पेटेंट कार्यालय
शासकीय जर्नल

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पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

INTRODUCTION

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01st January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

(PROF. (DR) UNNAT P. PANDIT)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

03th MAY, 2024

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KOLKATA, 03/05/2024
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3	The Patent Office, Government of India, Boudhik Sampada Bhavan, Plot No. 32., Sector-14, Dwarka, New Delhi – 110075 Phone: (91)(11) 25300200 & 28032253 Fax: (91)(11) 28034301 & 28034302 E.mail: delhi-patent@nic.in ❖ The States of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttaranchal, Delhi and the Union Territory of Chandigarh.		

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All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 and The Patents (Amendment) Act, 2005 or by the Patents (Amendment) Rules, 2006 will be received only at the appropriate offices of the Patent Office.

Fees: The Fees may either be paid in cash or may be sent by Bank Draft or Cheques payable to the Controller of Patents drawn on a scheduled Bank at the place where the appropriate office is situated.

पेटेंट कार्यालय
कोलकाता, दिनांक 03/05/2024
कार्यालयों के क्षेत्राधिकार के पते

विभिन्न जगहों पर स्थित पेटेंट कार्यालय के पते आंचलिक आधार पर दर्शित उनके प्रादेशिक अधिकार क्षेत्र के साथ नीचे दिए गए है:-

1	कार्यालय : महानियंत्रक, एकस्व, अभिकल्प तथा व्यापार चिहन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, भारत, फोन: (91) (22) 24123311 फ़ैक्स: (91) (22) 24123322 ई. मेल: cgpdtm@nic.in	4	पेटेंट कार्यालय, भारत सरकार इंटेलेक्चुअल प्रॉपर्टी राइट्स बिल्डिंग, इंडस्ट्रियल इस्टेट एसआईडीसीओ आरएमडी गोडाउन एरिया एडजसेन्ट टु ईगल फ्लास्क, जी. एस. टी. रोड, गायन्डी चेन्नई - 600 032. फोन: (91)(44) 2250 2081-84 फ़ैक्स: (91)(44) 2250-2066 ई. मेल: chennai-patent@nic.in ❖ आन्ध्र प्रदेश, तेलंगाना, कर्नाटक, केरल, तमिलनाडु तथा पुडुचेरी राज्य क्षेत्र एवं संघ शासित क्षेत्र, लक्षदीप
2	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, फोन: (91) (22) 24137701 फ़ैक्स: (91) (22) 24130387 ई. मेल: Mumbai-patent@nic.in ❖ गुजरात, महाराष्ट्र, मध्य प्रदेश, गोवा तथा छत्तीसगढ़ राज्य क्षेत्र एवं संघ शासित क्षेत्र, दमन तथा दीव, दादर और नगर हवेली.	5	पेटेंट कार्यालय, भारत सरकार कोलकाता, (प्रधान कार्यालय) बौद्धिक संपदा भवन, सीपी-2, सेक्टर- V, साल्ट लेक सिटी, कोलकाता-700 091, भारत. फोन: (91)(33) 2367 1943/44/45/46/87 फ़ैक्स:/Fax: (91)(33) 2367 1988 ई. मेल: kolkata-patent@nic.in ❖ भारत का अवशेष क्षेत्र
3	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, प्लॉट सं. 32, सेक्टर- 14, द्वारका, नई दिल्ली- 110 075. फोन: (91)(11) 25300200, 28032253 फ़ैक्स: (91)(11) 28034301, 28034302 ई. मेल: delhi-patent@nic.in हरियाणा, हिमाचल प्रदेश, जम्मू तथा कश्मीर, पंजाब,राजस्थान, उत्तर प्रदेश, दिल्ली तथा उत्तरांचल राज्य क्षेत्रों, एवं संघ शासित क्षेत्र चंडीगढ़		

वेबसाइट: http://www.ipindia.nic.in
www.patentoffice.nic.in

पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 अथवा पेटेंट (संशोधन) नियम, 2006 द्वारा वांछित सभी आवेदन, सूचनाए, विवरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे।

शुल्क: शुल्क या तो नगद रूप में या Controller of Patents के नाम में देय बैंक ड्राफ्ट या चेक के द्वारा भेजी जा सकती है जो उसी स्थान के किसी अनुसूचित बैंक में प्रदत्त हो जहाँ उपयुक्त कार्यालय स्थित है ।

SPECIAL NOTICE

18 Months publication as required under Section 11A of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005.

Notice is hereby given that any person at any time before the grant of Patent may give representation by way of opposition to the Controller of Patents at appropriate office on the ground and in a manner specified under section 25(1) of the Patents (Amendment) Act, 2005 read with Rule 55 of the Patents (Amendment) Rules, 2006.

Notice is also given that if any interested person requests for copies of the complete specification, drawing and abstract of any application already published, the photocopy of the same can be supplied by the Patent Office as per the jurisdiction on payment of prescribed fees of Rs.8/- per page. If any further details are required to be obtained, the same can be provided by the respective Patent Offices on request.

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SPECIAL NOTICE

Under the new provision of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and Rules there under, Publication of the matter relating to Patents in the Official Gazette of India Part III, Section 2 has been discontinued and instead The Official Journal of the Patent Office is being published containing all the activities of The Patent Office such as publication of all the patent applications after 18th months , grant of patents & all other information in respect of the proceedings as required under the provisions of the Patents (Amendment) Act, 2005 and Rules thereunder on weekly basis on every **Friday**.

The Journal is uploaded in the website every Friday. So Paper form and CD-ROM form of the Journal are discontinued from 01/01/2009.

SPECIAL NOTICE

Every effort is being taken to publish all the patent applications under section 11(A) of the Patents Act. However, if duplication of publication of any application is found, then earlier date of publication will be taken for the purpose of provisional protection for applicant and Patent Office will grant Patent not before six months from the date of second publication, provided that there is there is no third party representation.

202314058390
Corrigendum

The patent application no **202314058390** date - 31/08/2023 - **SADDLED VEHICLE** of IPC: B60R0013100000, B60Q0001560000, B62K0019380000, B60T0017040000, B62J0011130000, having 22 pages and claim no 1-04 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314058390** of **Honda Motor Co., Ltd., 1-1, Minami-Aoyama 2-chome, Minato-ku, Tokyo, 107-8556 , Japan having the inventor OTAKI, Yuki, 1-1, Minami-Aoyama 2-chome, Minato-ku, Tokyo, 107-8556, Japan** should be read as

“Provided is a saddled vehicle in which a clamp member supporting a front-wheel brake hose at a vehicle body can be made less visible from an outside. A saddled vehicle (1) includes a license plate (41) on a front side of a vehicle body, and a clamp member (60) for supporting a front-wheel brake hose (70) at the vehicle body. The clamp member (60) is arranged at a position on a rear side of the license plate (41) and overlapping with the license plate (41) when viewed from a front side of the vehicle body. A stay (50) supporting the license plate (41) is fixed to a bottom bridge (5). A plurality of bases (5b, 5c) for fixing the stay (50) are provided at the bottom bridge (5). The clamp member (60) is co-fastened and fixed together with the stay (50) to one of a plurality of the bases (5b, 5c). The base (5c) for co-fastening and fixing the clamp member (60) has a thickness smaller than another base (5b)."

202317079390
Corrigendum

The patent application no **202317079390** date - 22/11/2023 - **COMMUNICATION METHOD AND APPARATUS** of IPC: H04W 28/12, H04W 40/22, having 75 pages and claim no 1-47 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317079390** of **HUAWEI TECHNOLOGIES CO., LTD., Huawei Administration Building Bantian, Longgang District Shenzhen, Guangdong 518129, China having the inventor PAN, Qi, Huawei Administration Building Bantian, Longgang District Shenzhen, Guangdong 518129, China, and HUANG, Zhenglei, Huawei Administration Building Bantian, Longgang District Shenzhen, Guangdong 518129, China** should be read as

“The present application provides a communication method and apparatus, capable of supporting a terminal device to indirectly send data to a first network element by means of an application provider. The method comprises: an application provider acquires first indication information; the application provider receives first data information from the terminal device; and the application provider sends the first data information to a first network element according to the first indication information, wherein the first indication information is used for indicating that data is transmitted between the terminal device and the first network element by means of the application provider."

202217035319
Corrigendum

The patent application no **202217035319** date - 20/06/2022 - **COUPLING FOR SUSPENDED LOAD CONTROL APPARATUS, SYSTEM, AND METHOD** of IPC: B66C0013060000, B66C0001100000, B66C0013080000, B66C0023520000, G11B0027300000, having 38 pages and claim no 1-20 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035319** of **Vita Inclinata IP Holdings LLC, 295 Interlocken Boulevard, Suite 100 Broomfield CO U.S.A. 80021 having the inventor SIKORA, Derek, 295 Interlocken Boulevard, Suite 175 Broomfield, CO 80021-8072, GOODRICH, Logan, 295 Interlocken Boulevard, Suite 175 Broomfield, CO 80021-8072** should be read as

"Disclosed are systems, apparatuses, and methods for a suspended load control system for use on or with respect to a main load bearing line, carrier hook, and or head block of a crane."

202217035294
Corrigendum

The patent application no **202217035294** date - 20/06/2022 - **WOUND-HEALING SYSTEMS AND METHODS THEREOF** of IPC: A61N 1/04, A61M 25/01, having 15 pages and claim no 1-24 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035294** of **BARD ACCESS SYSTEMS, INC., 605 North 5600 West Salt Lake City, UT 84116, U.S.A. having the inventor TA, Teresa, 5839 South Meadowcrest Drive Murray, UT 84107, OFEK, Gidon, 2548 East Heritage Way Millcreek, UT 84109, U.S.A.** should be read as

“Disclosed herein are wound-healing systems and methods thereof. A wound-healing system can include a wound dressing, a catheter-stabilization device, and an electrical- stimulation means for applying electrical stimulation to heal or protect at least a wound associated with a percutaneous insertion site of a patient. The wound dressing can be configured as an electrode for placement around the wound. The catheter-stabilization device can include an anchor pad and a retainer coupled to the anchor pad. The anchor pad can be configured to adhere to skin of the patient proximate the insertion site. The retainer can be configured to stabilize a catheter assembly while a catheter tube of the catheter assembly is disposed in the insertion site. The electrical-stimulation means can include an electrical power source and an external circuit between the catheter-stabilization device and the wound dressing for applying the electrical stimulation."

202217035451
Corrigendum

The patent application no **202217035451** date - 21/06/2022 - **CONTROLLING ACCESSES TO A BRANCH PREDICTION UNIT FOR SEQUENCES OF FETCH GROUPS** of IPC: G06F 9/38, having 44 pages and claim no 1-26 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035451** of **ADVANCED MICRO DEVICES, INC., 2485 Augustine Drive Santa Clara, California 95054, U.S.A. having the inventor AGRAWAL, Varun, 2485 Augustine Drive Santa Clara, California 95054, KALAMATIANOS, John, 2485 Augustine Drive Santa Clara, California 95054, YALAVARTI, Adithya, 2485 Augustine Drive Santa Clara, California 95054, QIAN, Jingjie, 2485 Augustine Drive Santa Clara, California 95054**, **U.S.A.** should be read as

“An electronic device handles accesses of a branch prediction functional block when executing instructions in program code. The electronic device includes a processor having the branch prediction functional block that provides branch prediction information for control transfer instructions (CTIs) in the program code and a minimum predictor use (MPU) functional block. The MPU functional block determines, based on a record associated with a given fetch group of instructions, that a specified number of subsequent fetch groups of instructions that were previously determined to include no CTIs or conditional CTIs that were not taken are to be fetched for execution in sequence following the given fetch group. The MPU functional block then, when each of the specified number of the subsequent fetch groups is fetched and prepared for execution, prevents corresponding accesses of the branch prediction functional block for acquiring branch prediction information for instructions in that subsequent fetch group."

202217035325
Corrigendum

The patent application no **202217035325** date - 20/06/2022 - **THERMAL MANAGEMENT USING VARIATION OF THERMAL RESISTANCE OF THERMAL INTERFACE** of IPC: H01L 23/44, H01L 23/373, H01L 23/367, H05K 1/02, having 15 pages and claim no 1-15 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035325** of **ADVANCED MICRO DEVICES, INC., 2485 Augustine Drive Santa Clara, California 95054, U.S.A. having the inventor MCNAMARA, Andrew J., Advanced Micro Devices, Inc. 7171 Southwest Pkwy Austin, Texas 78735, U.S.A., KALVE, Swagata P., Advanced Micro Devices, Inc. 7171 Southwest Pkwy Austin, Texas 78735, U.S.A., JAGGERS, Christopher M., Advanced Micro Devices, Inc. 7171 Southwest Pkwy Austin, Texas 78735, U.S.A.** should be read as

“A thermal management system includes an integrated circuit having an active side including a control circuit and a backside including a first set of electrodes distributed across the backside. The thermal management system includes a heat exchanger having a surface including a second set of electrodes. The thermal management system includes a thermal interface material including thermally conductive particles suspended in a fluid. The thermal interface material is disposed between the backside of the integrated circuit and the surface of the heat exchanger. The control circuit is configured to apply an electric field to the thermal interface material using a first electrode of the first set of electrodes and a second electrode of the second set of electrodes to excite at least some of the thermally conductive particles between the first electrode and the second electrode."

202217035521
Corrigendum

The patent application no **202217035521** date - 21/06/2022 - **A SITUATIONAL AWARENESS SYSTEM FOR AN AUTONOMOUS OR SEMI-AUTONOMOUS VEHICLE** of IPC: G01S 17/87, G01S 17/931, G01S 13/86, G01S 13/931, H04L 12/40, having 41 pages and claim no 1-49 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035521** of **BEHAULT INDUSTRIAL PROPERTY OFFICE B.V., Thor Park 8300 3600 Genk, Belgium, AUTONOMOUS KNIGHT BV, Thor Park 8300 3600 Genk, Belgium having the inventor CHEVALIER, Philippe Arthur Jean Ghislain, De Oogst 7 9800 Deinze, Belgium, EJZENBERG, Geoffrey, Belgium, JANS, Noël, Krukstraat 14 3770 Val-Meer (Riemst), Belgium** should be read as

"A situational awareness system for a vehicle comprising a cyber-physical system, wherein the situational awareness system is configured to generate an imaging dataset for processing by the cyber-physical system for enabling semi-autonomous or autonomous operational mode of the vehicle, wherein the situational awareness system includes a sensory system with a first electro-optical unit for imaging the surroundings of the vehicle, a second electro-optical unit configured for imaging a ground area in a direct vicinity of the vehicle, a radar unit for detecting objects, and a third electro-optical unit for object identification, wherein the situational awareness system further includes a data synchronization system configured to synchronize the imaging dataset obtained by means of each unit of the sensory system, wherein the data synchronization system is configured to provide the synchronized imaging dataset to the cyber-physical system of the vehicle."

202217035271
Corrigendum

The patent application no **202217035271** date - 20/06/2022 - **AN ELECTRIC MACHINE AND METHOD FOR COOLING AN ELECTRIC MACHINE** of IPC: H02K 1/32, H02K 9/19, having 16 pages and claim no 1-12 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035271** of **Punch Powertrain E-Vehicles N.V., Ondernemerslaan 5429, Poort Sint-Truiden, 3800 Sint-Truiden (BE), Belgium having the inventor GALAB, Mohammad, c/o Ondernemerslaan 5429, Poort Sint-Truiden 3800 Sint Truiden, Belgium** should be read as

"An electric machine and method for cooling an electric machine Abstract There is disclosed an electric machine comprising a rotatable shaft comprising an axial channel with a first diameter D1 for receiving cooling fluid; a rotor, arranged to receive the shaft and to be fixedly connected to the shaft; a stator, arranged for mounting over the rotor; wherein the shaft comprises at least one first radial outlet at a first end, and at least one second radial outlet at a second end for allowing cooling fluid to be supplied towards the stator, wherein the channel has a dam section extending from the first end to the second end of the shaft having a second diameter D2 larger than the first diameter D1."

202217035264
Corrigendum

The patent application no **202217035264** date - 20/06/2022 - **METHOD FOR MANUFACTURING BIOMASS FORMED ARTICLE** of IPC: B27K 5/00, having 16 pages and claim no 1-5 was published through online module on 28/10/2022 Journal no: 43/2022, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202217035264** of **PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO., LTD., 1-61, Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka 5406207, Japan having the inventor NAITO, Shigeki, c/o Panasonic Housing Solutions Co., Ltd., 1048, Oaza Kadoma, Kadoma-shi, Osaka, 571-8686 Japan, TAMURA, Toshiki, c/o Panasonic Housing Solutions Co., Ltd., 1048, Oaza Kadoma, Kadoma-shi, Osaka, 571-8686 Japan** should be read as

“This method for manufacturing a biomass formed article 1 includes a layering step, a heating and pressing step, and a peeling step. In the layering step, while the fiber directions of a first veneer 21 and a second veneer 22 are aligned, the first veneer 21, a flexible sheet 3, and the second veneer 22 are layered, in that order, to obtain a laminate 4. In the heating and pressing step, the laminate 4 is heated while being pressed in the layering direction. In the peeling step, the biomass formed article 1 formed on both sides of the sheet 3 is peeled from the sheet 3. The first veneer 21 and the second veneer 22 are formed from a sugar-containing plant of the palm tree family and are veneers supplied with a polyvalent carboxylic acid."

202317072819
Corrigendum

The patent application no **202317072819** date - 26/10/2023 - **PIXEL DRIVING CIRCUIT AND DISPLAY PANEL** of IPC: G09G 3/3258, having 19 pages and claim no 1-10 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317072819** of **HKC CORPORATION LIMITED, 1-3F, 5F-7F of Factory Building 1,7F of Factory Building 6, Huike Industrial Park, No. 1 Industrial 2nd Road, Shilong Community, Shiyan Street, Baoan District, Shenzhen, Guangdong 518101, China having the inventor ZHOU, Renjie, 1-3F, 5F-7F of Factory Building 1,7F of Factory Building 6, Huike Industrial Park, No. 1 Industrial 2nd Road, Shilong Community, Shiyan Street, Baoan District, Shenzhen, Guangdong 518101, China, LI, Rongrong, 1-3F, 5F-7F of Factory Building 1,7F of Factory Building 6, Huike Industrial Park, No. 1 Industrial 2nd Road, Shilong Community, Shiyan Street, Baoan District, Shenzhen, Guangdong 518101, China** should be read as

“A pixel driving circuit (100) and a display panel. The pixel driving circuit (100), during a reset stage, charges via a pre-charging loop (L1) the voltage of a first end of a bootstrap capacitor (C2) to a driving voltage (VDD); during a data writing stage, receives a data voltage (Vdata) via the bootstrap capacitor (C2) and charges an energy storage capacitor (C1) via the bootstrap capacitor (C2) so as to regulate the voltage of the control end of a driving transistor (M) to a second voltage; and during a light-emitting stage, enables the driving transistor (M) to drive, on the basis of the second voltage and the driving voltage (VDD), a light-emitting element (OLED) to emit light, thereby eliminating the phenomena of uneven display brightness."

202314043866
Corrigendum

The patent application no **202314043866** date - 30/06/2023 - **PROCESS FOR PREPARING THE DIALDEHYDE OF VINYLCYCLOHEXENE** of IPC: C07C29/141, C07C31/27, C07C45/50, C07C47/32, having 11 pages and claim no 1-13 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314043866** of **Evonik Oxeno GmbH & Co. KG, Paul-Baumann-Strasse 1, 45772 Marl, Germany having the inventor FRANKE, Robert, Uerdinger Str. 3, 45772 Marl, Germany, SCHNEIDER, Carolin, Sandstrasse 62, 40789 Monheim am Rhein, Germany, JACKSTELL, Ralf, Dostojewskistrasse 6, 18106 Rostock, Germany, BELLER, Matthias, Kliffstr. 11, 18211 Ostseebad Nienhagen, Germany** should be read as

“The present invention is directed to a Process for preparing the dialdehyde of vinylcyclohexene."

202314036619
Corrigendum

The patent application no **202314036619** date - 26/05/2023 - **BOTTOM FORMING PROCESS** of IPC: C03B0023045000, C03B0023110000, C03B0023090000, C03B0023043000, C03B0023080000, having 36 pages and claim no 1-15 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314036619** of **SCHOTT Pharma AG & Co. KGaA, Hattenbergstraße 10, 55122 Mainz (DE), Germany having the inventor HUMBERTJEAN, Alexander, c/o SCHOTT Pharma AG & Co. KGaA, Industriestr. 3, 79379 Müllheim (DE), WETZEL, Tobias, c/o SCHOTT Pharma AG & Co. KGaA, Industriestr. 3, 79379 Müllheim (DE), MUTLU, Fatih, c/o SCHOTT Pharma AG & Co. KGaA, Industriestr. 3, 79379 Müllheim (DE), Germany** should be read as

"The present invention relates to a process for the preparation of a glass container from a glass tube in a glass processing machine, wherein the glass tube comprises a first portion with a first end, a second portion with a second end and a longitudinal axis Ltube that passes through the centre of the first and the sec-ond end, wherein the glass processing machine comprises a plurality of processing stations, first and second clamping chucks which are adapted and arranged to hold the glass tube while ro-tating the glass tube around its longitudinal axis Ltube and to transport the rotating glass tube from one glass container processing station to the next one, a heating device and a mold ma-trix, wherein the process comprises the steps of

I) heating the glass tube at a defined position between the first portion and the sec-ond portion to a temperature above the glass transition temperature while the glass tube is rotating around its longitudinal axis Ltube and pulling apart the first portion and the second portion thereby separating the first portion from the second portion and forming a closed bottom at one end of the first portion;

II) moving the mold matrix towards the closed bottom and bringing the mold matrix into contact with the closed bottom;

wherein, while bringing the mold matrix into contact with the closed bottom in process step II), a distance Ym between the mold matrix and the first clamping chuck is decreased stepwise.

The present invention also relates to glass containers and to a glass processing machine."

202314045099
Corrigendum

The patent application no **202314045099** date - 05/07/2023 - **LIGHTING CONTROL DEVICE, LIGHTING DEVICE, AND LIGHTING CONTROL METHOD** of IPC: H05B0045200000, H01L0033500000, F21Y0115100000, H05B0045220000, G04G0015000000, having 48 pages and claim no 1-16 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314045099** of **Panasonic Intellectual Property Management Co., Ltd., 22-6, Moto-machi, Kadoma-shi, Osaka 571-0057, Japan having the inventor ICHIKAWA, Taichi, c/o Panasonic Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan, HATTA, Kazuhiro, c/o Panasonic Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan, HARADA, Kazuki, c/o Panasonic Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan** should be read as

“Control signals are dynamic signals that individually cause a luminous intensity or an illuminance of light emitted from a first light lighting device (10a) and a luminous intensity or an illuminance of light emitted from a second lighting device (10b) to repeatedly increase and decrease. A controller (20) outputs, to the first lighting device (10a) and the second lighting device (10b), the control signals that individually cause a chromaticity of the light emitted from the first lighting device (10a) and a chromaticity of the light emitted from the second lighting device (10b) to be different or the control signals that individually cause a chromaticity of an illuminated surface illuminated by the light emitted from the first lighting device (10a) and a chromaticity of an illuminated surface illuminated by the light emitted from the second lighting device (10b) to be different."

202314043878
Corrigendum

The patent application no **202314043878** date - 30/06/2023 - **PROCESS FOR THE PREPARATION OF DICIDAL** of IPC: C07B61/00, C07C29/157, C07C31/27, C07C35/37, C07C45/50, C07C47/347, having 10 pages and claim no 1-14 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314043878** of **Evonik Oxeno GmbH & Co. KG, Paul-Baumann-Strasse 1, 45772 Marl, Germany having the inventor FRANKE, Robert, Uerdinger Str. 3, 45772 Marl, Germany, SCHNEIDER, Carolin, Sandstrasse 62, 40789 Monheim am Rhein, Germany, JACKSTELL, Ralf, Dostojewskistrasse 6, 18106 Rostock, Germany, BELLER, Matthias, Kliffstr. 11, 18211 Ostseebad Nienhagen, Germany, REUSCH, Dieter, Rossinistr. 1, 45772 Marl, Germany, HÄGER, Harald, Am Dorn 11, 59348 Lüdinghausen, Germany** should be read as

“Process for the preparation of dicidal."

202317085067
Corrigendum

The patent application no **202317085067** date - 13/12/2023 - **DUAL READ PORT LATCH ARRAY BIT CELL** of IPC: G11C 8/16, G11C 11/412, H01L 27/11, having 16 pages and claim no 1-20 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317085067** of **ADVANCED MICRO DEVICES, INC., 2485 Augustine Drive Santa Clara, California 95054, U.S.A. having the inventor BANERJEE, Arijit, 7171 Southwest Pkwy Austin, Texas 78735, U.S.A., WUU, John J., 2950 E. Harmony Rd. Suite 300 Fort Collins, Colorado 80528, U.S.A., SCHREIBER, Russell, 7171 Southwest Pkwy Austin, Texas 78735, U.S.A.** should be read as

“An apparatus and method for providing efficient floor planning, power, and performance tradeoffs of memory accesses. A dual read port and single write port memory bit cell uses two asymmetrical read access circuits for conveying stored data on two read bit lines. The two read bit lines are pre-charged to different voltage reference levels. The layout of the memory bit cell places the two read bit lines on an opposed edge from the single write bit line. The layout uses a dummy gate placed over both p-type diffusion and n-type diffusion between the edges. The layout has a same number of p-type transistors as n-type transistors despite using asymmetrical read access circuits. The layout also has a contacted gate pitch that is one more than the number of p-type transistors."

202314044765
Corrigendum

The patent application no **202314044765** date - 04/07/2023 - **ILLUMINATION CONTROL DEVICE, ILLUMINATION DEVICE, AND ILLUMINATION CONTROL METHOD** of IPC: H01L0027092000, B60Q0001000000, H05B0045180000, H02M0003335000, F21V0009140000, having 85 pages and claim no 1-22 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314044765** of **Panasonic Intellectual Property Management Co., Ltd., 22-6, Moto-machi, Kadoma-shi, Osaka 571-0057, Japan having the inventor HARADA, Kazuki, c/o Panasonic Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan, HATTA, Kazuhiro, c/o Panasonic Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan, ICHIKAWA, Taichi, c/o Panasonic Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan** should be read as

“An illumination control device (2) includes a controller (20) that outputs a control signal that controls each of a first illumination device (10a), a second illumination device (10b), a third illumination device (10c), and a fourth illumination device (10d). The control signal is a dynamic signal that causes an output of light that each of the first illumination device (10a), the second illumination device (10b), the third illumination device (10c), and the fourth illumination device (10d) emits to repeatedly increase and decrease. When the first illumination device (10a), the second illumination device (10b), the third illumination device (10c), and the fourth illumination device (10d) are disposed in stated order along a passage from its one side to the other side, the controller (20) outputs, to each of the first illumination device (10a), the second illumination device (10b), the third illumination device (10c), and the fourth illumination device (10d), the control signal that satisfies t1a ? t1b when t2a > t1a and t2b > t1b hold."

202211052043
Corrigendum

The patent application no **202211052043** date - 12/09/2022 - **NON-COVALENTLY FUNCTIONALIZED GRAPHENE QUANTUM DOTS AND METHOD FOR PRODUCTION THEREOF** of IPC: C09K0011650000, A61K0009000000, B82Y0010000000, B82Y0020000000, C09C0003080000, having 31 pages and claim no 1-20 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211052043** of **Chairman, Defence Research & Development Organisation (DRDO), Ministry of Defence, Govt. of India, DRDO Bhawan, Rajaji Marg, New Delhi 110011, India having the inventor AGRAWAL, Neha, Department of Neurobiology, DIPAS, DRDO Timarpur, Delhi, India, KOHLI, Ekta, Department of Neurobiology, DIPAS, DRDO Timarpur, Delhi, India, PRASAD, Dipti N, Department of Neurobiology, DIPAS, DRDO Timarpur, Delhi, India** should be read as

"The present invention relates to a non-covalently functionalized graphene quantum dots useful for detection of biomolecule and method for preparation thereof, wherein the graphene quantum dots are functionalized by a modifier 'lithium salt of 6-aminohexanoic acid'. The invention also discloses a method for specifically and selectively detecting dopamine, using the 'lithium salt of 6-aminohexanoic acid' functionalized graphene quantum dots. The method for preparation of said functionalized graphene quantum dots comprises of: a) dispersing graphene quantum dots in a polar solvent; b) adding a modifier 'lithium salt of 6-amino hexanoic acid"; c) heating and ultrasonicating the obtained solution; d) heating the solution under vacuum to evaporate the polar solvent and obtain a dry powder; e) re-dispersing the obtained dry powder in polar solvent and ultrasonicating to obtain stable solution of modified graphene quantum dots."

202211052274
Corrigendum

The patent application no **202211052274** date - 13/09/2022 - **SYSTEM AND METHOD FOR PROVIDING AN ADAPTIVE USER INTERFACE (UI) NAVIGATION** of IPC: G06F0003048200, G06N0020000000, G06N0003080000, G06F0009451000, G06F0016903000, having 38 pages and claim no 1-15 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211052274** of **Samsung Electronics Co., Ltd., 416 Maetan-Dong, Yeongtong-GU, Suwon-SI, Gyeonggi-do 442-742, Republic of Korea having the inventor GUPTA, Vipul, S/o Rajkumar Gupta H: No 429, Sector 9-11, Hisar 125001, Haryana, India, AGRAWAL, Ankur, 45-A, Shubham Vihar Phase-2, Karmayogi, Kamla Nagar, Agra 282005, Uttar Pradesh, India, NEGI, Vaibhav, 547, Barkat Nagar, Street Number 12-A, Jaipur 302015, Rajasthan, India** should be read as

“A method (400) for providing an adaptive user interface (UI) navigation on a user equipment (UE) using a machine learning (ML) model is disclosed. The method includes obtaining a user context from a user action. The user action is associated with navigating UI components at the UI of the UE. The method includes determining an activity based on the user action and storing the activity in an activity stack. Further, extracting a feature from the UI components during navigation based on the user context for determining an action category. The method includes determining a user navigation indicative of learning of a required and a non-required activity and removing the non-required activity from the activity stack such that during navigation the UI components are removed providing the adaptive UI navigation on the UE."

202317052916
Corrigendum

The patent application no **202317052916** date - 07/08/2023 - **DISPLAY SUBSTRATE AND DISPLAY APPARATUS** of IPC: H01L 27/32, G06F 3/041, having 51 pages and claim no 1-45 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317052916** of **BOE TECHNOLOGY GROUP CO., LTD., No.10 Jiuxianqiao Rd., Chaoyang District Beijing 100015, China, BEIJING BOE TECHNOLOGY DEVELOPMENT CO., LTD., Room 407, Building 1, No.9 Dize Road, BDA Beijing 100176, China having the inventor XU, Jingjing, No.9 Dize Rd., BDA Beijing 100176, China, HAO, Xueguang, No.9 Dize Rd., BDA Beijing 100176, China, LI, Chunyan, No.9 Dize Rd., BDA Beijing 100176, China, LIU, Lang, No.9 Dize Rd., BDA Beijing 100176, China, WANG, Jingquan, No.9 Dize Rd., BDA Beijing 100176, China** should be read as

“A display substrate and a display apparatus. The display substrate has a display region (AA) and an opening (O) located in the display region (AA). The opening (O) penetrates the display substrate, and the display substrate comprises a base substrate (BS), a driving circuit layer, a light-emitting device layer, an encapsulation layer and a touch layer (TL). The driving circuit layer is arranged on the base substrate (BS), and comprises a first signal line (L1) at least partially surrounding the opening (O). The light-emitting device layer is arranged on the side of the driving circuit layer distant from the base substrate (BS). The encapsulation layer is arranged on the side of the light-emitting device layer distant from the base substrate (BS). The touch layer (TL) is arranged on the side of the encapsulation layer distant from the base substrate (BS), and comprises a touch electrode and a touch compensation electrode (TBC) electrically connected to the touch electrode and at least partially surrounding the opening (O). In a direction perpendicular to a board surface of the base substrate (BS), the first signal line (L1) at least partially overlaps with the touch compensation electrode (TBC). The foregoing display substrate has good touch and display effects."

202317081845
Corrigendum

The patent application no **202317081845** date - 01/12/2023 - **DISPLAY SUBSTRATE AND DISPLAY APPARATUS** of IPC: H01L 27/32, G09G 3/3225, having 37 pages and claim no 1-21 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317081845** of **BOE TECHNOLOGY GROUP CO., LTD., No.10 Jiuxianqiao Rd., Chaoyang District Beijing 100015, China, CHENGDU BOE OPTOELECTRONICS TECHNOLOGY CO., LTD., No.1188 Hezuo Rd. (West Zone), Hi-Tech Development Zone Chengdu, Sichuan 611731, China having the inventor DU, Mengmeng, No.9 Dize Rd., BDA Beijing 100176, China, WANG, Rong, No.9 Dize Rd., BDA Beijing 100176, China, YUAN, Changlong, No.9 Dize Rd., BDA Beijing 100176, China, DONG, Xiangdan, No.9 Dize Rd., BDA Beijing 100176, China, HOU, Rui, No.9 Dize Rd., BDA Beijing 100176, China** should be read as

“Provided in the present disclosure are a display substrate and a display apparatus. Sub-pixels in the display substrate comprise: a first initialization signal line and a second initialization signal line, potentials of initialization signals transmitted by the first initialization signal line and the second initialization signal line being different. A sub-pixel driving circuit in the sub-pixel comprises a driving transistor, a first reset transistor, and a second reset transistor. A first pole of the driving transistor is coupled to a light-emitting element. A first pole of the first reset transistor is coupled to a gate of the driving transistor, and a second pole of the first reset transistor is coupled to the first initialization signal line. A first pole of the second reset transistor is coupled to the light emitting element, and a second pole of the second reset transistor is coupled to the second initialization signal line."

202211051584
Corrigendum

The patent application no **202211051584** date - 09/09/2022 - **A CULTURE MEDIA FORMULATION FOR DIFFERENTIATING MESENCHYMAL STEM CELLS INTO ENDOTHELIAL CELLS** of IPC: C12N0005071000, C12N0005077500, A61K0035440000, C07K0014000000, C07D0417140000, having 25 pages and claim no 1-10 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211051584** of **Indian Council Of Medical Research, V. Ramalingaswami Bhawan, P.O. Box No. 4911, Ansari Nagar, New Delhi – 110029, India, Department Of Biotechnology, 6th-8th Floor Block 2 CGO Complex, Lodhi Road New Delhi india having the inventor MADAN, Taruna, Department of Innate Immunity, ICMR-National Institute for Research in Reproductive and Child Health, J. M. Street, Parel, Mumbai 400 012, India, CHATTERJI, Anil, 8 Astha Housing Society, Bella Vista Colony, Dona Paula, Goa-403 004, India, KG, Aghila Rani, Department of Innate Immunity, ICMR-National Institute for Research in Reproductive and Child Health, J. M. Street, Parel, Mumbai 400 012, India, PANDIT, Hrishikesh, Department of Innate Immunity, ICMR-National Institute for Research in Reproductive and Child Health, J. M. Street, Parel, Mumbai 400 012, India, SUBEDI, Rambhadur, Department of Innate Immunity, ICMR-National Institute for Research in Reproductive and Child Health, J. M. Street, Parel, Mumbai 400 012, India, SHENDE, Rajashri, C-7, Kohinoor Classy Marvel, Sector 23, Pradhikaran, Nigadi, Pune 411044, India, PATI, Siddhartha, Kalinga Nagar, Sunduri, PO-Sunhat, Dist-Balasore-756001, Odisha, India** should be read as

"The present invention provides a formulation for inducing differentiation in mesenchymal stem cells. More specifically, the present invention provides a culture media formulation for differentiating umbilical cord-derived mesenchymal stem cells into endothelial lineage. The culture media formulation significantly and specifically enhances induction of human UCMSC differentiation to endothelial lineage as assessed by endothelial markers namely; von Willibrand factor (vWF), Vascular Endothelial Growth Factor (VEGF) and soluble fms-like tyrosine kinase 1 (sFLT-1)."

202314059637
Corrigendum

The patent application no **202314059637** date - 05/09/2023 - **DRUG DELIVERY DEVICE** of IPC: A61M0005310000, A61M0005315000, A61M0005145000, A61M0005172000, A61M0005142000, having 30 pages and claim no 1-14 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314059637** of **SENSILE MEDICAL AG, Solothurnerstrasse 235, CH-4600 OLTEN, Switzerland having the inventor LAGORGETTE, Pascal, Quai du Bas 37, 2502 Bienne, Switzerland, BÜRLI, Fabian, Staffelackerweg 5, 4655 Stüsslingen, Switzerland, MÜLLER, Matthias, Mühlering 25, CH-4614 Hägendorf, Switzerland, KOSTAL Peer, Im Hof 6, D-79618 Rheinfelden, Germany** should be read as

"A drug delivery device (1), comprising a delivery unit (3) including a drug container (6) comprising a barrel portion (6a) and a plunger (12) slidably mounted within the barrel portion and sealing the drug (78) within the container at one end of the barrel portion, and a drive unit (4) comprising a pneumatic flow system (74) and a pneumatic pumping system configured to pump air via the pneumatic flow system (74) to a space behind the plunger to generate a gas pressure to advance the plunger in the container during drug delivery. The drug delivery device comprises a sealing adaptor (9) mounted on an end of the drug container facing an outer side of the plunger, the sealing adaptor (9) comprising a sealing plug (23) inserted inside an end of the barrel portion, the sealing plug (23) comprising an orifice (26) configured for pluggable sealing connection to a gas channel connector (40) of the pneumatic flow system."

202314058733
Corrigendum

The patent application no **202314058733** date - 01/09/2023 - **DRUG DELIVERY DEVICE** of IPC: A61M5/00, A61M5/142, A61M5/158, A61M5/32, having 25 pages and claim no 1-15 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202314058733** of **SENSILE MEDICAL AG, Solothurnerstrasse 235, 4600 OLTEN, Switzerland having the inventor LAGORGETTE, Pascal, Quai du Bas 37, 2502 Bienne, Switzerland, BÜRLI, Fabian, Staffelackerweg 5, 4655 Stüsslingen, Switzerland** should be read as

"Drug delivery device (1) comprising a housing (2), a delivery unit (3), a drive unit(4) and a pumping system, the delivery unit comprising a subcutaneous delivery system (6) and a needle actuator system (7), the subcutaneous delivery system comprising a slidable needle support (10) and an injection needle mounted to the slidable needle support, the needle support movable with respect to the housing (2) from a retracted position where the needle is mounted within the housing, to an extended position where the needle projects through a skin contact wall (48) of the housing for subcutaneous delivery, the needle actuator mechanism comprising an actuation disc (12) rotatably mounted to a housing portion (38) within the housing (2) configured to displace the slidable needle support from the retracted position to the extended position by rotation of the actuation disc,. The drug delivery device (1) further comprises a rotary drive shaft or stub (14) comprising a coupling interface (40b), the actuation disc comprising a coupling interface (40a) engageable with the coupling interface (40b) of the rotary drive shaft or stub (14), the drug delivery device further comprising a motor coupled to the rotary drive shaft or stub (14). The needle actuator mechanism further comprises a drive decoupling mechanism (13) comprising a cam arrangement (15, 15a, 15b) between the actuation disc and the housing portion (38) and a spring (32), the spring and cam arrangement configured to effect an axial displacement of the actuation disc (12) during rotation of the actuation disc causing displacement of the slidable needle support (10) from the retracted to the extended position, the axial displacement causing a decoupling of the rotor drive shaft or stub (14) coupling interface (40b) from the coupling interface (40a) of the actuation disc."

202317052916
Corrigendum

The patent application no **202317052916** date - 07/08/2023 - **DISPLAY SUBSTRATE AND DISPLAY APPARATUS** of IPC: H01L 27/32, G06F 3/041, having 51 pages and claim no 1-45 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317052916** of **BOE TECHNOLOGY GROUP CO., LTD., No.10 Jiuxianqiao Rd., Chaoyang District Beijing 100015, China, BEIJING BOE TECHNOLOGY DEVELOPMENT CO., LTD., Room 407, Building 1, No.9 Dize Road, BDA Beijing 100176, China having the inventor XU, Jingjing, No.9 Dize Rd., BDA Beijing 100176, China, HAO, Xueguang, No.9 Dize Rd., BDA Beijing 100176, China, LI, Chunyan, No.9 Dize Rd., BDA Beijing 100176, China, LIU, Lang, No.9 Dize Rd., BDA Beijing 100176, China, WANG, Jingquan, No.9 Dize Rd., BDA Beijing 100176, China** should be read as

“A display substrate and a display apparatus. The display substrate has a display region (AA) and an opening (O) located in the display region (AA). The opening (O) penetrates the display substrate, and the display substrate comprises a base substrate (BS), a driving circuit layer, a light-emitting device layer, an encapsulation layer and a touch layer (TL). The driving circuit layer is arranged on the base substrate (BS), and comprises a first signal line (L1) at least partially surrounding the opening (O). The light-emitting device layer is arranged on the side of the driving circuit layer distant from the base substrate (BS). The encapsulation layer is arranged on the side of the light-emitting device layer distant from the base substrate (BS). The touch layer (TL) is arranged on the side of the encapsulation layer distant from the base substrate (BS), and comprises a touch electrode and a touch compensation electrode (TBC) electrically connected to the touch electrode and at least partially surrounding the opening (O). In a direction perpendicular to a board surface of the base substrate (BS), the first signal line (L1) at least partially overlaps with the touch compensation electrode (TBC). The foregoing display substrate has good touch and display effects."

202211051338
Corrigendum

The patent application no **202211051338** date - 08/09/2022 - **A CLAMP ASSEMBLY FOR A TWO-WHEELER** of IPC: A61P0001040000, A61P0009120000, A61P0009000000, H04L0005000000, A61P0025020000, having 21 pages and claim no 1-10 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211051338** of **UNO Minda Limited, Village Nawada, Fatehpur, P.O. Sikanderpur Badda, Distt. Gurgaon 122004, Haryana, India having the inventor DEEPAK, Kumar Desh, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, SAHNI, Rahul, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, JEET, Kamal, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, GULATI, Anish, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India** should be read as

“The present disclosure relates to a clamp assembly (100) adapted to be mounted on a handlebar of a two-wheeler. The clamp assembly (100) comprises a first portion (102), a second portion (104) to lock with the first portion (102), and a lock assembly (105) to secure the first portion (102) with the second portion (104). The lock assembly (105) includes one or more cavities (109) extending inside the first portion (102), one or more cavities (111) extending inside the second portion (104) and aligned with the cavities (109) of the first portion (102), and an insert (110) adapted to be received inside each of the one or more cavities (109) of the first portion (102). The inserts (110) include a slot (112) having a plurality of threads (114) aligned with a thread (118) of each of the cavities (109) of the first portion (102)."

202211052490
Corrigendum

The patent application no **202211052490** date - 14/09/2022 - **METHOD AND SYSTEM FOR VEHICLE ENGINE SOUND SIMULATION** of IPC: B60Q0005000000, H04N0005781000, G06Q0040020000, F02D0041260000, G01S0005020000, having 37 pages and claim no 1-12 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211052490** of **UNO Minda Limited, Village Nawada, Fatehpur, P.O. Sikanderpur Badda, Distt. Gurgaon 122004, Haryana, India having the inventor SHARMA, Praveen Kumar, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, CHAUDHARY, Mohit, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, SINGH, Anish Kumar, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, PAL, Amrit, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, YADAV, Suraj, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India** should be read as

"A method and system for simulating an engine sound in a vehicle (102) is disclosed. A sound simulation system (100) comprising a control unit (602). The control unit (602) is adapted to receive, at a predefined interval, a plurality of signals indicative of a throttle position signal from a throttle position sensor (104) and a speed signal from a prime mover indicative of a rotational speed of the prime mover. The control unit (602) then compares each of the throttle position signal and the speed signal against a preset distribution of a set of wave files to determine a state of the prime mover. Further, the control unit (602) generates an audio signal wherein the audio signal includes at least one audio file corresponding to the determined state of the prime mover."

202211051315
Corrigendum

The patent application no **202211051315** date - 08/09/2022 - **ELECTRONIC SWITCH** of IPC: A61P0029000000, A61P0043000000, G06F0001160000, A61P0037000000, A61P0035000000, having 21 pages and claim no 1-9 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211051315** of **UNO Minda Limited, Village Nawada, Fatehpur, P.O. Sikanderpur Badda, Distt. Gurgaon 122004, Haryana, India having the inventor DEEPAK, Kumar Desh, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, SAHNI, Rahul, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, BEURA, Ganeswar, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, TAFSEER, Mohd., C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India** should be read as

“circuit board disposed in the housing (202) and having a pair of connection terminals, a knob (208) having a pair of legs (222) slidably disposed on the housing (202) and a rubber membrane (206) disposed over the printed circuit. The rubber membrane (206) includes a pair of elevated portions (218) adapted to support a tip of the pair of legs (222) and a pair of contact pills (216) positioned underneath the pair of elevated portion (218) that makes contact with the pair of connection terminals. The pair of elevated portion (218) flexes downward in response to a user input on the knob (208) to push the pair of contact pills (216) and flexes upward to push the pair of legs (222) to an original position thereof upon removal of the user inpu."

202211052476
Corrigendum

The patent application no **202211052476** date - 14/09/2022 - **A COIL PLACEMENT MECHANISM FOR A WIRELESS CHARGER ASSEMBLY** of IPC: H02J0007020000, H02J0007000000, H02J0050100000, H04M0001040000, H01H0050540000, having 27 pages and claim no 1-11 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211052476** of **UNO Minda Limited, Village Nawada, Fatehpur, P.O. Sikanderpur Badda, Distt. Gurgaon 122004, Haryana, India having the inventor JAIN, Amit, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, NAYAK, Shibabrata, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, HUSSAIN, Adil, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, PHASE, Pratik, C/o UNO Minda Limited, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India** should be read as

“The present disclosure relates to a coil placement mechanism (100) for a wireless charger assembly having a coil (200) and a coil holding member (202). The coil placement mechanism (100) may include a base plate (102) having a first face (132) and a second face (134), a pair of upper jaws (104, 106) and pair of lower jaws (108, 110). The pair of upper jaws (104, 106) is installed on the first face (132) and adapted to slide longitudinally along the first face (132). The pair of lower jaws (108, 110) is installed on the second face (134) and adapted to slide transversely along the second face (134). The pair of upper jaws (104, 106) and the pair of lower jaws (108, 110) are adapted form an adjustable mount adapted to receive and align the coil (200) with respect to a center of the coil holding member (202)."

202211052584
Corrigendum

The patent application no **202211052584** date - 14/09/2022 - **A SWITCH ASSEMBLY** of IPC: A61B0017000000, H01H0009020000, F04D0029280000, F02M0051060000, G06F0003035400, having 27 pages and claim no 1-13 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202211052584** of **UNO Minda Limited, Village Nawada, Fatehpur, P.O. Sikanderpur Badda, Distt. Gurgaon 122004, Haryana, India having the inventor SHARMA, Shwetaank, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, MEHLA, Ravinder, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, SINGH, Nitin Kumar, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India, KUMAR, Sanjay, Village Nawada Fatehpur, P.O. Sikandarpur Badda, Distt. Gurgaon 122004, Haryana, India** should be read as

“A switch assembly (100) having a housing member (106), a knob (102), an actuator member (210), a toggle switch (216), and a bellow (206), is disclosed. The knob is supported on the housing member (106). The actuator member (210) is adapted to move downward upon receipt of an input force. The toggle switch (216), disposed on an end of the housing member (106), is adapted to operate upon receiving a force at a periphery from the actuator member (210) to actuate the switch assembly (100). The bellow (206) is disposed in an inside portion of the knob (102). The bellow (206) is adapted to prevent an entry of a foreign element through a junction between the housing member (106) and the knob (102). The bellow (206) has a top end (206A) attached to the knob (102) and a bottom end (206B) supported on the housing member (106)."

202317068234
Corrigendum

The patent application no **202317068234** date - 11/10/2023 - **LITHIUM MANGANESE IRON PHOSPHATE POSITIVE ELECTRODE ACTIVE MATERIAL AND PREPARATION METHOD THEREFOR, POSITIVE ELECTRODE SHEET, SECONDARY BATTERY AND ELECTRIC DEVICE** of IPC: H01M 4/36, H01M 10/0525, having 39 pages and claim no 1-19 was published through online module on 15/03/2024 Journal no: 11/2024, but Inadvertently this said application had been left out of the said journal. All the documents submitted by the applicant were also available through online in official website in PDF format from the above said publication date. The abstract of the patent application **202317068234** of **CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED, No.2 Xingang Road, Zhangwan Town, Jiaocheng District Ningde, Fujian 352100, China having the inventor LIU, Shaojun, No.2 Xingang Road, Zhangwan Town, Jiaocheng District Ningde, Fujian 352100, ZHAN, Wenwei, No.2 Xingang Road, Zhangwan Town, Jiaocheng District Ningde, Fujian 352100, ZHANG, Xinxin, No.2 Xingang Road, Zhangwan Town, Jiaocheng District Ningde, Fujian 352100, OUYANG, Chuying, No.2 Xingang Road, Zhangwan Town, Jiaocheng District Ningde, Fujian 352100, LI, Qingzheng, No.2 Xingang Road, Zhangwan Town, Jiaocheng District Ningde, Fujian 352100** should be read as

“Provided in the present application are a lithium manganese iron phosphate positive electrode active material and a preparation method therefor, a positive electrode sheet, a secondary battery and an electric device. The preparation method comprises the following steps: mixing and grinding an iron source, a solid alkali and a source of an optional doping element M to make all the components undergo a low-temperature solid-phase reaction, and after the grinding is finished, subjecting the obtained product to washing, impurity removal and drying to obtain a nanoscale iron-containing oxide; mixing the obtained nanoscale iron-containing oxide with a solvent, a lithium source, a manganese source, a phosphorus source, a source of an optional doping element N, a source of an optional doping element Q and a source of an optional doping element R at a preset ratio, grinding the resulting mixture, and subjecting same to spray drying granulation after grinding is finished so as to obtain a powder; and sintering the obtained powder to obtain a lithium manganese iron phosphate positive electrode active material. By means of the preparation method provided in the present application, a lithium manganese iron phosphate positive electrode active material having both good electrochemical performance and a high tap density can be obtained."

Early Publication:

The following patent applications have been published under section 11A (2) of The Patents (Amendment) Act 2005 and rule 24A of The Patents (Amendment) Rules, 2006. Any person may file representation by way of opposition to the Controller of Patents at the appropriate office against the grant of the patent in the prescribed manner under section 25(1) of the Patents (Amendment) Act 2005 read with the rule 55 of The Patents (Amendment) Rules, 2006:

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :21/11/2022

(21) Application No.202211049910 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : A CONTROLLED AERIAL VEHICLE

(51) International classification	:C07D0417140000, C07C0067000000, H01M0008120000, C07D0409120000, C07C0045690000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure relates to a controlled aerial vehicle (100). The controlled aerial vehicle (100) includes a frame (102) defining housing. The frame (102) is configured to house a control module of the controlled aerial vehicle (100). Further, the controlled aerial vehicle (100) includes a plurality of elongated arms (104a, 104b, 104c, 104d) extending outwardly from the frame (102). Further, the vehicle (100) is provided with one or more landing structures (110a, 110b) coupled to the bottom surface (102b) of the frame (102) for providing support for the aerial vehicle during landing and take-off. Furthermore, a mounting means (114) is releasably connectable to the frame configured to receive and support a payload or imaging module (112). The present disclosure provides a controlled aerial vehicle configuration with the payload or imaging module (112) having more clearance to protect the payload during the event of a crash. [Figure 1]

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2023

(21) Application No.202311023711 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART DEVICE FOR CONTINUOUS MONITORING OF REMOTE LOCATION AND METHOD THEREOF

(51) International classification :G06F1/26, G06F1/32, H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The embodiments of the present disclosure generally relate to smart monitoring devices. More particularly, the present disclosure relates to a smart device 200 for continuously monitoring a remote location. The smart device 200 includes a plurality of sensors 222 configured to continuously monitor and detect a plurality of parameters in at least one device. The smart device 200 includes a recharging module 214 operatively connected to the plurality of sensors 222. The recharging module 214 is configured to initiate automatic recharging of the at least one device based on the detection of at least one parameter among the plurality of parameters.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2023

(21) Application No.202311023954 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A COMPACT SWITCH BOX

(51) International classification :H01H37/54, H01H71/16, H02B1/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention provides a compact and organized switch box having vertical clamps and a protruding capsule installed such that optimal wiring is utilized. The present invention also provides a bimetallic element, incorporated inside the switch box to provide protection against high current surges. The present invention helps in efficiently reducing installation and maintenance time, thereby saving service costs.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/08/2023

(21) Application No.202311052705 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A NOVEL HEAVY METAL-TOLERANT MICROBIAL STRAIN, TRICHODERMA ASPERELLUM

(51) International classification	:A23L0011000000, C12N0001140000, C12R0001885000, A01N0063380000, C07D0401140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a technology for the development of innovative and superior control measures that can be attained by designing a new generation heavy metal (Cr, Cd, Pb, Zn) tolerant plant protectant Trichoderma asperellum. The present invention indicates the possible measures that can be utilized for the cleanup of heavy metal-contaminated sites. The main emphasis of the present invention lies in the metal uptake by the Trichoderma strain (IIPRTh-31) identified from the pulses rhizosphere of India. The greenhouse experiments were conducted to evaluate the field efficacy of the proposed strain on the growth of chickpeas, pigeon pea, and lentils under heavy metal-stressed conditions.

No. of Pages : 25 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2023

(21) Application No.202311022623 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR DETECTING SUB-CLINICAL MASTITIS IN BOVINE MAMMALS

(51) International classification	:A61B5/00, G06N20/00, G06N3/08, G06T7/73, G16H30/40, G16H50/20
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates to a system and a method detecting sub-clinical mastitis (SCM) in bovine mammals. The system receives one or more images of at least one bovine mammal captured by a camera (112) associated with the system (102). The system extracts one or more features from the one or more images, where the one or more features include one or more heat signatures in the at least one bovine mammal. The system correlates the one or more heat signatures to one or more equivalents of at least one pathogen, generates a diagnostic report in response to the correlation, and based on the diagnostic report, determines an onset and a progression of sub-clinical mastitis in the at least one bovine mammal.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2023

(21) Application No.202311022664 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NOZZLE BASED AIR COOLED PV PANEL

(51) International classification :H01L23/473, H05K7/20
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention is a nozzle based air cooled PV panel to reduce temperature of PV panel with monocrystalline PV panel (1) perforated with a plurality of holes, convergent nozzles (2) attached to the plurality of holes. The nozzles (2) increase speed of air trapped in a region of high pressure and pass the air to a region of low pressure, thereby reduce the temperature inside the monocrystalline PV panel (1).The plurality of convergent nozzle's (2) region of high pressure comprising of air below surface of the monocrystalline PV panel (1), and the plurality of convergent nozzle's (2) region of low pressure comprising of air above surface of the monocrystalline PV panel (1).

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2023

(21) Application No.202311025504 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYNERGISTIC GRANULAR INSECTICIDAL COMPOSITION

(51) International classification	:A01N25/12, A01N31/14, A01N43/56
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a synergistic granular insecticidal composition and manufacturing method thereof. More specifically, it relates to a synergistic granular insecticidal composition comprising A) at least one anthranilic diamide insecticide or its agrochemically acceptable salts, esters and derivatives; B) Fipronil or its agrochemically acceptable salts, esters and derivatives and C) Emamectin or its agrochemically acceptable salts, esters and derivatives. The present invention also relates to a process for preparation of such synergistic granular insecticidal composition for foliar spray treatment of plants and soil application treatment for synergistic and efficacious control of insect pests and improved plant yield. Dated this 01st April, 2024 Dr. Shilpa Arora IN/PA-1238 Patent Agent for the Applicant To The Controller of Patents The Patent Office At New Delhi

No. of Pages : 59 No. of Claims : 26

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/01/2024

(21) Application No.202411001151 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : COMPUTATIONAL AND EXPERIMENTAL INSIGHTS INTO GLYCYRRHIZIN-LOADED NANOSTRUCTURED LIPID CARRIERS: DOCKING, DYNAMICS, DESIGN OPTIMIZATION, AND ANTICANCER EFFICACY IN LUNG CANCER CELLS

(51) International classification :A61P0035000000, A61K0031704000, G16C0010000000, A61K0009000000, G16B0015000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
COMPUTATIONAL AND EXPERIMENTAL INSIGHTS INTO GLYCYRRHIZIN-LOADED NANOSTRUCTURED LIPID CARRIERS: DOCKING, DYNAMICS, DESIGN OPTIMIZATION, AND ANTICANCER EFFICACY IN LUNG CANCER CELLS Lung cancer (LC) remains a predominant global health concern, especially with escalating tobacco-smoking rates. Present study provides computational screening, molecular dynamics, DFT and simulation analysis of phytoconstituents on EGFR receptors (2ITY and W2O), followed by selection of highest docking score phytoconstituents among 45 for further analysis. Glycyrrhizin was found to possess maximum docking score -8.863 and -8.837 on both 2ITY and W2O respectively. The study unveils glycyrrhizin's interactions with EGFR pivotal in cancer progression and treatment. Molecular dynamics simulations highlighted the structural and dynamic interactions within a protein-ligand complex, indicating both stability and flexibility characteristics. DFT analysis of Glycyrrhizin revealed its molecular properties, suggesting stability and potential reactivity. Glycyrrhizin loaded nanostructured lipid carriers (GNLC) have been developed and analysed by various parameters like particle size and drug release zeta potential, SEM analysis, spectroscopic (UV, IR) and solubility analysis etc reveals critical insights into their optimization for effective drug delivery. The anticancer potential of GNLC have been further proved by experimental analysis through MTT assay. Both GNLC and Doxorubicin (0.78-50 µg/ml) were used for the activity. The anticancer potential at 12.50, 25 and 50µg/ml pf GNLC was found to be statistically significant and was comparable with that of standard group Doxorubicin. The observed structural transformations in Glycyrrhizin into a lipid matrix indicate potential enhancements in its bioavailability. The study concludes by emphasizing Glycyrrhizin's potential as a potent anticancer agent, acting through EGFR inhibition and influencing DNA replication processes will be more effective in GNLC formulation when compared with that conventional one.

No. of Pages : 30 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/01/2023

(21) Application No.202311006224 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NOVEL FRACTIONAL ACID HYDROLYSIS PROCESS/METHOD FOR THE PRODUCTION OF FERMENTABLE SUGARS FROM LIGNOCELLULOSIC BIOMASS.

(51) International classification	:C13K0001020000, C12P0007100000, C08H0008000000, C12P0019020000, H03L0007197000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a novel process for producing fermentable sugars (xylose and glucose) separately from the materials consisting hemicellulose and cellulose as carbohydrate source using a novel fractional acid hydrolysis reactor system. The fermentable sugars are useful in high value added products production like bioethanol (2G-ethanol) through fermentation.

No. of Pages : 43 No. of Claims : 27

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/01/2023
(21) Application No.202311006225 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : FRACTIONAL HYDROLYSIS REACTOR SYSTEM FOR ACID HYDROLYSIS OF LIGNOCELLULOSIC BIOMASS

(51) International classification :C08H0008000000, C12P0007100000, C01C0001080000, D21C0003040000, D21C0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a novel fractional hydrolysis reactor system to convert around 90% (w/w) of available sugars, present in form of cellulose and hemicelluloses in any kind of lignocellulosic biomass to fermentable sugars.

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/03/2023

(21) Application No.202311017556 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD OF VERMICOMPOSTING USING TRI-FOLD MECHANISM

(51) International classification :C05F0017050000, C05F0017907000, C05F0017964000, C05F0005000000, C05F0017900000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a method of treating/degrading organic waste preliminarily with fungus and then subjecting the resulting product to vermicomposting. The method involves the steps of collection phase involving collection and compaction of raw material, an enzyme reaction phase and a vermicomposting phase. The raw material is subjected to enzyme reaction phase and the vermicomposting phase sequentially.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/10/2023

(21) Application No.202311071220 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR FABRICATION OF ALL PEROVSKITES INTEGRATED PHOTO-RECHARGEABLE ENERGY STORAGE DEVICE

(51) International classification :B82Y40/00, H01G11/32, H01G11/56, H01G11/84, H01G17/00, H01L31/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system and method for fabrication of all perovskite integrated photo-rechargeable energy storage device. The invention utilizes inorganic perovskites such as CsPbBr3 for solar cell fabrication as well as energy storage devices. These devices are highly stable in ambient condition without any encapsulation. Therefore, the integration with perovskite supercapacitors is more reliable and reproducible. The storage efficiency is improved for series connected solar cells while voltage is improved by stacking the supercapacitors in series. Published with Figure 1

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/12/2023

(21) Application No.202311088825 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED VIRTUAL DOCTOR ROBOT

(51) International classification :G16H0020130000, G16H0050200000, G05D0001020000, B25J0009160000, G07F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention is related to the integration of advanced artificial intelligence (AI), robotics, and medical technology to create an autonomous mobile virtual doctor. The system excels in disease detection, medication dispensing, and medical inspections, providing an unparalleled 24/7 healthcare companion.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/01/2024

(21) Application No.202411002888 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM FOR AUTOMATIC SIEVING AND GRINDING SOIL PARTICLES

(51) International classification :B07B1/28, B07B1/42, B07B1/46
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a system (100) for automatic sieving and grinding soil particles is described. The system (100) comprises at least a frame (102), configured to provide mechanically support to the system (100). Further, at least a hopper (104) coupled with the at least a frame, configured to load the soil particles in the system. Further, at least a controller (302) coupled with the hopper (102). The controller (302) is configured execute instruction via at least a user interface to collect a real time input data from a plurality of sensors (316), of the soil particles; further, separate the soil particles at least based on sizes via at least a vibrating screen (318). Further, grinding the soil particles into fine powder via at least a grinder (320).

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/04/2023

(21) Application No.202311027715 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A COMPOSITION OF TERNARY BLENDED CONCRETE (TBC) MIXTURE

(51) International classification :C21C0007068000, C21C0005000000, A63B0037000000, C04B0028020000, C22B0003000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a cement composition essentially comprising a combination of: (a) cement; (b) argon oxygen decarburization (AOD) steel slag; and (c) jarosite. In accordance with one of the preferred embodiments, the argon oxygen decarburization (AOD) steel slag is a waste from a stainless-steel plant. In accordance with one of the preferred embodiments, the jarosite is a waste material from the zinc ore industry.

No. of Pages : 17 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/10/2023
(21) Application No.202311073028 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD FOR ANOMALY DETECTION IN ELECTRICITY CONSUMPTION USING SMART METER DATA AND GEOGRAPHIC INFORMATION

(51) International classification :G01D4/00, G01R21/133, G01R22/06, G06Q50/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This present invention application describes a novel method for anomaly detection in electricity consumption, utilizing smart meter data and geographic information. The system, operated by a central server, collects data on electricity consumption and trigger datapoints generated by smart meters, indicating any state changes. Upon receiving a trigger datapoint, the system calculates the average electricity consumption during a predefined interval before the trigger and compares it to the consumption for a predefined interval after the trigger. If the post-trigger consumption for predefined interval does not fall below the average, an alert is generated, signifying potential anomalies. The system considers geographic information, such as weather patterns and local events, and suspends alert when an activity in the vicinity of the premises is detected.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/02/2024
(21) Application No.202411014836 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN UNMANNED AERIAL VEHICLES (UAVS) SYSTEM AND A METHOD THEREOF

(51) International classification	:H04N0005232000, B64C0039020000, H04N0005330000, G01J0005000000, H04N0005225000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A system for unmanned aerial vehicles (UAVs). The UAVs comprises a thermal imaging camera for measuring thermal radiation within field of view of the UAVs. Further, an image capturing module for capturing images within field of view of view of the UAVs. Further, a plurality of sensors for detecting hazard objects within field of view of UAVs. Further, a processing unit coupled to the thermal imaging camera, the image capturing module and the plurality of sensors, configured to process the captured data and send to one or more server, wherein the one or more servers performs object recognition and temperature detection and facilitates data transfer between the processor and the API. Further, an API for promoting one or more users to input desired data and transmitting comparison data from one or more server to the users.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/03/2024
(21) Application No.202411017067 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ADAPTABLE MASSAGE DEVICE WITH DETACHABLE MASSAGE HEADS AND EMBEDDED BATTERY COMPARTMENT

(51) International classification	:A61H15/00, A61H23/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The instrument features a modular design, comprising a battery compartment integrated with a bottom case, a middle case housing a motor body, and an upper cover body connected to the middle case. Additionally, a vibration motor, specifically a 0408 coreless motor, enhances the effectiveness of the massage. Furthermore, the instrument offers flexibility with interchangeable massage heads, including those with tail- shaped, circular and arc-shaped cross-sections, each snap-fitted for stability and secure attachment. This innovative massage instrument provides customizable massage options for diverse user needs, combining convenience, versatility, and efficacy in one compact device.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/02/2024

(21) Application No.202411013188 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LIZARD CAPTURING DEVICE AND METHOD OF OPERATING THEREOF

(51) International classification :A01M23/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses Lizard capturing device and method thereof. Present invention discloses a lizard capturing device, which is capable of capturing and then releasing live lizards. The disclosed device comprises two control buttons (2 & 3), a DC motor (5) & a battery (4) to wind and unwind the string (7) of soft material such as silicon and nylon attached to the capturing device. A cup shaped mesh (6) of silicon & nylon string (7) captures the alive lizard when the user presses the button (3), which wind/pull the nylon string attached to circumference of mesh to trap the lizard. Further, user can take the device to the location where he wants to drop/release the lizard and then presses the unwinding/release button (2), which unwinds and releases the string of the cup, hence releases the live lizard.

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/03/2024

(21) Application No.202411015238 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SEAMLESS OPTICAL HORN MECHANISM

(51) International classification :B60Q1/00, B60Q1/14, B60Q1/48, B60Q9/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An automotive lighting system provided with a four-position switch for selectively energizing the high beam (front irradiation), low beam (downward irradiation) and parking light illuminating elements, one type of elements at a time or in given combinations. A two-way switch is electrically connected to the four-position switch provided for selectively energizing no illuminating element when four-position switch is in one position; parking light illuminating elements when fourposition switch is in other position; parking light with low beam illuminating elements when fourposition switch is ·in another position; or parking light with high beam illuminating elements when four-position switch is in its rest one position, when the two-way switch is at its one position, i.e., ideal position. The said two-way switch also provided for selectively energizing high beam illuminating elements when four-position switch is in one position; parking light with high beam illuminating elements when four-position switch is in other position; parking light with high beam illuminating elements when four-position switch is in another position; or parking light with low beam illuminating elements when four-position switch is in its rest one position, when the two-way switch is at its other position, i.e., temporary position under external intervention. The swapping between the two positions of the two-way switch is provided to realize the momentarily switching on and off of the high beam illuminating elements, when the four-position switch is in its one or other position; or momentarily swapping between the low beam and high beam illuminating elements, when the four-position switch is in its another or rest one position, to produce a flash of light beams manifesting an "Optical Hom".

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/03/2024

(21) Application No.202411016846 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ELECTRIC WIRE / CABLE WITH POLYMERIC METAL COMPOSITE STRANDS AND A METHOD OF MANUFACTURING THEREOF

(51) International classification	:H01B13/02, H01B5/08, H01B7/04
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides an electrical wire / cable (100, 200) comprising at least a conducting core (110) made of a plurality of flat strands (S1, S2, S3, S4……), obtained by slitting a web of polymeric metal composite (50), comprising of a base film (10) and at least a conducting layer (11); and at least an insulating sheathing (60) enclosing the conducting core (110). Each strand of the conducting core (110) has a width ranging from 0.1 mm to 2 mm. The electrical wire / cable (200) comprising of the plurality of single core wires / cable (100), either bunched or twisted and enclosed by an insulating polymeric sheathing (70). The conducting layer (11) is any of the metal deposition layer (20) or metal deposition layer (15, 30) or a metal foil (40). The metal foil (40) is laminated with the base film (10) using an adhesive (12). A method of manufacturing of the electrical wires / cables (100,200) is also disclosed. FIG. 3A

No. of Pages : 40 No. of Claims : 59

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/11/2023

(21) Application No.202311077317 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD AND SYSTEM FOR REAL TIME MONITORING OF A POWER SYSTEM

(51) International classification	:G05B23/02, G06F113/04, G06N20/00, G06N3/08, H02J13/00, H02J3/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a method and system for real-time monitoring of a power system. The method comprising sending one or more activation requests to one or more phasor measurement units to initiate data transmission, receiving a plurality of data frames from the one or more phasor measurement units, in response to the one or more activation requests, performing a validation check for the received plurality of data frames, processing the validated data frames to generate a plurality of processed data, synchronizing the plurality of processed data of the one or more phasor measurement units based on time stamp information, to store in a data buffer, analysing the synchronized data to generate a plurality of assessment parameters, and monitoring a power system by generating a real time assessment data based on the plurality of assessment parameters. FIG. 2A

No. of Pages : 50 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/12/2023

(21) Application No.202311089953 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM FOR FULLY AUTOMATIC ORGANIC COATING

(51) International classification :A23P20/10, A23P20/12, B65B25/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system for fully automatic organic coating comprises an input section; a washing unit configured to use water for cleansing of the categorized food items; a collection unit configured to collect spoiled food items into a designated bucket; a drying unit; a recycling unit configured to detect any unwanted items; an organic coating unit configured to apply a nano-coating to foods; a coated foods undergoes a post-coating drying mechanism, an automatic testing process ensures the quality and safety of the foods, resulting in tested foods; a packaging unit is configured to package the tested foods based on the predetermined weights; an incorrect bucket is provided for collecting non-compliant items during the testing phase; a processing module is configured to: a sensors for monitoring the drying process, washing process, coating process, and testing process; a camera for capturing images; and a fan for controlling the airflow for the drying process.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/02/2024

(21) Application No.202411009947 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYNERGISTIC INSECTICIDAL COMPOSITION

(51) International classification	:A01N25/02, A01N25/04, A01N25/14, A01N37/46, A01N43/40, A01N43/80, A01N53/00, A01P7/04
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a synergistic insecticidal composition comprising an isoxazoline insecticide and at least two insecticides, process of preparation of composition and uses thereof.

No. of Pages : 34 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/03/2024

(21) Application No.202411019696 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR METAL IONS DETECTION USING CARBON QUANTUM DOTS (CQDS) BIOSENSOR

(51) International classification :B82Y30/00, B82Y40/00, C09K11/65, G01N21/33, G01N21/64, H01J37/26
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention relates to the preparation of Carbon quantum dots (CQDs) via hydrothermal carbonization, using castor (Ricinus Communis) leaves as a natural precursor. The used technique is a one-step, economical, and environmentally friendly method for CQDs preparation. The prepared CQDs were further characterized by high-resolution transmission electron microscopy (HR-TEM), X-ray photoelectron spectroscopy (XPS), Energy dispersive X-ray spectroscopy (EDX), and Photoluminescence (PL) spectroscopic techniques to investigate their size, shape, elemental composition, and optical characteristics. The obtained results suggest that CQDs are nearly spherical, uniformly distributed, have non-uniform sizes (1.5-4.5 nm) with an average of 2.7 nm, and are weakly crystalline. They are mainly composed of carbon (82.64 %), nitrogen (1.33 %), and oxygen (16.02 %) and comprise various carbon, nitrogen, and oxygen-containing functional groups including carbonyl, hydroxyl, etc. They have broad excitation and emission bands in UV and visible region respectively. They possess excellent photostability in UV, fluorescent light, and salty conditions. They were found selective and sensitive to Fe3+ ions in an aqueous medium based on which they were utilized for Fe3+ ions detection with the lowest limit of detection (LOD) of 19 µM.

No. of Pages : 23 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2024

(21) Application No.202411020965 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A MULTI DOMAIN PIPELINE SYSTEM AND METHOD TO OPTIMALLY IDENTIFY RECHARGE ZONE IN ARID CRATON

(51) International classification :G06K0009620000, C07K0016000000, G02F0001133700, H04L0001060000, H04N0021658000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a multi domain pipeline system and method to optimally identify recharge zone in arid craton. The invention provides a multidomain method which defines a pipeline comprising geospatial, geophysical and hydrogeological processes with a precision of more than 90%. It optimizes a multidomain approach and pipeline and judicious integration and calibration of diverse data sources with an iterative feedback channel for performance improvement. Published with Figures 1 and 2

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2024

(21) Application No.202411020974 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD AND SYSTEM FOR ENHANCING QUANTUM KEY DISTRIBUTION IN CLOUD ENVIRONMENT FOR DATA SECURITY AND PRIVACY

(51) International classification :G06N10/00, H04L9/06, H04L9/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses the computer implemented method for enhancing quantum key distribution includes selecting data to be transmitted by transmitter node/data owner, sending the selected data a quantum key distribution system for processing the data and generating a random quantum key using an improved BB84 protocol, storing the generated quantum key in a quantum key distribution server (QKDS) using quantum communication channel, feeding the generated quantum key to an encryption unit to encrypt/encode the selected data using a hybrid encryption model, uploading the encrypted data and the generated quantum key in a cloud server using a quantum communication channel, obtaining ID connected to the quantum key distribution server from the data owner/transmitter node to access the uploaded quantum key, retrieving the uploaded quantum key using the ID obtained from the data owner/ transmitter node and passing the retrieved quantum key through the quantum communication channel, downloading and decrypting the uploaded from the cloud server using the retrieved key.

No. of Pages : 48 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/03/2024

(21) Application No.202411021465 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PROOF-OF-SECURITY: A ROBUST CONSENSUS MECHANISM FOR BLOCKCHAIN SYSTEMS

(51) International classification :H04L0009320000, G06Q0020060000, G06Q0020200000, G06Q0020380000, H04W0084180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
various industries by providing decentralized and secure transactions. However, the consensus mechanism, which ensures agreement among network participants on the validity of transactions, remains a critical aspect of blockchain systems. Traditional consensus mechanisms such as Proof-of-Work (PoW) and Proof-of-Stake (PoS) have demonstrated certain limitations, including high energy consumption, susceptibility to centralization, and vulnerability to attacks. In this Patent, we propose a novel consensus mechanism termed "Proof-of-Security" (PoS), designed to address the shortcomings of existing approaches while enhancing the security and efficiency of blockchain systems. PoS leverages cryptographic primitives and game-theoretic principles to achieve consensus in a decentralized and resilient manner. Unlike PoW, which relies on computational puzzles, or PoS, which relies on stakeholder voting power, PoS introduces a multi-dimensional security framework that incorporates elements of both computational complexity and stakeholder participation. The key innovation of PoS lies in its ability to dynamically adjust security parameters based on network conditions and threat models, thereby ensuring robustness against diverse attacks, including double spending, Sybil attacks, and selfish mining. Moreover, PoS incentivizes active participation and contribution to the network's security while mitigating the risks of centralization and collusion. We present a formal model of PoS, analyze its security properties, and evaluate its performance through simulations and empirical studies. Our results demonstrate that PoS achieves consensus with high throughput, low latency, and minimal resource consumption, making it suitable for a wide range of blockchain applications, including cryptocurrency, decentralized finance (DeFi), supply chain management, and voting systems. Overall, Proof-of-Security represents a significant advancement in consensus mechanisms for blockchain systems, offering a robust, efficient, and secure foundation for the decentralized future.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/03/2024

(21) Application No.202411016066 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PROCESS FOR PREPARING AN ANTIMICROBIAL AGENT FROM ENDOPHYTIC FUNGI ASSOCIATED WITH HIBISCUS ROSA SINENSIS LEAVES

(51) International classification	:A61P31/00, A61P31/04, C12N1/14
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A process for preparing an antimicrobial agent comprises Hibiscus rosa sinensis leaves rinsed with water multiple times and cutting the same into 1 – 2 cm long pieces. The cut leaves are sterilized by 70 – 75 % concentrated ethanol and then 3 – 4 % concentrated sodium hypochlorite. The sterilized leaves are washed twice with autoclaved distilled water. Multiple pieces of leaves are placed on a plate having potato dextrose agar (PDA) along with 18 – 22 µL antibiotic solution therein. The plates are incubated at a temperature of 28 - 32 ºC until fungal mycelia grew. The fungal mycelia are sub-cultured repeatedly in the fresh PDA plates to obtain a pure culture of fungal mycelia. The pure culture of fungal mycelia is incubated for 4 - 6 days at 28 – 32 ºC in an incubator to obtain endophytic fungi. Hyphal tips of culture are incubated in potato dextrose broth (PDB) and shaking the same in a shaker at a temperature of 28 – 32 oC, 100 – 140 rpm for 12 – 16 days undisturbed. The incubated culture is Centrifuged for 15 – 25 min at 3800 – 4200 rpm to obtain supernatant and pellet separately. Metabolites are extracted from so obtained supernatant by adding an equal volume of ethyl acetate, shaking the same for 4 – 6 minutes, kept undisturbed for 8 - 12 minutes until two clear immiscible layers formed. 2 – 3 v/w sodium sulfate is added to the organic phase to remove possible water residues, filtering the same, and collecting the upper layer of ethyl acetate solvent. The extracted metabolites are transferred into the upper ethyl acetate layer, evaporating the solvent using a rotator vacuum evaporator to obtain a crude extract. The crude extract is Dissolved into DMSO to form the antimicrobial agent of 0.5 – 1.5 % concentration. [Fig.1]

No. of Pages : 28 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024

(21) Application No.202411022763 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR WEBSITE EVALUATION

(51) International classification :G06F16/951, G06F40/00 , G06N20/00, G06N3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The system (100) introduces a novel approach to multimedia analysis and website optimization. It uitilizes a custom neural network architecture and evaluates diverse multimedia elements on websites for quality and contextual relevance. The system (100) uses advanced Natural Language Processing (NLP) techniques and sentiment analysis for analysis of textual and audial content. DRAM features dynamic adaptation to evolving web content standards and employs predictive cross-browser compatibility testing for proactive issue identification. The system (100) integrates semantic-visual analysis, employing a proprietary matrix of similarity and visual feature extraction for comprehensive content assessment. The system (100) also uses real-time benchmarking, user feedback loops, and a proprietary scoring system for immediate and accurate evaluations of website relevance and effectiveness.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024
(21) Application No.202411023644 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENGINE HEALTH MONITORING FOR HAUL TRUCK FLEETS THROUGH NRF NETWORK AND IOT-BASED SYSTEM

(51) International classification :G07C0005000000, G07C0005080000, G05B0023020000, G06Q0010080000, H04N0005210000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Engine Health Monitoring for Haul Truck Fleets through nRF Network and IoT-Based System comprises of HTF_RFNTMote (100), MPU Sensor (101), OBD2 16pin Module (102), Power Supply (103), Atmega16 MCU Board (104), nRF Module (105), HTF_RFNRMote (200), GSM Modem (201), Touch TFT Display (202), LED Indicator (203), Buzzer (204), Power Supply (205), ATmega 16 MCU Board (206) and nRF Module (207). Utilized as an embedded device within Haul Trucks, the HTF_RFNTMote is outfitted with an Atmega16 MCU Board, nRF Module, OBD2 16pin Module, MPU Sensor, and Power Supply. It actively gathers and transmits real-time engine health data, including motion information from MPU sensors and diagnostics from OBD2 modules, enabling proactive maintenance and enhancing fleet management efficiency overall. Positioned strategically on the dashboard of Haul trucks, the HTF_RFNRMote is outfitted with an Atmega16 MCU Board, nRF Module, Touch TFT Display, GSM Modem, Buzzer, Led Indicator, and Power Supply. It receives and displays real-time engine health data from HTF_RFNTMote devices through a nRF network, allowing user interaction with a Touch TFT Display and transmitting data to a centralized cloud server for extensive fleet-wide analysis, alerts, and predictive maintenance decision-making.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023645 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONDITION MONITORING SOLUTION UTILIZING SX1272 RF TECHNOLOGY FOR ENHANCED OVERSIGHT OF PLASTIC INJECTION MOLDING IN THE MANUFACTURING PROCESS

(51) International classification	:G16H0040670000, B29C0045170000, B29C0045760000, G06F0011300000, G01P0015090000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Condition Monitoring Solution Utilizing SX1272 RF Technology for Enhanced Oversight of Plastic Injection Molding in the Manufacturing Process comprises of PIL_COTCMote (100), SX1273 RF Module (101), Power Supply (102), Temperature Sensor (103), Vibration Sensor (104), Accelerometer (105), ATmega8 MCU Board (106), PIL_CORCMote (200), Customized Switches (201), Power Supply (202), ATmega8 MCU Board (203), SX1273 RF Module (204), Display (205) and GSM Modem (206). The ATmega8 MCU Board, SX1273 RF Module, Accelerometer, Vibration Sensor, Temperature Sensor, and Power Supply equipped PIL_COTCMote plays a critical role in this innovation by continuously monitoring and transmitting real-time data on temperature, vibration, and acceleration during plastic injection molding processes. This allows for proactive decision-making for improved efficiency and reliability as well as comprehensive insights into operational health. Remote health monitoring and control of SX1272 RF Technology is provided by the PIL_CORCMote, which is outfitted with an ATmega8 MCU Board, an SX1273 RF Module, a GSM Modem, a display, customized switches, and a power supply. This allows operators to communicate via a web dashboard, get timely alerts, and guarantee optimal performance during the plastic injection molding process. Both PIL_COTCMote and PIL_CORCMote can communicate wirelessly thanks to the embedded SX1273 RF Module, which also makes it possible to monitor and manage both motes remotely. Critical data is transmitted seamlessly in real time.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023646 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN AUTOMATION CONTROL AND FEEDBACK DEVICE, INTEGRATED WITH NRF AND IOT, TO EFFICIENTLY GOVERN CONVEYOR BELTS AND ROLLERS FOR ENSURING SMOOTH MATERIAL MOVEMENT ON THE PRODUCTION LINE

(51) International classification	:H04W0084120000, G08C0017020000, G05B0019418000, H04W0088060000, H04W0004800000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT An Automation Control and Feedback Device, Integrated with nRF and IoT, to Efficiently Govern Conveyor Belts and Rollers for Ensuring Smooth Material Movement on the Production Line comprises of Hazardous Monitoring Mote (100), RA01 Module (101), STM32 Processor (102), Power Supply (103), Vibration Sensor (104), Temperature Sensor (105), Pressure Sensor (106), Volatile organic Compound (VOC) Sensor (107), Level Sensor (108), Centralize Monitoring Mote (200), Hooter (201), TFT Display (202), Power Supply (203), STM32 Procesor (204), RA01 Module (205) and ESP01 Wifi Module (206). Conveyor belt and roller management is made possible on-site by the GCB_ACFDTMote, which is outfitted with a Raspberry Pi board, nRF Module, Actuator Module, Micro SD card, Speaker, and Power Supply. It also offers the added benefits of remote control via the nRF-based system and real-time monitoring through the customized web dashboard. The GCB_ACFDRMote, which has a Raspberry Pi board, nRF Module, Speaker, Display, Keypad, and Power Supply, is used to provide wireless remote control of rollers and conveyor belts. It provides visual feedback and allows user interaction through a web dashboard.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023647 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATING IOT AND WPAN-BASED SYSTEMFOR WIRELESSLY MONITORING THE CONDITION OF PRESS MACHINES INAUTOMOTIVE SHEET METAL STAMPING AND FORMING

(51) International classification :A61K0036730000, A61B0005000000, G08B0021020000, H04W0004800000, E21B0047130000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Integrating IoT and WPAN-Based System for Wirelessly Monitoring the Condition of Press Machines in Automotive Sheet Metal Stamping and Forming comprises of CMPM_WDTMote (100), XBee RF Module with Explorer (100A0, Power Supply (100B), Displacement Sensor (100C), Pressure Sensor (100D), Vibration Sensor (100E), Temperature Sensor (100F), Raspberry Pi Pico Board (100G), CMPM_WDRMote (200), XBee RF Module with Explorer (200A), Power Supply (200B), Keyboard (200C), Buzzer (200D), HMi Display (200E) GSM Modem (200F) and Raspberry Pi Pico Board (200G). Positioned strategically on press machines in automotive sheet metal stamping and forming, the CMPM_WDTMote is outfitted with a Raspberry Pi Pico Board, an XBee RF Module with Explorer, temperature, vibration, pressure, displacement, and power supply. Its purpose is to gather vital data on temperature, vibrations, pressure, and displacement, and transfer it via an XBee RF WPAN network to a central hub for real-time monitoring and analysis. This reduces downtime and enables proactive maintenance. The CMPM_WDRMote is used to process data received from CMPM_WDTMote via XBee RF WPAN network and present real-time machine condition information on an HMI display while generating alerts for operators through a buzzer, facilitating timely decision-making and proactive maintenance. It is equipped with a Raspberry Pi Pico Board, an XBee RF Module with Explorer, a GSM modem, an HMI display, a keyboard, a buzzer, and a power supply.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023648 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EXTERNAL IOT DEVICE FOR HEALTH MONITORING OF SCREWING MACHINES IN AUTOMOTIVE ASSEMBLY LINES

(51) International classification :H04L0067120000, H04W0004700000, G07C0005000000, H04W0004380000, A61B0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT External IoT Device for Health Monitoring of Screwing Machines in Automotive Assembly Lines comprises of HMSM_DCTMote (100), GSM Modem (100A), Vibration Sensor (100B), Temperature and Humidity Sensor (100C), Power Supply (100D), Pressure Sensor (100E), Accelerometer (100F) and Raspberry Pi 4 Processor Board (100G). Using Internet of Things (IoT) technology and AI-driven analytics, the HMSM_DCTMote, which is outfitted with a Raspberry Pi 4 processor board, GSM modem, vibration sensor, temperature and humidity sensor, accelerometer, pressure sensor, and power supply, enables real-time monitoring and data acquisition from various sensors to enable proactive health management of screwing machines in automotive assembly lines. HMSM_DCTMote's built-in GSM modem is used to send the gathered information about screwing machine condition effectively to a customized cloud server for real-time analysis and AI-driven insights in automotive assembly lines.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023649 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AUTOMATION AND FEEDBACK CONTROL SYSTEM FOR ROBOTIC ARMS IN AUTOMOTIVE ASSEMBLY AND WELDING PROCESSES WITH IOT REMOTE FEATURING CC2500 TECHNOLOGY

(51) International classification :A61B0034370000, G08C0017020000, G05B0015020000, B23K0037040000, B25J0019000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Automation and Feedback Control System for Robotic Arms in Automotive Assembly and Welding Processes with IoT Remote Featuring CC2500 Technology comprises of RAAA_WPCTMote (100), SSR Module (101), Buzzer (102), Power Supply (103), TI MSP430 Board (104), CC2500 RF Module (105), Actuator (106), RAAA_WPCRMote (200), CC2500 RF Module (201), Power Supply (202), Indicator (203), Custom Control Keyboard (204), ESP8266 Wifi board (205) and TI MSP430 Board (206). To improve operational flexibility and efficiency, robotic arms used in automotive assembly and welding can be wirelessly controlled and optimized by the RAAA_WPCTMote, which is outfitted with TI MSP430 Board, CC2500 RF Module, Actuator Module, SSR Module, Buzzer, and Power Supply. To extend control capabilities to a remote context, the RAAA_WPCRMote, which is outfitted with a TI MSP430 Board, CC2500 RF Module, ESP8266 Wifi Board, Custom Control Keyboard, Indicator, and Power Supply, is utilized. This allows operators to remotely command and monitor robotic arms through a personalized web dashboard, offering flexibility and real-time feedback in automotive assembly and welding processes.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023650 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A HANDHELD MONITORING AND CONTROL DEVICE INTEGRATED WITH NRF TECHNOLOGY FOR PLASTIC INJECTION MOLDING MACHINE TO PREVENT DISRUPTIONS IN THE MANUFACTURING PROCESS

(51) International classification :B29C0045760000, B29C0045170000, B29C0045180000, B29C0045840000, G06F0003041000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A Handheld Monitoring and Control Device Integrated with nRF Technology for Plastic Injection Molding Machine to Prevent Disruptions in the Manufacturing Process comprises of PIMM_HHMCTMote (10), Relay Module(10A), Indicator (10B), Proximity (10C), Power Supply (10D), STM32 Board (10E), nRF Module (10F), PIMM_HHMCTMote (20), ESP32 Board (20A), nRF Module(20B), Power Supply(20C), Buzzer (20D), HMI UI Touch Display (20E) and STM32 Board(20F).The PIMM_HHMCTMote is a handheld control device with wireless communication capabilities, relay control, and feedback mechanisms that allows operators to remotely and effectively manage plastic injection molding machines, thereby improving operational control and preventing disruptions in the manufacturing process. It is equipped with an STM32 Board, nRF Module, Relay Module, Indicator, Proximity Sensor, and Power Supply.To improve user experience and operational efficiency, the PIMM_HHMCRMote, which is outfitted with an STM32 Board, nRF Module, ESP32 Board, HMI UI Touch Display, Buzzer, and Power Supply, is utilized to give operators an interactive and user-friendly way to remotely control and monitor plastic injection molding machines.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023651 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EXTERNAL CONTROL PANEL WITH CC2500 RF CAPABILITY FOR CONTROLLING AND MONITORING SCREWING MACHINES ON AUTOMOTIVE ASSEMBLY LINES

(51) International classification :G05B0019418000, A61K0036730000, G07C0009000000, H04W0008000000, G05B0019042000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT External Control Panel with CC2500 RF Capability for Controlling and Monitoring Screwing Machines on Automotive Assembly Lines comprises of ECP_MSMCMote (10), Single Channel Relay Module (10A), Micro SD Card (20B), Power Supply (20C), Raspberry Pi Board (20D), CC2500 RF Module (20E), ECP_MSMHHMote (20), HMI Display (20A), Keypad (20B), Power Supply (20C), Raspberry Pi Board (20D) and CC2500 RF Module (20E). To enable wireless and remote operation of screwing machines on automotive assembly lines, the ECP_MSMCMote, which is equipped with a Raspberry Pi board, CC2500 RF Module, Single Channel Relay Module, Micro SD card, and Power Supply, is used. This allows for seamless on/off control and real-time monitoring. The ECP_MSMHHMote is designed to give operators on automotive assembly lines an easy-to-use interface for interacting with and controlling screwing machines. It is outfitted with a Raspberry Pi board, CC2500 RF Module, HMI Display, Keypad, and Power Supply.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023652 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INNOVATIVE GAS TURBINE MONITORING SYSTEM IN OIL AND GAS INDUSTRIES USING CC2500 RF TECHNOLOGY WITH CLOUD LOGGING

(51) International classification :C02F0001280000, H04L0067100000, A61B0005020500, G06Q0050060000, E21B0047120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Innovative Gas Turbine Monitoring System in Oil and Gas Industries using CC2500 RF Technology with Cloud Logging comprises of GTMS_OGITCMote (100), CC2500 RF Module (101), Power Supply (102), Pressure Sensor (103), RPM Sensor (104), Temperature Sensor (105), Vibration Sensor (106), STM32 Board (107), GTMS_OGIRCMote (200), GSM Modem (201), Buzzer (202), Power Supply (203), HMI Display (204), CC2500 RF Module (205) and STM32 Board (206). The GTMS_OGITCMote, which is outfitted with an STM32 Board, a CC2500 RFModule, a vibration sensor, a temperature sensor, an RPM sensor, a pressure sensor, and a power supply, is utilized to actively monitor and gather vital data from gas turbines in the oil and gas industries. By means of wireless communication to a centralized cloud server, real-time insights and predictive maintenance are made possible. The Gas Turbine Monitoring System for Oil and Gas Industries is enhanced by the GTMS_OGIRCMote, which is outfitted with an STM32 Board, CC2500 RFModule, GSM Modem, HMI Display, Buzzer, and Power Supply. It also offers an easy-to-use interface with an HMI display and enables timely alerts through a buzzer, all of which contribute to efficient data transmission, user interaction, and prompt response to critical conditions.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023653 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : DEPLOYMENT OF CONTROL AND MONITORING SYSTEM FOR CNC MACHINES IN PRECISION MACHINING OF COMPONENTS USING XBEE WPAN NETWORK

(51) International classification	:H05B0045100000, B23Q0003060000, H04N0005640000, B23Q0007040000, H02K0007180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Deployment of Control and Monitoring System for CNC Machines in Precision Machining of Components using XBee WPAN Network comprises of LGWN_CNCCTMote (100), Actuator (101), LED Indicator (102), Temperature Sensor (103), Power Supply (104), ATmega328 Board (105), XBee Explorer (106), XBee RF Module (107), LGWN_CNCCRMote (200), XBee RF Module (201), NuttyFi Wifi Board (202), Power Supply (203), LED Indicator (204), Keypad (205), XBee Explorer (206) and ATmega328 Board (207). The LGWN_CNCCTMote, which has an ATmega328 Board, an XBee RF Module, an XBee Explorer, an actuator, an LED indicator, a temperature sensor, and a power supply, is used to enable remote control and monitoring of CNC machines. It also facilitates real-time decision-making for improved component machining precision by offering instant visual feedback. The LGWN_CNCCRMote, which has an ATmega328 Board, an XBee RF Module, a NuttyFi Wifi Board, an XBee Explorer, a Keypad, an LED indicator, and a power supply, is used to increase the precision and efficiency of CNC machine operations by expanding connectivity beyond the XBee RF network and providing a variety of control options. The XBee RF Module, which is built into both of the motes, is utilized to provide smooth communication inside the invention. This allows for the establishment of a strong wireless network that links CNC control and monitoring equipment, guaranteeing effective and dependable remote machine operation.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023659 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENHANCING SMART COFFEE MACHINES WITH EXTERNAL LORA AND IOT-EQUIPPED ADD-ON FOR WIRELESS AUTOMATION AND REMOTE OPERATION

(51) International classification :A47J0031440000, A61K0036730000, H04N0021431000, G08C0017020000, A63B0071060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Enhancing Smart Coffee Machines with External LoRa and IoT-equipped Add-On for Wireless Automation and Remote Operation comprises of SCM_AHDCOMote (100), LoRa Module (200), Power Supply (300), SSR Module (400), Relay Module (500), Speaker (600), Raspberry Pi 4 Processor Board (700), SCM_AHDTCOMote (1000), LoRa Module (1100), Power Supply (1200), ESP32 Board (1300), Touch TFT Display (1400) and Buzzer (1500). Remote control of the coffee maker is enabled by the SCM_AHDCOMote, which is outfitted with a Raspberry Pi 4 Processor Board, LoRa Module, Relay Module, SSR Module, Speaker, and power supply. This allows users to personalize and operate their coffee-making experience from a distance. The Raspberry Pi 4 Processor Board, LoRa Module, ESP32 Board, Touch TFT Display, Buzzer, and Power Supply of the SCM_AHDTCOMote are utilized to provide an interactive user interface that allows for both local and remote control of the coffee maker. Users can also customize the coffee maker and receive real-time feedback.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023662 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : OIL LEVEL MONITORING SOLUTION FOR DISTRIBUTION TRANSFORMERS IN OIL AND GAS INDUSTRIES USING LORA LPWAN

(51) International classification :C02F0001280000, C02F0103100000, G08C0017020000, G01F0023296000, G08G0001095000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Oil Level Monitoring Solution for Distribution Transformers in Oil and Gas Industries using LoRa LPWAN comprises of DTOGI_TCMote (100), Power Supply (100A), LED Indicator (100C), Waterproof Ultrasonic Sensor (100D), LoRa Module (100E), TI MSP430 Board (100F), DTOGI_RCMote (200), GSM Modem (200A), Power Supply (200B), Display (200C), LoRa Module (200D) and TI MSP430 Board (200E). In the oil and gas industries, the DTOGI_TCMote, which is outfitted with a TI MSP430 Board, LORA Module, Waterproof Ultrasonic Sensor, LED Indicator, and Power Supply, is utilized to precisely gauge oil levels in distribution transformers and send real-time data for remote monitoring. The DTOGI_RCMote is utilized for GSM communication and a local display to receive data from DTOGI_TCMote, facilitating on-site monitoring. It is also outfitted with a TI MSP430 Board, LORA Module, GSM Modem, Display, and Power Supply. Additionally, it functions as a bridge to transmit the collected data to a customized cloud server for extensive analytics and remote access in the oil and gas industries.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/03/2024

(21) Application No.202411024615 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IMPROVED POWER GENERATION SYSTEM

(51) International classification :H02K41/06, H02K7/18, H02K99/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An improved power generation system (100) includes a circular track (102), a plurality of primary coils (104) configured within the circular track (102) at a predefined position, a plurality of rolling bogies (108) electromagnetically coupled to the plurality of primary coils (104), and a rotor hub (110) positioned at a center of the circular track (102). The rotor hub (110) is coupled to the plurality of rolling bogies (108) via a plurality of radially positioned connecting pipes (112). In power generation mode, the system (100) activates the power supply unit (106) to energize each of the primary coils (104) to create a magnetic field that propels the rolling bogies (108) along the circular track (102) at the predefined speed, thereby rotating the rotor hub (110) and facilitating the generation of electrical power.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/03/2024

(21) Application No.202411021654 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ASSAULT TRACKWAY PLANKS AND SYSTEM FROM COMPOSITE PREPARED FROM WASTE PLASTIC AND OTHER WASTE

(51) International classification :B09B3/00, B29B17/00, E01C5/20
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to the trackway planks from composite prepared from waste plastic and other waste and its method of preparation. The weight of composite based trackway (~180 kg for 25 m roll) is around 50% of the conventional metal based product in use. The decreases in weight makes it easy for loading, unloading, laying and recovery. It also reduces the transportation cost of the products because of the requirement of less space for same track length. The design of planks and their connection make the trackway easy to roll. The cost of the developed products will also very less than the conventional products. Published with Figures 1, 2, 3

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411023936 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : READY TO INSTALL REUSABLE AND RUST-FREE VERTICAL PIPE COMPONENT SYSTEM

(51) International classification	:E04B0002740000, E04C0002380000, E02D0029020000, E03C0001122000, B01J0023100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides ready-to-install reusable and rust-free vertical pipe component system as shown in figure 1. Vertical pipes serve as the primary structural element within the partition wall system, providing upright support along the length of the partition wall system. These vertical pipes feature both rectangular and circular hole sections, which are utilized for securing and accommodating other system components such as end brackets, levellers, top connectors, panel brackets and edge brackets.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202411024253 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MAPPING AND GEODATABASE DEVELOPMENT FOR ANALYSIS ANDQUERY USING CARTOSAT – 1 AND GEOEYE – 1 SATELLITE DATA

(51) International classification :G06F0016290000, G01C0011020000, B33Y0030000000, G01C0015020000, G06K0019077000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention provides for a novel and unique method to create a geodatabase for different feature layers using Erdas Imagine 9.2 and Leica Photogrammetric Suite (LPS) and Arc GIS 9.3 softwares. Further, the present invention provides for a method to extract the topographic features to prepare a map using Cartosat – 1 and Geoeye – 1 satellite stereo data. Moreover, the present invention relates to a method for Mapping from Cartosat – 1; and GeoEye – 1 data and Querying.

No. of Pages : 25 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025281 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENHANCING INDUSTRIAL PRODUCTION EFFICIENCY THROUGH AI-DRIVEN PREDICTIVE MAINTENANCE INTERVENTIONS FOR AUTONOMOUS DRILLING SYSTEMS

(51) International classification :H04L0067120000, G06Q0010060000, G06N0005040000, G06Q0010000000, H04L0001180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Enhancing Industrial Production Efficiency through AI-Driven Predictive Maintenance Interventions for Autonomous Drilling Systems comprises of IPE_ADMTMote(1000), DHT Sensor(1001), Vibration Sensor(1002), Power Supply(1003), Displacement Sensor(1004), GSM Modem(1005), ESP32 Module(1006) and STM32 Board(1007).In order to improve the efficiency and dependability of autonomous drilling systems in industrial settings, the IPE_ADPMTMote—which is outfitted with an STM32 Board, ESP32 Module, GSM Modem, Vibration Sensor, DHT Sensor, Displacement Sensor, and Power Supply—is utilized to facilitate real-time data acquisition from a variety of sensors, enable AI-driven predictive maintenance interventions, and give operators actionable insights through an intuitive display and remote access via a web dashboard.The innovation's central processing unit, the STM32 Board, coordinates the various hardware parts, oversees sensor data acquisition, and allows for smooth communication. This allows the IPE_ADPMTMote to conduct real-time analysis and AI-driven predictive maintenance interventions for autonomous drilling systems.This innovation relies on the ESP32 Module, which is used to enable smooth data transmission and connectivity, guarantee the integration of various sensors, and support real-time data transmission from the device to a cloud server for AI-driven predictive maintenance interventions in autonomous drilling systems.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025022 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CHEWABLE TABLET FORMULATION COMPRISING CARICA PAPAYA LEAF EXTRACT AND PREPARATION METHOD THEREOF

(51) International classification :A61K0009000000, A61K0009200000, A61K0036185000, A61K0031498000, A61K0047360000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a chewable tablet formulation comprising phytosomes of carica papaya leaf extract. The formulation further includes diluent, binder, saliva stimulating agent, sweetener, cooling agent, flavoring agent, glidant, lubricant and solvent. The invention also provides a process for preparation of chewable tablet formulation.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025060 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EARLY WARNING METHOD FOR DISTRIBUTION TRANSFORMER WEIGHT OVERLOAD USING CC3000 RF-ENABLED IOT SOLUTION

(51) International classification :G01R31/62, G05B23/02, G16Y10/35, G16Y40/10, H01F27/40, H02J13/00, H04W4/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Early Warning Method for Distribution Transformer Weight Overload using CC3000 RF-enabled IoT Solution comprises of DTWO_EWMTMote (100), Current Sensor (110), CC3000 RF Module (120), Power Supply (130), Voltage Sensor (140), Temperature Sensor (150), Vibration Sensor (160), TI AM69 Processor Board (170), DTWO_EWMCMote (300), CC3000 RF Module (310), GSM Modem (320), TI AM69 Processor Board (330), Power Supply (340), Buzzer (350), Keypad (360) and HMI Display (370). Using a combination of vibration, temperature, current, and voltage sensors as well as wireless communication capabilities, the DTWO_EWMTMote—which is outfitted with a TI AM69 Processor Board, CC3000 RF Module, Vibration Sensor, Temperature Sensor, Voltage Sensor, and Power Supply—is utilized to continuously monitor and transmit vital data from distribution transformers, facilitating the early detection of potential weight overload issues. To provide a comprehensive solution for monitoring distribution transformer weight overload, the DTWO_EWMCMote is outfitted with a TI AM69 Processor Board, CC3000 RF Module, GSM Modem, HMI Display, Keypad, Buzzer, and Power Supply. This configuration enables remote communication, user-friendly interaction, and audible alerts. For the purpose of enabling wireless communication between the monitoring devices (DTWO_EWMTMote and DTWO_EWMCMote) and facilitating the seamless transmission of vital sensor data for the real-time monitoring of distribution transformer weight overload, the CC3000 RF Module is integrated into both of the motes.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025061 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS GLASS CLEANING MACHINE MONITORING AND CONTROL SYSTEM USING CC3000RF & IOT TECHNOLOGY

(51) International classification :F21Y0115100000, A61K0036730000, H04L0067120000, H04M0001724150, G08B0025140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Wireless Glass Cleaning Machine Monitoring and Control System Using CC3000RF & IoT Technology comprises of WCS_GCMTCMote (100), CC3000 RF Module (101), Rechargeable Battery (102), Piezo Buzzer (103), Relay Module (104), Raspberry Pi Processor Board (105), WCS_GCMRCMote (200), Rechargeable Battery (201), Led Indicator (202), Keypad (203), ESP01 Wifi Board (204), CC3000 RF Module (205) and Raspberry Pi Processor Board (206). The Precision Switching Glass Cleaning Machine's functions, including relay control and real-time feedback, can be locally managed and observed by users with the help of the WCS_GCMTCMote, which is outfitted with a Raspberry Pi Processor Board, CC3000 RF Module, Relay Module, Piezo Buzzer, and Rechargeable Battery. This wireless communication is made possible by the CC3000 RF technology. The WCS_GCMRCMote, which has an LED indicator for status feedback, a keypad for input, an ESP01 WiFi Board, a Raspberry Pi Processor Board, a CC3000 RF Module, and a rechargeable battery, is used to connect to the Internet and enable users to operate the Precision Switching Glass Cleaning Machine through a dedicated mobile app. Both of the motes' CC3000 RF Modules provide for smooth wireless communication between the WCS_GCMTCMote and WCS_GCMRCMote, guaranteeing effective local and remote control and monitoring of the Precision Switching Glass Cleaning Machine.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025062 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENABLING SEAMLESS AND INTELLIGENT CONVEYOR BELT CLEANER CONTROL MANAGEMENT THROUGH LONG-RANGE LORAWAN-BASED IOT SOLUTIONS

(51) International classification :B65G0045120000, B65G0045160000, H04L0067120000, G06F0003048400, A47L0009280000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Enabling Seamless and Intelligent Conveyor Belt Cleaner Control Management through Long-Range LoRaWAN-Based IoT Solutions comprises of ICBC_CMTMote (500), LoRaWAN Module (510), TI MSP432 IC Board (520), Power Supply (530), Buzzer (540), Relay Module (550), SSR Module (560), ICBC_CMRMote (600), Multicolour Led Module (610), Keypad (620), Power Supply (630), ESP8266 Wifi Module (640), LoRaWAN Module (650) and TI MSP432 IC Board (660). The LoRaWAN technology and advanced hardware components are used by the ICBC_CMTMote, which is outfitted with a TI MSP432 IC Board, LoRAWAN Module, SSR Module, Relay Module, Buzzer, and Power Supply, to enable precise and long-range control over the switching and speed of the conveyor belt cleaner in industrial settings. The conveyor belt cleaner may be remotely controlled and monitored by operators using the ICBC_CMRMote, which is outfitted with a TI MSP432 IC Board, LoRAWAN Module, ESP8266 Wifi Module, Keypad, Multicolor Led Module, and Power Supply. This feature improves flexibility and offers real-time feedback. The LoRaWAN Module, which is built into both motes, enables long-range wireless communication between the user interface (ICBC_CMRMote) and the core control unit (ICBC_CMTMote), guaranteeing dependable and smooth data transmission for accurate control and monitoring of the conveyor belt cleaner in industrial settings.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025063 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MAXIMIZING WATER SUSTAINABILITY THROUGH NRF WIRELESS TECHNOLOGY AND AN IOT-BASED REMOTE CONTROL SYSTEM FOR VERTICAL SUCTION TYPE SELF-CLEANING IN WASTEWATER TREATMENT PLANTS

(51) International classification	:G06Q0010080000, A61B0034100000, H04N0021414000, H04N0021422000, G06F0003041000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Maximizing water sustainability through nRF wireless technology and an IoT-based remote control system for vertical suction type self-cleaning in wastewater treatment plants comprises of WS_WSTPmote(100), nRF Module(110), STM32 Board(120), Power Supply(130), Buzzer(140), Indicator(150), Actuator Module(160), WS_WSTPRMote(200), Touch Screen Display(210), Power Supply(220), nRF Module(230), ESP32 Board(240) and STM32 Board(250) In wastewater treatment facilities, the WS_WSTPMote, which is outfitted with an STM32 Board, nRF Module, Actuator Module, Indicator, Buzzer, and Power Supply, is utilized to provide precise switching and real-time monitoring of vertical suction type self-cleaning procedures. Using a customized mobile app, the WS_WSTPRMote, which is outfitted with an STM32 Board, nRF Module, ESP32 Board, Touch Screen Display, and Power Supply, facilitates a smooth Internet of Things integration for remote control and monitoring of wastewater treatment processes. The two motes' integrated nRF Module enables wireless communication, allowing for remote control and feedback features for precisely adjusting the vertical suction type self-cleaning in wastewater treatment facilities.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025064 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A VISION & IOT BASED BIOMETRIC SYSTEM TO ENHANCE SAFETY SHIELD FOR ROTARY DRILLING RIGS IN MINING OPERATION

(51) International classification :H04N0005225000, H04L0009320000, G06F0021310000, H04N0005232000, H04W0004029000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A Vision & IoT based biometric system to enhance Safety shield for rotary drilling rigs in Mining Operation comprises of VBS_RDRTCMote (100), Camera Module (200), Touch TFT Display (300), Power Supply (400), GSM Modem (500), Finger Print Sensor (600) and Raspberry Pi Processor Board (700). To ensure comprehensive employee authentication, monitor industrial gestures, and facilitate real-time data transmission for enhanced safety and security in rotary drilling rigs during mining operations, advanced biometric and vision-based technologies are employed with the VBS_RDRTCMote, which is equipped with a Raspberry Pi Processor Board, Camera Module, Finger Print Sensor, GSM Modem, Touch TFT Display, and Power Supply. The computing capacity required for real-time data processing, authentication algorithms, and the smooth integration of various sensors to improve safety and security measures in mining operations is provided by the Raspberry Pi Processor Board, which is included in this innovation. This innovation's integrated Camera Module collects visual data for industrial gesture analysis, facial recognition, and general monitoring. This helps to build a strong biometric system that improves security and safety in rotary drilling rigs during mining operations.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025065 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : IOT-BASED FORCED DRAFT COOLING TOWER MONITORING AND MANAGEMENT SYSTEM WITH LORA-ENABLED EXTERNAL DEVICE

(51) International classification	:H04W0004800000, H04W0004700000, H04W0084120000, F28C0001020000, F28F0025000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT IoT-Based Forced Draft Cooling Tower Monitoring and Management System with LoRa-Enabled External Device comprises of LEED_FDCTTMote (200), LoRa Module (250), Temperature Sensor (300), Humidity Sensor (350), Flow Sensor (400), Vibration Sensor (450), Pressure Sensor (500), Power Supply (550), TI AM69 Processor Board (600), LEED_FDCTRMote (1000), Display (1050), NuttyFi Wifi Board (1100), Buzzer (1150), Custom Keypad (1200), Power Supply (1250), TI AM69 Processor Board (1300) and LoRa Module (1350). Using a variety of sensors and LoRa communication, the LEED_FDCTTMote—which is outfitted with a TI AM69 Processor Board, Lora Module, temperature, humidity, flow, vibration, pressure, and power supply—is utilized to continuously monitor and transmit critical operational parameters, facilitating real-time insights and analysis for optimal cooling tower performance.The LEED_FDCTRMote is utilized to enable wireless data reception from LEED_FDCTTMote, to provide a local user interface with display and keypad for monitoring and control, and to enable prompt response to alerts through email communication. It is outfitted with TI AM69 Processor Board, Lora Module, NuttyFi Wifi Board, Display, Custom Keypad, Buzzer, and Power Supply.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025066 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : IOT-BASED REMOTE DEVICE CONTROL WITH CC2500RF WIRELESS TECHNOLOGY FOR PRECISION SWITCHING IN TUBE BENDING MACHINES AUTOMATION

(51) International classification :G08C0017020000, B21D0007024000, G08C0017000000, H02J0013000000, B21D0007120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT IOT-BASED REMOTE DEVICE CONTROL WITH CC2500RF WIRELESS TECHNOLOGY FOR PRECISION SWITCHING IN TUBE BENDING MACHINES AUTOMATION IoT-Based Remote Device Control with CC2500RF Wireless Technology for Precision Switching in Tube Bending Machines Automation comprises of RDC_WTTBMTMote (100), CC2500 RF Module (110), Power Supply (120), Single Channel Relay Module (130), STM32 Board (140), RDC_WTTBMRMote (200), Display (210), STM32 Board (260), Power Supply (220), Custom Keys (230), GSM Modem (240), CC2500 RF Module (250) and STM 32 Board (260). To wirelessly control precise switching in tube bending machines, the RDC_WTTBMTMote—which is outfitted with an STM32 Board, CC2500 RF Module, Single Channel Relay Module, and Power Supply—is utilized. This ensures effective on/off functionalities for increased automation. With the STM32 Board, CC2500 RF Module, GSM Modem, Display, Custom Keys, and Power Supply attached, the RDC_WTTBMRMote enhances the efficiency and accessibility of tube bending machine automation by offering advanced control capabilities, such as remote operation and monitoring, through an intuitive interface. The RDC_WTTBMTMote and RDC_WTTBMRMote both have wireless connectivity enabled by the CC2500 RF Module, which also supports advanced features like remote operation and monitoring and allows for precise control signals for on/off functions in tube bending machines.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025067 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EXTERNAL IOT PLUGIN SOLUTION WITH PREDICTIVE MAINTENANCE FOR TRANSFORMER CONDITION RISK MANAGEMENT

(51) International classification	:G05B0023020000, G06N0020000000, G06Q0010000000, G06N0020200000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT EXTERNAL IOT PLUGIN SOLUTION WITH PREDICTIVE MAINTENANCE FOR TRANSFORMER CONDITION RISK MANAGEMENT External IoT Plugin Solution with Predictive Maintenance for Transformer condition risk management comprises of TCRM_PMTCMote (1000), Power Supply (1100), Ethernet Board for Output (1200), Neural Stick (1300), RS485 Custom Board for Data Fetching (1400), GSM Modem (1500) and HMI Display (1600). Machine learning and artificial intelligence are utilized in the TCRM_PMTCMote, which is equipped with a Raspberry Pi Processor Board, GSM Modem, RS485 Custom Board for Data Fetching, Neural Stick, Ethernet Board for Output, HMI Display, and Power Supply, to enable real-time condition monitoring, predictive insights, and proactive maintenance suggestions. In addition to maximizing transformer performance and lifespan, this minimizes downtime. TCRM_PMTCMote's embedded GSM modem facilitates smooth connection by allowing vital sensor data to be transmitted from industrial transformers to the central server, guaranteeing timely predictive maintenance interventions and real-time monitoring. To efficiently collect data from industrial transformers and ensure a secure and dependable connection for the smooth integration of sensor data into the predictive maintenance system, TCRM_PMTCMote has integrated an RS485 Custom Board for Data Fetching.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025068 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATING LORA AND IOT FOR SEAMLESS CONTROL AND REAL-TIME MONITORING OF BLOW MOLDING MACHINES IN PLASTIC MANUFACTURING INDUSTRY

(51) International classification	:B29C0049420000, B29C0049040000, B29C0049560000, B29C0049480000, H04L0027260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Integrating LoRa and IoT for Seamless Control and Real-time Monitoring of Blow Molding Machines in Plastic Manufacturing Industry comprises of LICM_BMMTCMote (500), LoRa Module (501), Power Supply (502), Actuator Module (503), STM32 Board (504), LICM_BMMRCMote (1000), LoRa Module (1001), Display (10002), Power Supply (1003), Custom Control Keys (1004), GSM Modem (1005) and STM 32 Board (1006). In the plastic manufacturing industry, the LICM_BMMTCMote, which is outfitted with an STM32 Board, Lora Module, Actuator Module, and Power Supply, is utilized to facilitate accurate on/off switching of Blow Molding Machines. This guarantees smooth control inside an extensive, networked system. The LICM_BMMRCote, which has an STM32 Board, Lora Module, Display, GSM Modem, Custom Control Keys, and a Power Supply, is used to enhance the overall responsiveness and efficiency of blow molding machines in the plastic manufacturing industry by utilizing its STM32 Board, LoRa module, display, GSM modem, and custom control keys to provide a sophisticated interface for real-time monitoring and flexible control options.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025069 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : VISION BASED PLANT CARE AUTOMATION WITH WPAN AND IOT INNOVATION IN CONSCIOUS HORTICULTURE MANAGEMENT

(51) International classification	:A01G0007040000, G01N0033240000, H04N0005225000, H04L0067120000, A61K0036730000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Vision based Plant Care Automation with WPAN and IoT innovation in Conscious Horticulture Management comprises of VPCA_CHMTMole(100), DHT Sensor(110), XBee RF Module(120), Camera(130), Power Supply(140), Water Pump(150), Actuator Module(160), Soil Sensor(170), Raspberry Pi Processor Board(180), VPCA_CHMRMole(200), XBee RF Module(210), Raspberry Pi Processor Board(220), Power Supply(230), Buzzer(240) and Touch TFT Display(250). The VPCA_CHMTMote, equipped with a Raspberry Pi Processor Board, XBee RF Module, Camera, Soil Sensor, DHT Sensor, Actuator Module, Water Pump, and Power Supply, is used in conjunction with vision-based technology, soil and environmental sensors, and automated actuators to provide real-time data analysis and responsive actions for optimized and conscientious horticultural management.The VPCA_CHMRMote is utilized to feature a touch TFT display, a buzzer for alerts, and seamless connectivity to enable user control, facilitating a user-friendly and responsive experience in conscious horticulture management. It is equipped with a Raspberry Pi Processor Board, an XBee RF Module, a Power Supply, and a buzzer.To enable smooth connectivity and data exchange between devices in this cutting-edge plant care system, the XBee RF Module, which is integrated into both of the motes, is utilized to form a WPAN. This improves the effectiveness and responsiveness of conscious horticulture management.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025080 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PERFORMING SERVER-BASED DESIGN FOR EXCELLENCE (DFX) ANALYSIS ON 3-DIMENSIONAL (3D) MODELS

(51) International classification :G06F0011360000, G06F0030000000, G06F0016955000, H04L0041000000, G16H0020600000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT This disclosure relates to method (200) and system (100) for performing server-based Design for Excellence (DFX) analysis on 3-dimensional (3D) models. The method (200) may include receiving (202) an execution request and a set of execution parameter values corresponding to a DFX analysis of a 3D Computer Aided Design (CAD) model from a user device (106); adding (204) the DFX analysis to an execution queue. The execution queue may include a plurality of DFX analyses received for server-based execution from a plurality of user devices. The method (200) may further include assigning (206) one of a plurality of execution servers to perform an execution of the DFX analysis from the execution queue; and triggering (208) the one of the plurality of execution servers to execute the DFX analysis of the 3D CAD model based on the set of execution parameter values via a DFX batch application implemented in silent mode. [To be published with FIG. 1A]

No. of Pages : 35 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025094 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ERGONOMICALLY DESIGNED HYDRAULIC HEIGHT-ADJUSTABLE STAND FOR CAMEL MILK COLLECTION

(51) International classification :C11B0009000000, A61M0001060000, G01N0033040000, B82Y0040000000, A61K0035200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an ergonomically design and development of a hydraulic height-adjustable stand for camel milk collection. The stand is designed scientifically, with anthropometric parameters of milkmen, teat height variations in different types of camels, availability of space under the hind quarter of camel, requirements of strenuous camel milk collection operations etc. It comprises a height-adjusting mechanism, a dismantling mechanism, and smooth edges, providing comfort to both animals and milkmen. The stand enhances efficiency, ensures complete milk letdown, and is easy to carry and clean in the field.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025211 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AUTOMATIC SYSTEM FOR EYE SIGHT TESTING AND PRESCRIPTION GENERATION

(51) International classification	:A61B3/00, A61B3/028, A61B3/18, G02C7/02, G06F3/01, G16H40/60
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to an automatic system for eye sight testing and prescription generation, more specifically the present invention based on the principles of internet of things and optometric eye testing. FIG. 1 and 2

No. of Pages : 22 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :28/03/2024

(21) Application No.202411025245 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR CATEGORIZING MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE APPLICATIONS IN MARKETING: A COMPREHENSIVE TAXONOMY

(51) International classification	:G06Q0030020000, G06N0020000000, G06N0005040000, G06N0007000000, G06N0005020000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :

The presented invention discloses a novel system for marketing that integrates machine learning and artificial intelligence technologies to deliver personalized marketing strategies. The system comprises a machine learning module that analyzes diverse consumer data to identify patterns and insights, and an artificial intelligence module that generates customized marketing content based on this analysis. A data processing unit collects and processes consumer data from various sources, while a communication interface delivers personalized marketing content across multiple channels. The system adapts marketing strategies in real-time using feedback mechanisms and reinforcement learning algorithms. It enables dynamic adjustment of marketing content delivery based on consumer engagement metrics and offers predictive analytics capabilities to anticipate future consumer behavior and market trends. Overall, this system revolutionizes marketing practices by leveraging advanced technologies to create highly tailored and effective marketing campaigns.

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025254 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A GAME PLAYING DEVICE FOR A MULTI-PLAYER BOARD GAME: WHO?

(51) International classification :G06F0003023000, A63F0013670000, A63F0013460000, A63F0003000000, A63F0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The device (100) comprising a starting phase-I board (102) configured to accommodate various components of the device (100), a plurality of tile (104) configured to be randomly flip-able and shuffle-able, a plurality of character card (112) configured to indicate the identity, role, and victory details of the character, a plurality of character meter (114) configured to help players in knowing whether their character is positive or negative by calculating the associated character score, a plurality of pawn (116) configured to indicate the current position of each player, a plurality of cue card (118) configured as a base to write and distribute cues/instructions/manipulative cues, and a plurality of cue board (120) configured as a platform for attaching the cue cards (118).

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024

(21) Application No.202411023313 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : READY TO INSTALL DIGITIZED EDGE BRACKET COMPONENT SYSTEM

(51) International classification :E04B0002740000, B29C0065480000, H01M0004136000, E04B0002000000, F21V0021088000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention provides ready-to-install digitized edge bracket component system which can be utilized to hang cladding panels, boards, acoustic materials, or similar material 111 to wall partition system with enhanced design, precision, and characteristics over the traditional construction components. These corrosion free and re-usable components can be installed without any drilling, zero dust and no mess left behind. A ready-to-install digitized edge bracket of figure 2 consists of a primary body with dual side clips extending from its sides. Each clip features a hook-like component that possesses resilient properties, allowing it to be flexed open on application of force and then naturally return to its original shape and position. The extensions, specifically ledges 106-E1 and -E2 offset the clips 106-F1 and -F2, from an upright position on the vertical pipe. Additionally, ledges 106-D1, -D2 and 106-G on the main body 106-A serve the function of locking or holding the vertical pipe securely in place.

No. of Pages : 41 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/03/2024

(21) Application No.202411024467 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : COMPOSITIONS FOR IMPROVING THE REPRODUCTIVE PERFORMANCE OF MALE SHEEP AND METHODS THEREOF

(51) International classification	:A61K33/30, A61K33/34, A61K36/185, A61K36/23, A61K36/28, A61K36/55, A61K36/81, A61K36/899
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention broadly relates to the field of animal reproduction. More particularly, the present invention relates to a composition comprising plants parts and trace elemental metals having an improved effect on the reproductive performance of rams. The present invention also relates methods for producing the same and use of the said composition in a method for improving sexual performance in male sheep.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025901 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A LORA RF AND IOT-BASED REMOTE-CONTROLLED SPRAY JET DYEING MACHINE WITH LOW EXPRESSION DYEING CAPABILITY FOR TEXTILE INDUSTRY

(51) International classification :D06B0003280000, H04L0067120000, D06B0011000000, G08C0017020000, D06B0023040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A LoRa RF and IoT-Based Remote-Controlled Spray Jet Dyeing Machine with Low Expression Dyeing Capability for Textile Industry comprises of LIR_SJDMTMote (10), TI AM69 Processor Board (11), Power Supply (12), Piezo Buzzer (13), Relay Module (14), LoRa RF Module (15), LIR_SJDMRMote (40), LoRa RF Module (41), Keypad (42), Power Supply (43), ESP8266 Wifi Module (44), Display (45) and TI AM69 Processor Board (46). The LIR_SJDMTMote improves operational efficiency in the textile industry by integrating a TI AM69 Processor Board, LoRa RF Module, Relay Module, Piezo Buzzer, and Power Supply. This allows for remote on/off automation of Spray Jet Dyeing Machines. The TI AM69 Processor Board, LoRa RF Module, ESP8266 Wifi Module, Keypad, Display, and Power Supply are all integrated into the LIR_SJDMRMote. This allows for the smooth integration of IoT capabilities for remote control and real-time monitoring of Spray Jet Dyeing Machines via a customized web dashboard, promoting operational flexibility and proactive issue resolution in the textile industry. The LIR_SJDMTMote and LIR_SJDMRMote receive computational power and control logic from the TI AM69 Processor Board, which is integrated into both of the motes. This allows for the smooth integration and coordination of functionalities in the remote-controlled Spray Jet Dyeing Machine system for the textile industry.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/03/2024
(21) Application No.202411016889 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A HEALTH PROMOTING INSTANT FOOD MIX

(51) International classification :A23L11/00, A23L27/10, A23L27/30, A23L33/105, A61K36/185, A61K36/19
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention provides a health promoting instant food mix and a method of preparing the same. The instant food mix includes powdered leaves of Hygrophila auriculata at a concentration ranging from 30% to 60% w/w, powdered Phyllanthus emblica fruit at a concentration ranging from 5% to 10% w/w, powdered chickpea at a concentration ranging from 10% to 30% w/w and a first flavour enhancer or a second flavour enhancer at a concentration ranging from 15% to 30% w/w. The instant food mix contains 16.85% protein, 4.6% crude fiber, 51.6% carbohydrates, 0.53% fat, 41.43 mg/100gm Vitamin C, 160.6 ppm calcium, 3.06 ppm iron, 103.3 ppm potassium and 537.5 ppm sodium. The instant food mix also contains various bioactive compounds like 2,4,6- Trihydroxybenzoic acid, Gallic acid 3-O-(6-galloylglucoside), Atrovirinone, Kaempferol 3- rhamnoside 7- galacturonide, Cinchonain Id 7- glucoside, Ellagic acid and Apigenin 7-glucoside.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025667 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EXTENDED STABILIZATION METHOD FOR HYDROLASE ENZYMES WITH FUNCTIONAL COMPONENTS FOR BREAKING BIOPOLYMER DAMAGE IN UNDERGROUND RESERVOIR AND PIPE RELEASE

(51) International classification :E21B0031000000, E21B0031030000, C09K0008520000, B60W0030180000, C09K0008508000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a method for stabilizing a hydrolase enzyme in the presence of a functional cleanup fluid component for breaking of biopolymer damage in an underground reservoir, or biopolymer damage buildup that causes friction against free movement of the drill pipe and differential stuck pipe situation. The method provides a simple way to thermally fortify and maximize the benefits of hydrolase enzymes for effective removal of biopolymer based damage from a subterranean formation. This method also has advantages over conventional treatments as it provides the capability of filter cake removal treatments as an additional application for freeing of stuck pipes diagnosed to be differentially stuck.

No. of Pages : 39 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025738 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ALUMINUM FOIL BASED SERS SUBSTRATE TO DETECT URINARY TRACT INFECTION, POCT DEVICE AND FABRICATION PROCESS THEREOF

(51) International classification :G01N0021650000, G01N0033569000, G01N0015000000, G06F0021600000, C12Q0001700000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention provides for an aluminum foil integrated pegylated gold nanoparticles as SERS substrate to detect urinary tract infection specific pathogen and the fabrication process thereof. Further, the present invention provides for a highly specific and sensitive point of care testing device to detect pathogen indicative of urinary tract infection. Furthermore, the present invention provides for a fabrication process of aluminum foil integrated pegylated gold nanoparticles that is rapid, user friendly, cost effective, facile and highly sensitive.

No. of Pages : 24 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025739 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SEAWEED-ENRICHED NOVEL BIO-FERTILIZER FOR CROP NUTRITION AND PROCESS THEREOF

(51) International classification :C05F11/08, C05F17/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present innovation introduces a new bio-fertilizer enriched with seaweed extract, tailored to enhance the productivity of chickpea (Cicer arietinum) crops. This innovative composition incorporates seaweed extract, water hyacinth (Eichhornia crassipes), sugarcane molasses (Saccharum officinarum), phosphate rock, pH stabilizer, and preservatives, either independently or in combination. Notably, this bio-fertilizer, enriched with seaweed extract, exhibits a shelf life spanning from 12 to 18 months. Application methods include root treatment and foliar spraying. Subsequent to its formulation, this novel seaweed extract-infused bio-fertilizer underwent comprehensive evaluation, showcasing both technical advancement and cost-effectiveness.

No. of Pages : 19 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025272 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A REFRIGERATOR COMPRESSOR MOUNTING MACHINE CONTROL USING IOT EQUIPPED WIRELESS CONTROL PANEL IN MANUFACTURING INDUSTRY

(51) International classification :G06F0003041000, F25D0023000000, H05K0013080000, G08C0017020000, F25D0019000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A Refrigerator Compressor Mounting Machine Control using IoT equipped Wireless Control Panel in Manufacturing Industry comprises of WCP_RCPTMote(100), Touch HMI Display(101), Piezo buzzer(102), Led Indicator(103), Power Supply(104), Actuator Module(105), GSM Modem(106), ESP32 Board (107) and STM32 Board (108). The WCP_RCMTMote, which combines wireless communication, touch interface, and internet connectivity to improve operational efficiency and responsiveness in the manufacturing industry, is used to facilitate advanced control and monitoring of Refrigerator Compressor Mounting Machines. It is equipped with STM32 Board, ESP32 Board, GSM Modem, Actuator Module, Touch HMI Display, Piezo buzzer, Led Indicator, and Power Supply. The Refrigerator Compressor Mounting Machine's remote control capabilities are improved and seamless connectivity is provided by the ESP32 Board, which is integrated into this innovation. This increases the production process's flexibility and efficiency. This innovation also incorporates a GSM modem, which is utilized to improve real-time monitoring and enable timely reactions to manufacturing process inconsistencies. It also allows operators to access and manage the refrigerator compressor mounting machine remotely.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025273 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTELLIGENT CONDITION MONITORING SOLUTION FOR CONVEYOR BELT CLEANER MANAGEMENT THROUGH NRF-BASED IOT SOLUTION

(51) International classification	:B65G0045120000, B65G0045160000, A61B0005000000, A61B0005020500, G01M0013028000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT Intelligent Condition Monitoring Solution for Conveyor Belt Cleaner Management through nRF-Based IoT Solution comprises of ICMS_CBCMTMote(10), Vibration Sensor(10A), Temperature Sensor(10B), Optical Torque Sensor(10C), Optical Decoder(10D), Power Supply(10E), STM32 Board(10F), nRF Module(10G), ICMS_CBCMTMote(20), ESP32 Board(20A), Custom Keypad(20B), Power Supply(20C), STM32 Board(20D), nRF Module (20E) and HMI Display(20F).Using sophisticated sensors to monitor vital parameters like vibration, temperature, and torque in conveyor belt cleaner management, the ICMS_CBCMTMote—which is outfitted with an STM32 Board, nRF Module, Vibration Sensor, Temperature Sensor, Optical Torque Sensor, Optical Decoder, and Power Supply—allows wireless transmission and real-time data collection for thorough condition monitoring.For effective and proactive conveyor belt cleaner management, the ICMS_CBCMRMote—which is outfitted with an STM32 Board, nRF Module, HMI Display, Custom Keypad, ESP32 Board, and Power Supply—is utilized to wirelessly receive data from the ICMS_CBCMTMote, display predictive insights through an HMI Display, and enable user interaction and control through a custom keypad and remote access through a customized mobile app.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025274 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATION OF ADVANCED WIRELESS TECHNOLOGY AND IOT FOR REMOTE CONTROL OF DISH PLATE WASHING MACHINES

(51) International classification :G08C0017020000, H04L0067120000, H04N0021414000, H04B0007045600, H04B0001380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Integration of Advanced Wireless Technology and IoT for Remote Control of Dish Plate Washing Machines comprises of AWT_DPWMTMote(100), CC2500 RF Module(100A), TI MSP 430 Board(100B), Power Supply(100C), Buzzer(100D), Actuator Module(100E), AWT_DPWMRMote(150), Indicator(150A), Keys(150B), Power Supply(150C),GSM Modem(150D), CC2500 RF Module(150E) and TI MSP430 Board (150F).Using advanced wireless technology, the AWT_DPWMTMote, which is outfitted with a TI MSP430 Board, CC2500 RF Module, Actuator Module, Buzzer, and Power Supply, allows operators to remotely operate dishwashing machines while maintaining smooth communication for effective on/off operations.The operator can operate dish plate washing machines remotely, get real-time feedback, and access a customized web dashboard for thorough monitoring and timely alerts with the AWT_DPWMRMote, which is outfitted with a TI MSP430 Board, CC2500 RF Module, GSM Modem, Keys, Indicator, and Power Supply.The AWT_DPWMTMote transmitter and the dish plate washing machines communicate wirelessly thanks to the CC2500 RF Module, which is integrated into both of the motes. This allows for smooth remote control and monitoring of the system.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025902 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : VIBRATORY TRUSS SCREED MACHINE REMOTE OPERATION MANAGEMENT USING NRF EQUIPPED IOT EQUIPPED EXTERNAL DEVICE IN ROAD CONSTRUCTION

(51) International classification :H04L0067120000, E01C0019480000, H04N0005210000, F16K0031040000, G08C0017020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Vibratory Truss Screed Machine Remote Operation Management using nRF equipped IoT Equipped External Device in Road Construction comprise of EDRC_VTSTMote(10), nRF Module(11), NuttyFi WiFi Board(12), Power Supply(13), Buzzer(14), Vibration Sensor(15), Single Channel Actuator(16), EDRC_VTSTMote(30), Custom Switchpad(31), Power Supply(32), GSM Modem(33), nRF Module(34) and NuttyFi WiFi Board(35). Using wireless technology and sensory feedback, the EDRC_VTSTMote device—which is outfitted with a NuttyFi WiFi Board, nRF Module, Single Channel Actuator, Buzzer, Vibration Sensor, and Power Supply—enables on/off automation and real-time monitoring of vibratory truss screed machines in road construction. Using a custom switchpad and a customized web dashboard, operators can remotely control and monitor Vibratory Truss Screed Machines in road construction. This ensures increased flexibility and proactive monitoring. The EDRC_VTSRMote is outfitted with a NuttyFi WiFi Board, nRF Module, GSM Modem, Power Supply, and custom switchpad.The nRF Module, which is built into both motes, enables seamless wireless control and monitoring in road construction applications by providing dependable short-range communication between the control units and vibratory truss screed machines.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025903 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : UTILIZING WPAN-BASED NETWORK FOR WIRELESS CONTROL AND MONITORING OF MINI COMMERCIAL SERIES MULTI-HEAD EMBROIDERY MACHINE IN MANUFACTURING

(51) International classification	:A61M0005142000, H05B0047190000, H04M0001253000, D05C0011180000, D05C0009040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Utilizing WPAN-Based Network for Wireless Control and Monitoring of Mini Commercial Series Multi-Head Embroidery Machine in Manufacturing comprise ofWCM_CMHETMote(100), XBee Module with Base(101), Power Supply(102), Buzzer(103), Actuator(104), ATmega64 MCU Board(105), WCM_CMHETMote(150), XBee Module with Base(151), NuttyFi WiFi Board(152), ATmega64 MCU Board(153), Power Supply(154), Led Indicator(155) and Custom Keypad(156).The WCM_SWMTMote, equipped with an ATmega64 MCU Board, an XBee Module with Base, an Actuator, a Buzzer, and a Power Supply, offers a comprehensive solution for seamless wireless control and monitoring of Mini Commercial Series Multi-Head Embroidery Machines. This is accomplished by optimizing operating efficiency and enabling real-time data insights through the integration of complex sensors, actuators, and communication modules. The WCM_CMHERMote, which combines features like a NuttyFi WiFi Board, custom keypad, LED indicators, and internet connectivity, provides an advanced and user-friendly solution for remote machine management. It is outfitted with an ATmega64 MCU Board, an XBee Module with Base, a NuttyFi WiFi Board, a Led Indicator, and a Power Supply to enable advanced control and monitoring of Mini Commercial Series Multi-Head Embroidery Machines.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025911 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SIGNATURE AND ANOMALY BASED WEB APPLICATION FIREWALL

(51) International classification :H04L0067020000, G06F0021550000, G06F0021570000, G06N0003080000, G06F0021560000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In the realm of cybersecurity, safeguarding web applications against malicious attacks has become increasingly challenging due to their dynamic nature and the multitude of variables they entail. In response to these evolving threats, this paper introduces a novel approach: a hybrid learning-based Web Application Firewall (WAF) model adept at thwarting web-based attacks. Central to this model's efficacy are two complementary detection methodologies: Signature-Based Detection (SBD) and Anomaly-Based Detection (ABD). SBD operates on the premise of swiftly identifying known attack patterns by comparing incoming HTTP requests against a comprehensive signature database. Its strength lies in its rapidity and effectiveness in targeting predefined attack types. However, its reliance on pre-existing signatures renders it vulnerable to zero-day attacks, where novel exploit techniques evade detection. To address this vulnerability, ABD augments the WAF's defensive capabilities by scrutinizing HTTP requests for aberrant patterns that deviate from established norms. This approach is particularly adept at identifying zero-day attacks and other previously unseen threats. In the proposed model, ABD is implemented through the utilization of Artificial Neural Networks (ANN), leveraging their capacity to discern intricate patterns and anomalies within vast datasets. By incorporating learning-based ABD using ANN, the WAF model exhibits a capacity for adaptation and resilience against zero-day attacks. Through continuous exposure to diverse network traffic, the ANN refines its detection capabilities, enhancing its ability to discern between benign and malicious HTTP requests. This adaptive framework not only fortifies the WAF's defenses against evolving threats but also mitigates the risk posed by previously unknown attack vectors. Furthermore, the hybrid nature of the proposed model synergizes the strengths of both SBD and ABD, creating a robust defense mechanism capable of mitigating a wide array of web-based threats. This integrated approach underscores the importance of combining signature-based methods for rapid detection with the adaptive capabilities of learning-based ABD to fortify web application defenses in an ever-evolving cybersecurity landscape.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025317 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT BASED NON-CONDUCTIVE LIQUID LEVEL MEASURING SYSTEM AND METHOD THEREOF

(51) International classification	:G01F0023240000, G01F0023296000, G07C0005000000, G01F0023263000, B60K0015030000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Disclosed herein a system for measuring liquid levels in tanks, comprising a transmitter comprising one or more capacitive sensors positioned at specific locations within the tank for detecting the liquid level, a wireless module for transmitting data obtained from the capacitive sensors to a base station and a memory for storing the transmitted data, and a receiver comprising an IoT system integrated with cloud server for monitoring and storing the data and displaying liquid level fluctuations over time. This system is effective in reducing theft of fuel in vehicles and remote monitoring of fuel consumption in vehicles. Fig. 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026040 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LONG-RANGE LORA AND IOT-ENABLED REMOTE CONTROL PANEL FOR WATER JET CUTTING MACHINES FOR ENHANCED EFFICIENCY AND SAFETY IN THE MODERN INDUSTRIAL LANDSCAPE

(51) International classification :B26F0003000000, B24C0001040000, G05B0015020000, B26F0001380000, G16H0040670000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT Long-Range LoRa and IoT-Enabled Remote Control Panel for Water Jet Cutting Machines for Enhanced Efficiency and Safety in the Modern Industrial Landscape comprise of RCP_WJCMMote(100), Actuator Module(100A), Power Supply(100B), ATmega2560 SMD Board(100C), SX1272 RF Module(100D), RCP_WJCMMote(200), Power Supply(200A), ESP32 Board(200B), SX1272 RF Module(200C), ATmega2560 SMD Board(200D) and Touch Screen TFT Display(200e).For seamless automation and remote control of Water Jet Cutting Machines, the RCP_WJCMCMote, outfitted with an ATmega2560 SMD board, an SX1272 RF Module, an Actuator Module, and a Power Supply, is utilized for long-range communication and actuation. This improves operational efficiency and safety in the contemporary industrial landscape.A touch screen TFT display and an ESP32 board are integrated into the RCP_WJCMRMote, which is outfitted with an ATmega2560 SMD board, an SX1272 RF Module, an ESP32 board, a power supply, and a means of facilitating local control and monitoring. This allows operators to communicate with the system and obtain real-time feedback, which improves the efficiency and user experience of operating water jet cutting machines in industrial settings.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026041 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : IOT-ENABLED EXTERNAL DEVICE WITH ADVANCED LORA TECHNOLOGY FOR REAL-TIME MONITORING AND AUTOMATED CONTROL OF TANGENTIAL-FLOW DIAFILTRATION PROCESSES IN BIOPROCESSING APPLICATIONS

(51) International classification :B01D0061140000, C12M0001000000, C07K0001340000, B01D0061220000, C12M0001060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An IoT-Enabled External Device with Advanced LoRa Technology for Real-time Monitoring and Automated Control of Tangential-Flow Diafiltration Processes in Bioprocessing Applications comprises of ALTR_RMACMote (600), Lora RF Module (610), Power supply (620), Esp32 WIFI Board (630), Keypad (640), Atmega2560 Processor Board (650), ALTR_RMATMote (800), Loar RF Module (810), Power supple (820), Relay Module (830), Temperature Sensor (840), Pressure Sensors (850), Air Flow sensor (860) and Atmega2560 processor Board (870). An essential part of this innovation is the ALTR_RMATMote, which is outfitted with an atmega2560 Processor Board, a lora RF module, an air flow sensor, a pressure sensor, a temperature sensor, a relay module, and a power supply. It allows for automated control of tangential-flow diafiltration processes in bioprocessing applications, resulting in ideal conditions and efficient operation. By processing data received from ALTR_RMATMote, the ALTR_RMACMote—which is outfitted with an atemga2560 Processor Board, a lora RF module, an esp32 wifi board, a keypad, and a power supply—plays a pivotal role in enabling operators to remotely monitor, adjust, and manage Tangential-Flow Diafiltration Processes in bioprocessing applications by utilizing a combination of LoRa communication and internet connectivity.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025740 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : RIVER FILTERATION AND RESTORATION METHOD

(51) International classification :G06F0011140000, A61P0025280000, C02F0001000000, H01L0029786000, C02F0103000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT RIVER FILTERATION AND RESTORATION METHOD The present disclosure discloses a river filtration and restoration method (100) comprising a 21-layer filtration process within a canal structure, specifically designed for the comprehensive purification and restoration of water bodies. FIG. 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025748 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT-ENABLED AUTOMATIC VERMICOMPOST MAKER FOR BIOLOGICAL PROCESSING

(51) International classification	:C05F0017050000, A01K0067033000, B01D0053140000, G06Q0010060000, C05F0017964000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to an IoT-enabled automatic vermicompost maker (100) for biological processing. The IoT-enabled automatic vermicompost maker (100) for biological processing comprises a vermicomposting unit, plurality of sensors, central control unit and connectivity features. The vermicomposting unit with multiple compartments designed to create optimal conditions for earthworm activity and organic waste decomposition. The plurality of sensors strategically placed within the vermicomposting unit to continuously monitor temperature, moisture levels, pH balance, and airflow. The central control unit receiving data from the sensors, analyzing the information, and making adjustments to maintain ideal composting conditions. The connectivity features enabling remote monitoring and control of the composting process via web or mobile applications

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025754 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN AUTOMOBILE SYSTEM FOR DETECTING AND PREVENTING ACCIDENTAL CONDITION IN THE PRONE AREA

(51) International classification :B60R0001000000, G08G0001160000, F01P0011060000, B60W0030095000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The present invention discloses an automobile system (100) designed to detect and prevent accidental conditions in prone areas around the vehicle. The system (100) employs a combination of sensors, processors, and actuators to monitor the vicinity of the automobile and initiate preventive actions to mitigate potential accidents. Through a sophisticated algorithmic approach, the system (100) can identify prone areas and swiftly respond to potential threats, thereby enhancing safety measures for both pedestrians and objects surrounding the vehicle. The system (100) has the potential to save lives, prevent injuries, and reduce property damage associated with automobile accidents. The system (100) has ability to analyze sensor data and initiate preventive actions in real-time ensures swift and effective responses to potential threats, minimizing the likelihood of accidents.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025774 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LICENCE PLATE RECOGNITION SYSTEM FOR ANTI-COUNTERFEITING

(51) International classification :G08G0001017000, B60R0013100000, G06Q0030000000, G03H0001000000, G06K0019060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The innovative Secure License Plate Recognition System with Holographic Verification offers a pioneering solution to combat fake license plates within the Indian transport system. By incorporating a small holographic feature and diagonal engraving of "India," this system introduces a distinctive and strong anti-counterfeiting method. Through the utilization of computer vision technologies, this invention guarantees immediate identification and validation of license plates, thereby enhancing the security and legitimacy of government-issued plates.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025870 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : TETHERED AERIAL SOIL SAMPLING SYSTEM

(51) International classification :G01N0001080000, B64C0039020000, A61B0005000000, G01N0001220000, H04W0004800000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The system comprises a hex-copter agricultural drone (1.1) designed for soil sampling purposes and consisting of a frame and an attached power and control unit (1.2). Further, the proposed system may include a sensor pod (1.7) equipped with the drone (1.1) such that the sensor pod (1.7) is connected to TASSC (1.3) via a tether string (1.11). The sensor pod collects data from the soil and including nutrient levels, conductivity, surface temperature, and other relevant variables. All of the variable information is processed by the power and control unit (1.2) of the Hex-copter agricultural drone (1.1) and transmitted to a base station for analysis and decision-making. Additinally, the proposed system may include a resulting sample field (1.5) visually depicting a disturbed soil area and showcasing the effectiveness of soil sampling process. Figure to be published with Abstract: Figure 1

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025894 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTELLIGENT XBEE AND IOT EQUIPPED INNOVATION TO CONTROL AND AUTOMATE VEGETABLE WASHER MACHINES TO ENHANCED CLEANING PERFORMANCE

(51) International classification :H04L0067120000, G16H0040200000, F24H0009200000, H04N0021414000, G06N0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Intelligent XBee and IoT Equipped innovation to Control and Automate Vegetable Washer Machines to Enhanced Cleaning Performance comprise of CAVW_CPTCMote(1000), ATmega328 Board(1100), Power Supply(1200), Speaker(1300), Single Channel Actuator Module(1400), XBee Module(1500), CAVW_CPTCMote(2000), TFT Display(2100), ESP01 WIFi Board(2200), Power Supply(2300), Customized keypad(2400), XBee Module(2500) and ATmega328 Board(2600). To greatly improve cleaning performance, the CAVW_CPTCMote, which is outfitted with an ATmega328 Board, an XBee Module, a Single Channel Actuator Module, a Speaker, and a Power Supply, is utilized to enable intelligent automation and accurate management of the vegetable washer machine's crucial parameters. The CAVW_CPRCMote is used to enable remote control and monitoring of the vegetable washer machine through a customized web dashboard. It is outfitted with an ATmega328 Board, an XBee Module, an ESP01 Wifi Board, a customized keypad, a TFT display, and a power supply. The user-friendly interface allows operators to command the system and receive real-time updates while guaranteeing flexibility and convenience in operation. The control unit (CAVW_CPTCMote) and the connection hub (CAVW_CPRCMote) can communicate seamlessly thanks to the XBee Module, which is included into both of the motes. This allows for effective data interchange and command transmission in the innovative vegetable washer machine.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025895 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ADVANCED LPWAN AND IOT-BASED REMOTE CONTROL AND MONITORING SYSTEM FOR POULTRY FARM EGG TRAY WASHER MACHINES

(51) International classification :H04L0067120000, H04B0007155000, G08C0017020000, H04W0084120000, H04W0004700000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Advanced LPWAN and IoT-Based Remote Control and Monitoring System for Poultry Farm Egg Tray Washer Machines comprise of RCM_PFETMote(100), Lora Module(101), NuttyFi WiFi Board(102), Power Supply(103), Buzzer(104), Temperature Sensor(105), Single Channel Relay(106), RCM_PFETMote(200), Display(201), GSM Modem(202), Rechargeable Bettery(203), Keypad(204), Lora Module(205) and NuttyFi WiFi Board(206). The RCM_PFETMote uses LPWAN and IoT technologies to enable remote control and real-time monitoring of poultry farm egg tray washer machines. It is equipped with a NuttyFi WiFi Board, Lora Module, Single Channel Relay, Buzzer, Temperature sensor, and Power Supply. This enables operators to effectively manage on-off automation, monitor temperature conditions, and receive immediate alerts for prompt issue resolution.LPWAN and IoT technologies are used to enable mobile network connectivity, provide a user-friendly interface with a display and keypad for on-site interactions, and ensure uninterrupted operation through a rechargeable battery, all of which improve the overall remote control and monitoring capabilities of poultry farm egg tray washer machines. The RCM_PFERMote is equipped with a NuttyFi WiFi Board, Lora Module, GSM Modem, Display, Keypad, and Rechargeable Battery.To provide seamless connectivity for remote control and monitoring of poultry farm egg tray washer machines, the LoRa Module is installed into both of the motes. This ensures effective data transmission and communication between devices.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026042 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATED IOT SOLUTION WITH CC3000RF FOR EFFORTLESS REMOTE CONTROL AND MONITORING OF VEGETABLE CHOPPING MACHINE IN A SMART RESTAURANT

(51) International classification :A61K0036730000, H04N0009310000, G07C0009000000, G06F0003041000, G06K0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An Integrated IoT Solution with CC3000RF for Effortless Remote Control and Monitoring of Vegetable Chopping Machine in a Smart Restaurant comprises of ISC_VCMTMote (100), TFT HMI Touch Display (100A), Single Channel Relay Module (100B), Power supply (100C), Raspberry Pi Pico Board (100D), CC3000 RF Module (100E), ISC_VCMRCMote (200), Customized keypad (200A), Rechargeable Battery (200B), NuttyFi WIFI Board (200C), Raspberry Pi Pico board (200D) and CC3000 RF Module (200E). The Vegetable Chopping Machine in a Smart Restaurant can be seamlessly automated on and off thanks to the ISC_VCMTCMote, which is outfitted with a Raspberry Pi Pico Board, CC3000 RF Module, Single Channel Relay Module, TFT HMI Touch Display, and Power Supply; and its user-friendly TFT HMI Touch Display allows for manual control and integration with IoT and CC3000 RF technology for responsive and efficient operation.The ISC_VCMRCMote can be used to wirelessly control and monitor the vegetable cutting machine in a smart restaurant; and its rechargeable battery ensures flexibility and on-the-go functionality; and it is equipped with a Raspberry Pi Pico Board, CC3000 RF Module, NuttyFi WiFi Board, Customized Keypad, and Rechargeable Battery.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026043 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS HEALTH MONITORING INVENTION FOR VIBRATORY TRUSS SCREED MACHINE CC3000 RF BASED ONLINE SOLUTION IN ROAD INFRASTRUCTURE DEVELOPMENT

(51) International classification :A61B0005000000, A61B0005024000, A61B0005020500, G16H0040670000, A61B0005080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Wireless Health Monitoring Invention for Vibratory Truss Screed Machine CC3000 RF based online solution in Road Infrastructure Development comprise of WHM_VTSDTMote(100), CC3000 RF Module(100A), Vibration Sensor(100B), Temperature Sensor(100C), Pressure Sensor(100D), Accelerometer(100E), Power Supply(100F), ATmega2560 SMD Board(100G), WHM_VTSDMote(200), ATmega2560 SMD Board(200A), Power Supply(200B),HMI Display(200C), ESP32 Board(200D) and CC3000 RF Module(200E). To enable thorough health monitoring, real-time data on vital parameters like vibration, pressure, and temperature from the vibratory truss screed machine are collected by the WHM_VTSDTMote, which is outfitted with an ATmega2560 SMD board, CC3000 RF Module, Accelerometer, Pressure Sensor, Temperature Sensor, Vibration Sensor, and Power Supply. The WHM_VTSDRMote is used to analyze and present the health data transmitted from the WHM_VTSDTMote, enabling authorized personnel and machine operators to make informed decisions based on real-time and historical insights. The WHM_VTSDRMote is equipped with an ATmega2560 SMD board, CC3000 RF Module, ESP32 Board, HMI Display, and Power Supply. The WHM_VTSDTMote's integrated accelerometer, pressure, temperature, and vibration sensors monitor and evaluate the Vibratory Truss Screed Machine's physical and environmental conditions together, providing vital information for real-time health analytics and monitoring.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026044 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : UTILIZING ZIGBEE TECHNOLOGY FOR HEALTH MONITORING OF THE COTTON BALE LOOSING SYSTEM IN A RING SPINNING YARN PRODUCTION LINE WITHIN THE PRODUCTION INDUSTRY

(51) International classification :A61B0005000000, G16H0010600000, G01D0021020000, G06Q0010060000, G16H0040670000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Utilizing ZigBee Technology for Health Monitoring of the Cotton Bale Loosing System in a Ring Spinning Yarn Production Line within the Production Industry comprise of ZTHM_CBLTMote(10), Accelerometer(10A), Pressure Sensor(10B), DHT Sensor(10C), Vibration Sensor(10D), Power Supply(10E), ZigBee RF Module(10F), STM32 Nucleo Board(10G), ZTHM_CBLTMote(20), Touch Screen HMI Display(20A), STM32 Nucleo Board(20B), Power Supply(20C), ZigBee RF Module(20D) and GSM Modem(20E). Using a variety of sensors and wireless communication via ZigBee technology, the ZTHM_CBLTMote—which is outfitted with an STM32 Nucleo board, a ZigBee RF Module, a vibration sensor, a DHT sensor, a pressure sensor, an accelerometer, and a power supply—enables real-time monitoring of crucial parameters in the Cotton Bale Loosing System. This data is invaluable for preventative maintenance and guarantees peak performance in the Ring Spinning Yarn Production Line. The STM32 Nucleo board, ZigBee RF Module, GSM Modem, Touch Screen HMI Display, and Power Supply equipped ZTHM_CBLRMote is utilized as the ZigBee network's receiver node, allowing for smooth communication with ZTHM_CBLTMote, integrating GSM connectivity for increased accessibility, and displaying the gathered data on a Touch Screen HMI Display, which allows operators and authorized personnel to monitor and assess the Cotton Bale Loosing System's condition in an easy-to-use interface.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025275 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A CC3000 RF TECHNOLOGY-ENABLED CONTROL AND FEEDBACK SYSTEM FOR THE COTTON BALE LOOSING SYSTEM IN RING SPINNING YARN PRODUCTION LINE WITHIN THE PRODUCTION INDUSTRY

(51) International classification	:G08B0007060000, G06F0001160000, H04N0007150000, D05C0011180000, D02G0003360000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT A CC3000 RF technology-enabled control and feedback system for the Cotton Bale Loosing System in Ring Spinning Yarn Production Line within the Production Industry comprises of CFS_SBLCTMote(10), CC2500 RF Module with Base (20), Buzzer(30), Power Supply(40), Single Channel Relay Module(50), ATmega128 MCU Board(60), CFS_CBLCRMote(100), NuttyFi WiFi Board(110), ATmega128 MCU Board(120), Power Supply(130), Led Indicator(140), Custom Keypad(150) and CC2500 RF Module with Base(160). The Mini Commercial Series Multi-Head Embroidery Machine can be turned on and off wirelessly with the help of the CFS_CBLCTMote, which is outfitted with an ATmega128 MCU Board, a CC2500 RF Module with Base, a Single Channel Relay Module, a Buzzer for alerts, and a Power Supply. Reliable connectivity between the CFS_CBLCRMote and the machine is also ensured for improved operational control. With the help of an intuitive custom keypad, LED indicators, internet connectivity, and live feedback via a customized web dashboard, the CFS_CBLCRMote—which is outfitted with an ATmega128 MCU Board, CC2500 RF Module with Base, NuttyFi WiFi Board, Custom Keypad, Led Indicator, and Power Supply—allows remote operation and real-time monitoring of the Mini Commercial Series Multi-Head Embroidery Machine. It also sends out prompt alerts for any discrepancies.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025276 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : UTILIZING LORA TECHNOLOGY FOR REMOTE MONITORING AND PREDICTIVE MAINTENANCE OF GEA SCREW COMPRESSORS IN INDUSTRIAL MACHINERY

(51) International classification	:G06N0020000000, G05B0023020000, G01D0021020000, H04L0067120000, H04W0084180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Utilizing LoRa Technology for Remote Monitoring and Predictive Maintenance of GEA Screw Compressors in Industrial Machinery comprises of RMP_SCITMote(100), Temperature Sensor (101),Vibration Sensor(102), Accelerometer(103), Displacement Sensor(104), Buzzer(105), Power Supply(106), STM32 Board(107), Lora Module(108), RMP_SCIRMote(200), Touch HMI Display(201), ESP01 Wifi Board(202), Power Supplay(203), STM32 Board(204) and Lora Module(205).The RMP_SCITMote is used to actively collect real-time data from GEA Screw Compressors through advanced sensors and transmit it via LoRa RF network to a customized cloud server, enabling proactive remote monitoring and predictive maintenance. It is equipped with an STM32 Board, Lora Module, Temperature sensor, Vibration sensor, Accelerometer, Displacement sensor, Buzzer, and Power Supply.The RMP_SCIRMote is used to interface with the cloud server. It is outfitted with an STM32 Board, Lora Module, ESP01 Wifi Board, Touch HMI Display, and Power Supply. It receives machine learning-based predictive maintenance suggestions and presents them through a Touch HMI Display, giving operators an easy-to-use interface and enabling remote control and interaction through a customized mobile app.The LoRa Module, which is built into both motes, allows seamless data transmission for real-time monitoring and predictive maintenance of GEA Screw Compressors in industrial machinery by enabling long-range, low-power wireless communication between the RMP_SCITMote and RMP_SCIRMote devices.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025896 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MONITORING THE HEALTH OF RIETER AIR-JET SPINNING MACHINE J26 USING XBEE AND INTEGRATED IOT TECHNOLOGY

(51) International classification :D01H0001115000, D01H0004020000, A61B0005000000, D01H0015000000, G01H0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Monitoring the Health of Rieter Air-Jet Spinning Machine J26 using XBee and Integrated IoT Technology comprise of MHOR_XITMote(100), XBee Module(101), Power Supply(102), Optical Rotation Sensor(103), Current Sensor(104), Torque Sensor(105), Temperature Sensor(106), Vibration Sensor(107), Atmega8 Processor Board(108), MHOR_XITMote(200), XBee Module(201), Esp8266 WiFi Board(203), Power Supply(203) and Atmega8 Processor Board(204).The MHOR_XITMote, which is outfitted with an atmega8 Processor Board, an XBee module, vibration, temperature, torque, current, optical rotation, and a power supply, is a key component of this innovation. It does so by combining a number of sensors with an XBee module to monitor and transmit the Air-Jet Spinning Machine J26's critical health parameters in real-time, facilitating seamless communication for improved operational insights.The MHOR_XICMote, which has an atmega8 Processor Board, an XBee module, and a power supply installed. This allows users to connect to the internet and see the Air-Jet Spinning Machine J26's health indicators in real time through a customized web dashboard.For efficient Air-Jet Spinning Machine J26 monitoring, the atmega8 Processor Board integrated with both MHOR_XITMote and MHOR_XICMote, enabling data collecting from several sensors and guaranteeing smooth connection.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025897 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT-INFUSED PREDICTIVE MAINTENANCE MONITORING SYSTEM WITH XBEE FOR ESPRESSO MACHINE IN INDUSTRIAL MANUFACTURING

(51) International classification :G06Q0010000000, G05B0019042000, G05B0019418000, H04W0004380000, A61K0036730000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT An IoT-Infused Predictive Maintenance Monitoring System with Xbee for Espresso Machine in Industrial Manufacturing comprise of IIP_MSVSTMote (100), XBee Modem (100A), Buzzer (100B), Power Supply (100C), SD Card Module (100D), RTC Module (100E), Temperature Sensor (100F), Pressure Sensor (100G), Vibration Sensor (100H), Raspberry Pi Processor Board(100J), IIP_MSVSTMote (200), XBee Modem (200K), Raspberry Pi Processor Board (200P), Power Supply (200L), Custom Keypad (200M), HMI display (200N) and GSM Modem (200O). The IIP_MSVSTMote is an innovation that uses a variety of sensors to monitor temperature, pressure, and vibration in real-time, enabling proactive maintenance predictions for industrial espresso machines. It is equipped with a Raspberry Pi Processor Board, XBee Modem, Vibration Sensor, Pressure Sensor, Temperature Sensor, RTC Module, SD Card Module, Buzzer, and Power Supply. The GSM Modem, HMI Display, Custom Keypad, Raspberry Pi Processor Board, XBee Modem, GSM Modem, and Power Supply are all included in the IIP_MSVSRMote, which is used for remote communication and user interaction. It allows operators to monitor and manage industrial espresso machines, receive notifications for predictive maintenance, and interact with an intuitive interface. This innovation for predictive maintenance of industrial espresso machines uses the Raspberry Pi Processor Board, which is embedded inside both of the motes, to provide the computing capacity required for data analysis, communication, and control tasks.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025898 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CC2500RF BASED CENTRALIZED MONITORING SYSTEM WITH MONITORING OF AIR QUALITY AND HVAC EFFICIENCY IN FOR SMALL SCALE RETAIL OUTLETS

(51) International classification :F24F0011300000, F24F0011620000, G01N0033000000, G06Q0030060000, G01N0015060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT CC2500RF based Centralized Monitoring System with Monitoring of Air Quality and HVAC Efficiency in for Small Scale Retail Outlets comprise of MSMA_MAQTMote(300), CC2500 RF Module(310), Power Supply(320), Relay Module(330), MQ135 Sensor(340), PM Dust Sensor(350), DHT Sensor(360), STM32 Board(370), MSMA_MAQTMote(400), CC2500 RF Module(410), Power Supply(420), Esp01 WiFi Board(430), HMI Display(440) and STM32 Board(450). Using its inbuilt sensors and wireless communication capabilities, the MSMA_MAQTMote functions as a sensor node within the innovation, actively gathering real-time data on air quality and HVAC efficiency in small-scale retail establishments. The innovation's focal point is the MSMA_MAQCMote, which processes and wirelessly receives data from the MSMA_MAQTMote and displays real-time data on an HMI display. This enables small-scale retail shop owners or managers to keep an eye on and maximize HVAC efficiency and air quality. As the central processing unit in MSMA_MAQTMote and MSMA_MAQCMote, the STM32 Processor Board is an essential component of the invention. It makes data gathering, analysis, and communication easier for small-scale retail establishments looking to monitor HVAC efficiency and air quality effectively.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025922 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SMART SYSTEM FOR SIGN LANGUAGE DETECTION AND ACTION RECOGNITION

(51) International classification	:G06N0020000000, G06F0003010000, G06N0003080000, G06K0009620000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a smart system (100) for sign language detection and action recognition. The smart system (100) for sign language detection and action recognition comprises an image capture module, a preprocessing module, a machine learning model module and an action recognition module. The image capture module is configured to capture visual data of sign language gestures performed by a user. The preprocessing module is configured to preprocess the captured visual data to enhance image quality and extract relevant features. The machine learning model module is configured to analyze the preprocessed visual data using machine learning algorithms to recognize and interpret sign language gestures. The action recognition module is configured to translate the interpreted sign language gestures into actionable commands or communication outputs. The image capture module comprises one or more cameras or sensors positioned to capture hand movements, facial expressions, and body posture of the user performing sign language gestures.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026049 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A LONG-RANGE LORA-ENABLED IOT ADDON AUTOMATE DEVICE FOR SHRINK WRAPPING MACHINES, ENHANCING OPERATIONAL EFFICIENCY IN FOOD INDUSTRY

(51) International classification	:H04L0067120000, G08G0001095000, H04W0084120000, B65B0021240000, G09B0023180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A Long-Range LoRa-enabled IoT Addon Automate Device for Shrink Wrapping Machines, Enhancing Operational Efficiency in Food Industry comprises of LIAD_SWMTMote (100), STM32 Nucleo board (101), Power supply (102), Buzzer (103), Relay Module (104), RTC Module (105), Lora Module (105), LIAD_SWMRMote (200), Lora Module (201), Keypad (202), Power supply (203), Indicator (204), ESP32 WIFI Board(205), TFT Display (205) and STM32 Nucleo board (206). The system as claimed in claim 1, wherein to enable the effective control of shrink wrapping machines, the LIAD_SWMTMote is outfitted with an STM32 Nucleo board, Lora Module, Relay Module, RTC Module, Buzzer, and Power Supply. This is achieved by integrating a variety of necessary hardware, such as the STM32 Nucleo board, LoRa Module, Relay Module, RTC Module, Buzzer, and Power Supply, to support long-range communication, accurate scheduling, and dependable automation in the food industry.The system as claimed in claim 1, wherein the central processing unit that coordinates and controls the various components of the LIAD_SWMTMote is the STM32 Nucleo board, which is equipped with the STM32 Nucleo board, Lora Module, ESP32 Wifi Board, TFT Display, Keypad, Indicator, and Power Supply. This ensures smooth communication, accurate scheduling, and efficient automation of Shrink Wrapping Machines in the food industry.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026296 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AI-INTEGRATED CYBERSECURITY FRAMEWORK FOR NETWORK THREAT DETECTION

(51) International classification	:G06N0020000000, G06N0020100000, G06F0021560000, G06N0005040000, G06F0021550000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Traditional cybersecurity tactics frequently fail to detect cyber threats in a timely and effective manner due to the increasing complexity and frequency of cyber attacks. The purpose of this invention is to present a novel cybersecurity framework that incorporates artificial intelligence and is meant to improve network threat detection capabilities. Using sophisticated machine learning algorithms and data analytics methods, the framework that has been suggested has the objective of proactively identifying and mitigating a wide variety of cyber risks in real time. Through the use of artificial intelligence, the system is able to continuously learn from the patterns of data that are being received, adapt to new threats, and improve the accuracy of its detection. In addition, the framework provides scalability and flexibility, making it suitable for accommodating a wide variety of network infrastructures and constantly shifting threat landscapes. In this study, the effectiveness and efficiency of the AI-integrated cybersecurity framework are proved through extensive testing and evaluation. This demonstrates the framework's ability to greatly improve network security posture and minimize risks in current digital infrastructures.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025277 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ONLINE WORKING HOUR MONITORING OF VIBRATORY TRUSS SCREED MACHINE USING IOT EQUIPPED ADDON DEVICE IN INFRASTRUCTURE DEVELOPMENT

(51) International classification :G06Q0010060000, G06N0020000000, G06N0005040000, G06F0009451000, E01C0019480000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT Online Working Hour Monitoring of Vibratory Truss Screed Machine using IoT Equipped Addon Device in Infrastructure Development comprises of OWHM_VTSTMote(1500), HMI Screen(1550), Buzzer(1600), Power Supply(1650), RTC Module(1700), SD Card Module(1750), GSM Modem(1800), ESP01 Wifi Board(1850) and TI MSP432 Board(1850).The TI MSP432 Board, ESP01 Wifi Board, HMI Screen, GSM Modem, SD Card Module, RTC Module, Buzzer, and Power Supply equipped OWHM_VTSTMote is used to seamlessly integrate machine learning algorithms and IoT capabilities to offer actionable insights, AI-driven recommendations, and real-time remote monitoring for optimizing the working hours and productivity of vibratory truss screed machines in infrastructure development.This innovation's HMI Screen helps with on-site decision-making and improves the overall efficiency of vibratory truss sprinkled machines in construction projects by giving operators a localized, intuitive interface to access real-time data and AI-based recommendations.This innovation's built-in GSM modem allows for smooth communication over GSM networks and allows for prompt alerts and notifications to operators in the event of important events or problems with the vibratory truss screed machine. This ensures proactive response and reduces downtime in infrastructure development.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025278 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LONG RANGE LORA AND IOT TECHNOLOGIES FOR REMOTE CONTROL AND MONITORING OF TRADITIONAL STEAM IRONING MACHINE IN TEXTILE INDUSTRY

(51) International classification :H04L0067120000, C11B0009020000, H04N0005232000, G08C0017020000, D06F0081080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT Long Range LoRa and IoT Technologies for Remote Control and Monitoring of Traditional Steam Ironing Machine in Textile Industry comprises of LRLT_TSIMTMote(10), Lora Module(20), ESP12E Board(30), Power Supply(40), Actuator Module(50), LRLT_TSIMTMote(150), Indicator(160), Keypad(170), Power Supply(180), GSM Modem(190), Lora Module(200) and ESP12E Board(210).Providing consumers with effective and convenient operation, the LRLIT_TSIMTMote, which is outfitted with an ESP12E Board, Lora Module, Actuator Module, and Power Supply, is utilized for remote control and real-time monitoring of conventional steam ironing machines. The LRLIT_TSIMTRMote is used to provide enhanced connectivity options, user interface capabilities, and visual feedback for the remote control and monitoring of conventional steam ironing machines. It is equipped with an ESP12E Board, Lora Module, GSM Modem, Keypad, Indicator, and Power Supply. Both of the motes include a LoRa Module, which is utilized to enable long-range connectivity for traditional steam ironing machine remote control and real-time monitoring, guaranteeing dependable and effective functioning.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025279 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT EMPOWERED REMOTE CONTROL SYSTEM UTILIZING THE CC3000 RF MODULE FOR INJECTION MOLDING MACHINES IN A WOODEN MANUFACTURING FACILITY

(51) International classification :B29C0045760000, B29C0045170000, H04L0067120000, B29C0045180000, B29C0045770000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An IoT empowered Remote Control System Utilizing the CC3000 RF Module for Injection Molding Machines in a Wooden Manufacturing Facility comprises of RCS_IMMWTMote(100), CC3000 RF Module(110), Buzzer(120), Power Supply(130), Relay Module(140), ESP32 Board(150), EI_LFMRMote(200), CC3000 RF Module(210), GSM Modem(220), ESP32 Board(230), Power Supply(240), Customized Keypad(250) and Display(260).The RCS_IMMWTMote enhances operational responsiveness and efficiency by enabling wireless communication, relay-based functions, and real-time notifications via a personalized online dashboard. It does this by utilizing an ESP32 Board, CC3000 RF Module, Relay Module, Buzzer, and Power Supply. 1. In a wooden manufacturing facility, injection molding machines can be remotely controlled using the RCS_IMMWTMote. To increase the capabilities of remote control for injection molding machines in a wooden manufacturing facility, the RCS_IMMWCMote, which consists of an ESP32 Board, CC3000 RF Module, GSM Modem, Display, Customized Keypad, and Power Supply, is used. It incorporates features like GSM communication, a user-friendly display, a customized keypad, and internet connectivity through a customized web dashboard, guaranteeing comprehensive control and monitoring for optimal operational performance.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026368 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A SYSTEM AND A METHOD FOR ADVANCED EMBEDDED SYSTEM DESIGN”

(51) International classification :G06F0021570000, G06F0009500000, G06F0015780000, G06F0021600000, G06F0011200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a system for advanced embedded system design, comprising: i) Heterogeneous processing units including CPUs, GPUs, and accelerators interconnected via advanced on-chip communication fabrics; ii) Memory subsystems including high-bandwidth memory (HBM), cache memory, and non-volatile memory (NVM) for efficient data storage and retrieval; iii) Peripheral interfaces and I/O controllers for interfacing with external sensors, actuators, and communication modules; and iv) Security features including hardware-based encryption/decryption engines and secure boot mechanisms to ensure data integrity and system authenticity. Figure 1.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026369 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A LOW-POWERED VLSI SYSTEM”

(51) International classification	:G06F0001329600, G06F0001324000, G06F0001320300, H03K0019000000, G06F0001323400
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a low-power VLSI system comprises i) A power gating mechanism facilitating the selective activation and deactivation of specific functional blocks within an integrated circuit based on workload demands or operational requirements; ii) A Dynamic voltage and frequency scaling (DVFS) circuitry enabling real-time adjustment of operating voltage and clock frequency to optimize power consumption while maintaining performance. iii) An Adaptive clock gating circuitry dynamically controlling clock signals to individual circuit blocks based on their utilization, thereby reducing unnecessary power consumption during idle or low activity periods. iv) A Sleep transistor integration within flip-flops and latch circuits, allowing for efficient leakage power reduction during standby states without compromising data integrity; and v) Fine-grained power gating at the transistor level using isolation techniques such as power switches or body biasing to minimize leakage current in inactive regions of the circuit. Figure 1.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026370 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “AN APPARATUS FOR ADVANCED SIGNAL PROCESSING”

(51) International classification :G06K0009620000, A61B0005000000, G10L0015140000, G06N0020100000, G06F0015800000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an apparatus for advanced signal processing comprising: i) Input interfaces for receiving signals from one or more sources; ii) a signal processing unit incorporating adaptive filtering, machine learning, and pattern recognition modules wherein Digital signal processors (DSPs) programmed to implement recursive least squares (RLS) or Kalman filtering algorithms iii) Output interfaces for transmitting processed signals to external devices or systems a) Specialized hardware accelerators optimized for artificial neural network (ANN) inference or support vector machine (SVM) classification tasks; and iv) a pattern recognition module wherein said module possesses application-specific integrated circuits (ASICs) designed for efficient implementation of hidden Markov models (HMMs) or Gaussian mixture models (GMMs). Figure 1.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026371 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “SYSTEM FOR ADVANCED WIRELESS COMMUNICATION IN A 5G NETWORK”

(51) International classification :H04B0007060000, H04W0072080000, H04W0088080000, H04W0072040000, H04W0084040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system for advanced wireless communication in a 5G network, comprising: i) User equipment (UE) equipped with 5G NR capabilities for communication with a base station (BS); ii) A base station (BS) configured to establish connections with multiple UEs and manage radio resources dynamically, wherein the base station (BS) is further configured to perform radio resource management (RRM) functions, including scheduling, beamforming, and interference coordination; iii) Network elements including a Core Network (CN), Radio Access Network (RAN), and edge computing resources for supporting 5G services and applications. Figure 1.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025899 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ADVANCED IOT TECHNOLOGY EMPOWERING REMOTE CONTROL FOR REAL-TIME DECISION-MAKING IN CNC PRESSURE MACHINING THROUGH EDGE COMPUTING

(51) International classification	:A61K0036730000, G06Q0050020000, H04L0067020000, G06F0011300000, H05K0001110000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Advanced IoT Technology Empowering Remote Control for Real-Time Decision-Making in CNC Pressure Machining through Edge Computing comprises of AIT_CPMTCMote(10A), GSM Modem(10B), Actuator Module(10C), Power Supply(10D), Buzzer(10E), SD Card Module(10F), RTC Module(10G) and Raspberry Pi Processor Board(10H). For remote control and real-time decision-making in CNC pressure machining, the AIT_CPMTCMote, which is outfitted with a Raspberry Pi Processor Board, GSM Modem, Actuator Module, RTC Module, SD Card Module, Buzzer, and Power Supply, integrates necessary hardware components, guarantees smooth connectivity, and gives operators a customized web dashboard for effective monitoring and control. This innovation's Raspberry Pi Processor Board is used to coordinate data processing, communicate with different modules, and enable edge computing to improve the device's autonomy and ability to make decisions in real time when using CNC pressure machining. By integrating cutting-edge IoT technology, the GSM modem built into this machine creates a strong connection to the Global System for Mobile Communications network, facilitating smooth communication and remote access for operators to monitor and control CNC pressure machining processes.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411025900 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : IOT-INTEGRATED SYSTEM FOR REMOTE OPERATION AND EXTERNAL DEVICE MONITORING OF BLOW MOLDING MACHINES IN A MANUFACTURING UNIT SPECIALIZING IN TOYS AND SPORTING GOODS

(51) International classification	:B29C0049420000, B29C0049560000, A63B0071060000, B29C0049040000, B29C0045760000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT IOT-INTEGRATED SYSTEM FOR REMOTE OPERATION AND EXTERNAL DEVICE MONITORING OF BLOW MOLDING MACHINES IN A MANUFACTURING UNIT SPECIALIZING IN TOYS AND SPORTING GOODS IoT and Cloud based solution for Blow Molding Machine is the novelty of the system comprise of ROED_TSDMote(100), GSM Modem(101), Single Channel Relay Module(102), Power Supply(103), Buzzer(104), Humidity Sensor(105), Temperature Sensor(106) and ESP32 Board(107). In order to promote operational efficiency and proactive issue resolution, the ROED_TSDTMote—which is outfitted with an ESP32 Board, GSM Modem, Temperature Sensor, Humidity Sensor, Single Channel Relay Module, Buzzer, and Power Supply—is utilized to enable remote monitoring, control, and immediate feedback for blow molding machines in a manufacturing facility that specializes in toys and sporting goods. The innovation's ESP32 Board is utilized to coordinate the ROED_TSDTMote's communication, data processing, and control tasks. This allows the IoT-enabled blow molding machine system to be seamlessly integrated and operated in a toy and sporting goods manufacturing facility. The GSM modem built into the ROED_TSDTMote is utilized to connect it to the internet, allow it to connect to an IoT cloud platform, and allow real-time remote control and monitoring of blow molding machines in a toy and sporting goods manufacturing facility.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026412 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENHANCING INDUSTRIAL SAFETY COMPLIANCE WITH IOT-ENABLED LONG-RANGE LORA COMMUNICATION TECHNOLOGY FOR REMOTE CONTROL SYSTEMS IN METAL ROOF SHEET FORMING MACHINES

(51) International classification :G05B0019418000, G07C0009000000, G05B0019042000, G05B0023020000, G05D0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Enhancing Industrial Safety Compliance with IoT-Enabled Long-Range LoRa Communication Technology for Remote Control Systems in Metal Roof Sheet Forming Machines comprises of ILR_MRSCMote (100), Buzzer (110), Single channel actuator (120), Power supply (130), Atmega328 SMD Board (140), Lora module (150), ILR_MRSRMote (200), display (210), ESP32 Board (220), keypad (230), power supply (240), Atmega328 SMD Board (250) and Lora module (260). The Atmega328 SMD Board, Lora Module, Single Channel Actuator, Buzzer, and Power Supply equipped ILR_MRSRMote allows operators to communicate with Metal Roof Sheet Forming Machines remotely via an intuitive keypad interface and display. This allows for real-time control and monitoring for improved operational efficiency and safety compliance. The ILR_MRSRMote, which has an intuitive display and keypad and is outfitted with an Atmega328 SMD Board, Lora Module, ESP32 Board, Display, Keypad, and Power Supply, allows operators to remotely monitor and control Metal Roof Sheet Forming Machines, guaranteeing safe and effective industrial operations. Both of the nodes' Atmega328 SMD Boards are employed to supply the computational power required for the smooth automation, control, and communication of metal roof sheet forming machines.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026413 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATION OF CLOUD AND SX1278 RF TECHNOLOGIES FOR REMOTE CONTROL OPERATION OF CNC LASER CUTTING MACHINE IN METAL FABRICATION INDUSTRY

(51) International classification	:B23K0026380000, B23K0026700000, G05B0019418000, B23K0026080000, H04B0007155000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT An Integration of Cloud and SX1278 RF Technologies for Remote Control Operation of CNC Laser Cutting Machine in Metal Fabrication Industry comprises of RCO_CLCMTNode (10), Indicator (15), Buzzer (20), Actuator (25), Rechargeable power supply (30), ESP32 Board (35), SX1278 RF Module (40), RCO_CLCMrNode (100), 7 segment Display (105), Keypad (110), Rechargeable power supply (115), ESP32 Board (120) and SX1278 RF Module (125). Through a customized web dashboard and secure cloud connectivity, the RCO_CLCMTNode, which is outfitted with an ESP32 Board, SX1278 RF Module, Actuator, Indicator, Buzzer, and Rechargeable Power Supply, facilitates the remote initiation and real-time monitoring of CNC laser cutting machines in the metal fabrication industry. The RCO_CLCMRNode, which is outfitted with an ESP32 Board, an SX1278 RF Module, a 7-segment display, a keypad, and a rechargeable power supply, is utilized to enable smooth communication with the RCO_CLCMTNode, the central control unit. It offers an intuitive interface via a 7-segment display and keypad that allows operators to receive commands and receive information when operating CNC laser cutting machines remotely in the metal fabrication industry.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026414 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATING XBEE AND IOT TECHNOLOGY FOR WIRELESS CONTROL AND AUTOMATION OF THE 1325 SERIES HIGH-SPEED CNC ROUTER IN INDUSTRIAL MANUFACTURING

(51) International classification :G08C0017020000, G06F0003041000, G05B0019418000, H04L0067025000, H04L0067120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A Integrating XBee and IoT Technology for Wireless Control and Automation of the 1325 Series High-Speed CNC Router in Industrial Manufacturing comprises of XIT_WCATCMote (100), buzzer (100A), Relay Module (100B), Temperature Sensor (100C), Power supply (100D), STM32 Board (100E), XBee Explorer (100F), XBee Module (100G), XIT_WCARCMote (200), Touch screen HMI Display (200A), ESP01 WiFI Module (200B), Power supply (200C), STM32 Board (200D), XBee Explorer (200E) and XBee Module (200F). The 1325 Series High-Speed CNC Router in industrial manufacturing is equipped with the XIT_WCATCMote, which is used to enable wireless on-off automation, real-time environmental monitoring, and alert notifications. It is equipped with an STM32 Board, an XBee Module, an XBee Explorer, a relay module, a temperature sensor, a buzzer, and a power supply. The STM32 Board, XBee Module, XBee Explorer, ESP01 Wifi Module, Touch Screen HMI Display, and Power Supply of the XIT_WCARCMote are utilized to enhance the wireless automation and operational monitoring capabilities of the 1325 Series High-Speed CNC Router in industrial manufacturing by providing internet connectivity and user-friendly remote control via a web dashboard.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026415 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS REMOTE MONITORING AND CONTROL OF ROBOTIC SCREW EXTRUDER MACHINES IN AUTOMOBILE MANUFACTURING TO ENHANCED SAFETY USING CC2500RF AND IOT APP

(51) International classification :B25J0009160000, A61K0036730000, H04N0009310000, B60L0003000000, B62J0027000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT A Wireless Remote monitoring and control of Robotic Screw Extruder Machines in Automobile Manufacturing to Enhanced Safety using CC2500RF and IoT App comprises of WRC_RSEMTMote (10), Driver Module (10A), Actuator Module (10B), Power supply (10C), Raspberry Pi Pico Board (10D), CC2500 RF Module (10E), WRC_RSEMRMote (10), GSM Modem (11A), customized Joystick Module (11B), rechargeable battery (11C), Raspberry Pi Pico Board (11D) and CC2500 RF Module (11E). For improved safety and operational efficiency, the WRC_RSEMTMote, which is outfitted with a Raspberry Pi Pico Board, CC2500 RF Module, Actuator Module, Driver Module, and Power Supply, is utilized to enable wireless remote monitoring and precise control of robotic screw extruder machines in the automotive manufacturing industry.The WRC_RSEMRMote is used to enable wireless communication, mobile network connectivity, and manual control for effective remote monitoring and control of robotic screw extruder machines in the automotive manufacturing industry, improving safety and offering operational flexibility. It is equipped with a Raspberry Pi Pico Board, CC2500 RF Module, GSM Modem, Customized Joystick Module, and Rechargeable Battery.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202411025280 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONDITION MONITORING FOR SHRINK WRAPPING MACHINES VIA A CLOUD SOLUTION BASED ON NRF TECHNOLOGY ENHANCING INDUSTRIAL AUTOMATION

(51) International classification :G01H0001000000, G05B0019042000, A61B0005020500, G07C0005000000, A61B0005113000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT Condition Monitoring for Shrink Wrapping Machines via a Cloud Solution based on nRF Technology enhancing Industrial Automation comprises of WCM_SWMTMote(500), Pressure Sensor(500A), Accelerometer Sensor(500B),Temperature Sensor(500C), Vibration Sensor(500D), Power Supply(50E), ATmega 16 Board(500F), nRT Module(500G), WCM_SWMRMote(600), Touch Screen TFT Display(600A), NuttyFi WiFi Board(600B),Power Supply(600C), ATmega16(600D) and nRF Module(600E).The ATmega16 Board, nRF Module, Vibration Sensor, Temperature Sensor, Accelerometer Sensor, Pressure Sensor, and Power Supply are connected to the WCM_SWMTMote, which is essentially in charge of collecting vital machine data via nRF technology, including vibration, temperature, acceleration, and pressure, and transmitting it to a cloud server for real-time monitoring and analytics concerning shrink wrapping machine condition monitoring.The WCM_SWMRMote is utilized to integrate a touch screen TFT display and NuttyFi WiFi board to enable data visualization, user interaction, and internet connectivity. This allows for the smooth integration of condition monitoring data into a customized web dashboard for operators and authorities monitoring shrink wrapping machine performance. The WCM_SWMRMote is equipped with an ATmega16 Board, nRF Module, Touch Screen TFT Display, NuttyFi WiFi Board, and Power Supply.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026691 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A CLOTHES PRE-WASHING DEVICE AND METHOD THEREOF

(51) International classification :B08B0003120000, A47L0015000000, A61L0002100000, D06F0019000000, G16H0050300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The disclosure relates to a clothes pre-washing device (100). The clothes pre-washing device (100) may include a washing tank (202). The washing tank (202) includes a set of ultrasonic sensors, at least one inlet port, and an outlet port (204). Each ultrasonic sensor is integrated with an ultrasonic transducer (504) configured for generating ultrasonic waves to create cavitation bubbles in a cleaning solution. Further, the at least one inlet port is controlled via one or more pumps that are configured for recirculating the cleaning solution. The clothes pre-washing device (100) further include an ultrasonic generator coupled to the washing tank, configured for converting electric power into electrical signals to activate each of the ultrasonic transducer (504) for generating the ultrasonic waves; and a top lid (102) coupled to the washing tank (202) configured to cover the washing tank (202). The top lid (102) includes at least one ultraviolet-C light directed towards the washing tank (202). [To be published with FIG. 5]

No. of Pages : 35 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026695 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR REMOTELY MONITORING AND TRACKING USER-INITIATED EVENTS FROM ANALOG CONTROL SYSTEMS

(51) International classification :G05B19/042, G05B19/048, G08C17/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention discloses a system for remotely monitoring user interactions with existing analogue machinery. The system integrates with legacy push-button switch controls, capturing actuation events and transmitting them wirelessly. An analogue-to-digital converter translates switch signals, while a microcontroller processes and transmits data to a remote interface. This interface displays event history and allows for remote resets. By leveraging existing infrastructure, the system offers a cost-effective solution for regulatory compliance and preventative maintenance in various industries.

No. of Pages : 18 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026417 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A CENTRALIZED ACADEMIC CONTENT MANAGEMENT SYSTEM

(51) International classification	:G06Q0010080000, G06Q0050200000, B82Y0040000000, G09B0007000000, G06F0016176000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Centralized Academic Content Management System (CACMS) revolutionizes academic material management in educational institutions. Offering a centralized platform, CACMS facilitates efficient organization, sharing, and access to academic resources. Automated categorization streamlines content discovery, while robust user authentication ensures data security. Seamless integration with existing platforms enhances interoperability, and an intuitive interface prioritizes user experience. By centralizing academic content management, CACMS enhances productivity, collaboration, and accessibility, thereby advancing educational excellence.

No. of Pages : 28 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026439 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PATIENT & DOCTOR ANALYSIS ROBOT (PADIR)

(51) International classification	:A61B0005000000, A61B0005020500, G16H0040670000, A61B0005145500, A61B0005024000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Patient Analysis and Doctor Interaction Robot (PADIR) is a cutting-edge healthcare solution designed to elevate patient care standards in hospital environments. By amalgamating robotics, advanced sensor technology, and user-friendly software interfaces, PADIR offers a holistic system for real-time patient vital sign monitoring, remote consultation between patients and healthcare providers, and optimized medical workflows. PADIR's hardware backbone consists of an Arduino Mini microcontroller board, an L298D motor driver, an HC-05 Bluetooth module, a 12-volt battery, and a Johnson Motor. This hardware configuration enables seamless mobility within hospital settings, allowing PADIR to navigate through wards and interact with patients and medical staff. Integrated sensors include a MAX30100 pulse oximetry and heart-rate sensor, an MLX60914 digital temperature sensor, and a Galvanic Skin Response (GSR) sensor, facilitating real-time monitoring of vital signs such as heart rate, blood oxygen saturation, temperature, and emotional arousal. Software interfaces cater to both nurses and doctors, offering user-friendly dashboards for streamlined operation. The nurse interface enables patient registration, health monitoring, and data analysis, empowering nurses to track vital signs, record observations, and identify trends. The doctor interface facilitates remote consultation through video conferencing capabilities, allowing doctors to assess patients in real-time and provide medical advice remotely. Both interfaces prioritize password management, user registration, and data privacy for secure and seamless operation. PADIR operates in three primary modes: Monitoring Mode, Consultation Mode, and Accessible Consultations. Monitoring Mode ensures continuous real-time monitoring of patient vital signs, enabling proactive healthcare management. Consultation Mode facilitates remote communication between patients and healthcare providers, fostering timely medical advice and treatment. Accessible Consultations extend medical accessibility by providing expert consultations to remote or underserved areas, promoting healthcare equity. PADIR represents a significant technological advancement in healthcare, promising enhanced patient care, improved medical outcomes, and increased accessibility to quality healthcare services. By leveraging robotics, advanced sensors, and intuitive software interfaces, PADIR has the potential to redefine patient care standards and optimize medical workflows in hospital settings worldwide.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026719 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LIBRARY MANAGEMENT SYSTEM

(51) International classification	:G06Q0050200000, C40B0040020000, G06F0016176000, H04L0043087600, G06F0016220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A library management system is proposed for University/college libraries, featuring a distributed network to overcome geographical barriers. This network enables equal resource sharing among members, ensuring system robustness, quick query processing, and enhanced flexibility. With reduced storage costs and administrative complexities, the system fosters efficient information dissemination and user interaction. Initial focus is on bibliographic access, with plans for internet connectivity and global scholarly communication. Objectives include optimizing resource utilization, creating new services, and promoting standards adoption. Services encompass diverse information resources like books, journals, and A-V materials, reflecting a user-centric approach. The system aims to enhance library operations, foster collaboration, and enrich user experiences.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026723 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SMART CABINET SYSTEM AND METHOD THEREOF

(51) International classification	:G06Q0010080000, H04L0067120000, G07C0009000000, A63F0013300000, G08B0021180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT This disclosure relates to smart cabinet system (100) and method (1300) thereof. The smart cabinet system (100) includes tagged container (112) including predefined initial weight of item, sensor tray (102) including first tag sensor (604), and cabinet tray (104) including second tag sensor (204) and weighing sensor (206). The smart cabinet system includes server (106) configured to receive first identification data signal corresponding to the tagged container (112) from the first tag sensor (604); store registration details of the tagged container (112) to obtain registered container; receive second identification data signal from the second tag sensor (204) and current weight data signal from the weighing sensor (206), corresponding to the registered container; determine current quantity of the item within the registered container based on comparison between the predefined initial weight of the item and the current weight data signal; and determine time remaining from the expiration date. [To be published with FIG. 1]

No. of Pages : 49 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026730 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PRECISION HEALTH INSIGHTS: HARNESSING IOT AND MACHINE LEARNING FOR REMOTE HEALTHCARE MONITORING

(51) International classification	:G06N0020000000, A61B0005000000, G16H0050200000, G16H0050300000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In the contemporary landscape of healthcare, the convergence of IoT and machine learning technologies has paved the way for transformative approaches to remote healthcare monitoring, ushering in an era of precision health insights. This abstract explores the amalgamation of IoT devices and machine learning algorithms to enable continuous monitoring of patient health metrics outside traditional clinical settings. By leveraging IoT devices embedded with sensors and connectivity capabilities, real-time data on various health parameters such as heart rate, blood pressure, and activity levels are collected remotely. Subsequently, machine learning algorithms analyze this data to detect patterns, anomalies, and trends, facilitating predictive analytics and decision support for healthcare providers. The implementation of such a system involves identifying healthcare use cases, selecting appropriate IoT devices, preprocessing data, developing machine learning models, and integrating predictive insights into clinical workflows. Through early disease detection, enhanced patient engagement, and optimized resource utilization, the integration of IoT and machine learning in remote healthcare monitoring holds promise for improving patient outcomes, reducing healthcare costs, and advancing precision health management.

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026372 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : "A FRACTAL ANTENNA DESIGNED FOR OPERATION IN THE C-BAND FREQUENCY RANGE (4GHZ-6GHZ)"

(51) International classification :H01Q1/38, H01Q15/00, H01Q9/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to A fractal antenna designed for operation in the C-Band frequency range (4GHz-6GHz), comprising: i) A radiating element configured in a fractal geometry wherein the radiating element is based on a fractal geometry Koch curves; ii) Dielectric substrates positioned beneath the radiating element to provide mechanical support and insulation; iii) A protective coating applied to the radiating element to enhance durability and resistance to environmental factors; iv) One or more feed points for supplying RF signals to the radiating element; and v) Grounding structures for enhancing antenna performance and impedance matching within the C-Band frequency range. Figure 1.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026381 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “SOLAR POWER VEGETABLES PRESERVATION COOLER SYSTEM WITH CONTEXT TO VILLAGERS”

(51) International classification :F24F0011300000, H02J0007350000, F25D0011000000, F25B0027000000, H02J0003380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to A Solar Power Vegetables Preservation Cooler system, comprises: i) A thermally insulated enclosure for storing vegetables, fruits, or other perishable goods; ii) Photovoltaic panels mounted on the enclosure to harness solar energy for power generation; iii) A refrigeration unit powered by the generated solar energy to maintain a low temperature within the enclosure for preserving the stored vegetables; iv) Temperature and humidity sensors integrated within the enclosure to monitor environmental conditions; and v) Control circuitry configured to adjust the operation of the refrigeration unit based on the sensed temperature and humidity levels, optimizing the preservation process. Figure 1.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026382 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “DRIP AND SPRINKLER IRRIGATION SYSTEM”

(51) International classification :A01G0025160000, A01G0025020000, A01G0025090000, B05B0001260000, A01G0025000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a drip and sprinkler irrigation system comprising: i) A network of drip irrigation lines configured to deliver water directly to the root zones of plants wherein the drip irrigation lines are equipped with pressure-compensating emitters to ensure uniform water distribution across the irrigation area; ii) Sprinkler heads strategically positioned within the irrigation area to provide supplemental watering through overhead sprinkling, iii) A central control unit programmed to manage irrigation schedules, water flow rates, and sprinkler activation based on environmental factors and plant water requirements, and iv) Sensors for monitoring soil moisture levels, weather conditions, and plant health parameters, wherein the central control unit adjusts irrigation settings dynamically in response to sensor data. Figure 1.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026383 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A SYSTEM FOR EXERGY OR ANANGY ANALYSIS OF ENERGY SYSTEMS”

(51) International classification :G06Q0050060000, G06F0030130000, G06F0016250000, H02J0013000000, G05B0023020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system for exergy or anangy analysis of energy systems, comprising: i) Data acquisition modules for collecting operational data, thermodynamic properties, and performance metrics from energy system components; ii) Calculation modules for performing exergy or anangy calculations, including exergy destruction, exergy efficiency, anangy content, and anangy efficiency, based on thermodynamic principles and system parameters. iii) Visualization tools for presenting exergy or anangy analysis results, including diagrams, charts, and reports, to facilitate decision-making and optimization efforts. iv) Optimization algorithms and decision support systems for recommending strategies, interventions, or improvements to enhance exergy or anangy efficiency and overall system performance; v) Integration with energy management systems, control systems, or process automation platforms to implement exergy or anangy-based optimization strategies in real-time or near real-time. Figure 1.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026045 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LPWAN AND CLOUD INTEGRATED TECHNOLOGY BASED CONDITION MONITORING OF PLASMA CUTTING MACHINERY USED IN SHIPBUILDING

(51) International classification :B23K0010000000, H04W0004380000, H05H0001340000, G01L0003100000, G01R0031340000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A LPWAN and Cloud integrated Technology based Condition Monitoring of Plasma Cutting Machinery used in Shipbuilding comprises of CMS_SPCTMote (100), Temperature sensor (100A), Optical RPM Sensor (100B), Torque sensor (100C), Vibration sensors (100D), Rechargeable Power Supply (100E), Lora Module (100F), ESP32 Board (100G), CMS_SPCCMote (200), HMI Display (200A), ESP32 Board (200B), Rechargeable Power Supply (200C) and Lora Module (200D). Real-time data, including vibration, torque, optical RPM, temperature, and vibration from plasma cutting machinery is collected by the CMS_SPCTMote, which is outfitted with an ESP32 Board, Lora Module, vibration sensor, torque sensor, temperature sensor, and rechargeable power supply; and this allows for seamless wireless transmission to the centralized edge device for cloud-based analytics and proactive maintenance in shipbuilding.Analyzed data and trends from cloud-based analytics are presented by the CMS_SPCCMote, which is outfitted with an ESP32 Board, Lora Module, HMI Display, and Rechargeable Power Supply; and this enables operators and authorized personnel to keep an eye on and react to the condition of plasma cutting machinery in real-time during the shipbuilding process.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026046 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : REMOTE OPERATED HONING MACHINES USING SX1278 AND IOT-ENABLED SYSTEM FOR TOOL AND DIE MAKING INDUSTRY

(51) International classification :G06Q0010100000, B25J0009160000, G06Q0010000000, G05B0019418000, H04W0008000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The Remote operated Honing Machines Using SX1278 and IoT-Enabled System for Tool and Die Making Industry comprises of IES_RHMTMote (100), SX1278 RF Module (105), Power supply (110), Single Channel Actuator module (115), Indicator (120), STM32 Board (125), IES_RHMRMote (200), SX1278 RF Module (205), keypad (210), power supply (215), ESP01 Wifi Board (220), Buzzer (225), HMI Display (230) and STM32 Board (235). The system as claimed in claim 1, wherein the IES_RHMTMote is a crucial controller in the innovation, integrating necessary parts for wireless connection and real-time status signaling to enable accurate on-off automation of honing machines in the Tool and Die Making Industry.The system as claimed in claim 1, wherein with its advanced functionality, such as internet connectivity, an HMI display, and a keypad, the IES_RHMRMote improves on innovation by allowing operators to remotely control and monitor honing machines with an easy-to-use interface and instant alerts for discrepancies in the tool and die making industry.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026047 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PREDICTIVE MAINTENANCE SOLUTION FOR HIGH-QUALITY PRECAST CONCRETE TOWER MOLDS FOR WIND TURBINES USING WPAN AND IOT INTEGRATED NETWORKS WITH EDGE COMPUTING TECHNOLOGY

(51) International classification :E04H0012120000, G05B0023020000, G06Q0010000000, F03D0013200000, E04H0012160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A Predictive Maintenance Solution for High-Quality Precast Concrete Tower Molds for Wind Turbines using WPAN and IoT Integrated Networks with Edge Computing Technology comprises of PMS_PCTMTMote (5), Relay Module (10), Indicator (15), Vibration Sensors (20), Power supply (25), Raspberry Pi Processor Board (30), Long Range XBee RF Module (35), PMS_PCTMTMote (100), Power supply (105), GSM Module (110), Long Range XBee RF Module (115), Raspberry Pi Processor Board (120), TFT Display with stand (125). A key component of this innovation is the PMS_PCTMTMote, which tracks vibration levels on premium precast concrete tower molds in order to gather data in real time for predictive maintenance analysis.This breakthrough would not have been possible without the PMS_PCTMRMote, which offers a local interface for improved connectivity and visualization as well as real-time monitoring for the purpose of predictive maintenance on high-quality precast concrete tower molds for wind turbines.The Raspberry Pi Processor Board, which is integrated into both of the motes, helps with predictive maintenance and real-time analysis of premium precast concrete tower molds for wind turbines.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026478 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A DEVICE TO TEST THE EROSION CONTROL PERFORMANCE AND WATER RETENTION CAPACITY OF POROUS MATERIALS

(51) International classification :G01N0033240000, E02B0003120000, E03F0001000000, G01N0015080000, E02D0017200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A DEVICE TO TEST THE EROSION CONTROL PERFORMANCE AND WATER RETENTION CAPACITY OF POROUS MATERIALS The present invention consists of artificial rainfall simulator to simulate the required rainfall and an inclined testing ramp to perform test at the required slope. Runoff simulated by the rainfall simulator and slope is hinder by the sample laid on the slope. To perform erosion control test at zero infiltration condition samples are laid on the test ramp without soil and subjected to required rainfall intensity (Fig 1). The volume of runoff during the test and the culmination discharge after the test provides the erosion control performance of geomesh at zero infiltration condition. To perform erosion control test at soil infiltration condition settled soil trays are positioned at the testing ramp with required angle of slope and subjected to the simulated rainfall condition without sample, and the conditions are repeated with sample to evaluate the erosion control % of geomesh.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026500 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PROVIDING INTERACTIVE USER EXPERIENCE IN VIRTUAL INDUSTRY PREMISES

(51) International classification :G06Q0040040000, H04W0074000000, G06T0019000000, G06Q0020400000, G07F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT This disclosure relates to a method (300) and system (100) for providing an interactive user experience in a virtual industry premises. The method (300) includes receiving (302) information associated with a plurality of physical assets within a physical industry premises; and creating (304) the virtual industry premises corresponding to the physical industry premises based on the information, using a digital twin technology and an Artificial Intelligence (AI) model. The virtual industry premises includes a plurality of Three-Dimensional (3D) virtual replicas of the plurality of physical assets. The method (300) includes dynamically receiving (306) data corresponding to the plurality of physical assets and updating (308) the virtual industry premises based on the data. The method (300) includes initiating (314) a user experience in the virtual industry premises based on a user role, upon a successful verification of user credentials received from the user. [To be published with Figure 3]

No. of Pages : 33 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026501 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD AND SYSTEM FOR ASSESSING ACCURACY OF PREDICTION OBTAINED FROM A MACHINE LEARNING MODEL

(51) International classification	:G06N0020000000, H04L0027260000, G06N0003080000, G01N0033240000, G06T0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
ABSTRACT A method of assessing accuracy of a prediction obtained from a machine learning (ML) model is disclosed. The method includes obtaining a primary predicted value associated with a primary parameter and a secondary predicted value associated with each of one or more secondary parameters, from the ML model. The secondary predicted value may be partially dependent on the primary predicted value. Further, a measured value associated with each of the one or more secondary parameters is obtained, in response to an action performed based on the primary predicted value. The method further includes comparing the measured value with the secondary predicted value, for each of the one or more secondary parameters, and determining an accuracy score corresponding to the accuracy of the primary predicted value for the action performed, based on the comparison. [To be published with FIG. 6]

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026385 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WATER SAVING MODULE BY INTEGRATING FLUSH MODEL SYSTEM

(51) International classification :E03B0007070000, E03B0001040000, G06Q0010040000, G06Q0010060000, G05B0015020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This study proposes a novel approach to water conservation through the integration of a flush model system aimed at optimizing water usage in domestic and commercial settings. Traditional flush systems often result in excessive water wastage due to their fixed flushing volumes, irrespective of the actual requirement. In contrast, the proposed system utilizes advanced sensors and control mechanisms to dynamically adjust flushing volumes based on real-time usage patterns and waste detection. The integration of smart technologies enables the system to achieve significant water savings without compromising hygiene or user experience. Through comprehensive simulations and real world trials, the effectiveness and practicality of the integrated flush model system are demonstrated, highlighting its potential to contribute to sustainable water management practices in both residential and commercial buildings. This innovative approach represents a significant step towards addressing water scarcity challenges while promoting environmental sustainability and resource efficiency.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024
(21) Application No.202411026387 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MOBILE DEVICE BASED COMMUNICATION SYSTEM FOR ALERTS, PERTAINING TO WOMEN SAFETY

(51) International classification :H04W0004900000, H04W0076500000, H04W0004020000, H04M0001724180, G08B0021020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The system aims to empower women by providing a secure and discreet means of seeking assistance in potentially hazardous situations. The study begins by highlighting the hazardous nature of nighttime travel, emphasizing the persistent issue of violence against women despite safety precautions and societal awareness. The slow response time of law enforcement agencies and the challenges faced by victims in reporting crimes anonymously contribute to the urgency for a specialized tool to address these concerns. The literature review examines existing approaches to women's safety systems, presenting a comparative analysis of various methodologies. These include IoT-based devices, fingerprint-based connectivity and wearable devices with emergency buttons, GSM-based emergency buttons, and other innovative solutions. The diverse range of technologies reflects the evolving landscape of women's safety systems and underscores the need for comprehensive and adaptable solutions. The proposed Mobile Device Based Communication System utilizes advanced features to ensure women's safety. Users can activate the system with a single touch, initiating GPS-based location tracking. Distinctive to this system is its continuous messaging capabilities, sending location updates every five minutes to designated contacts. The inclusion of shake detectors facilitates real-time tracking, expediting rescue procedures and increasing the likelihood of positive outcomes in emergency situations. The methodology section outlines the development process using Android Studio, providing a clear and concise pseudo code. Key steps involve user authentication, adding emergency contacts, activating safety services through a shake detector, and sending distress information. Additionally, camera shots from both front and back cameras are captured during emergencies, enhancing situational awareness for responders. The development process, implemented using Android Studio, is outlined, emphasizing user authentication, emergency contact management, and service activation. The system's architecture is illustrated, emphasizing the interaction between the Mobile Device Based Communication System and backend services, ensuring efficient communication and data flow. Implementation details include a user-friendly login page, an interface for managing emergency contacts, a service activation page, notification services, and a real-time map view displaying the user's location. The "stop service" feature ensures that all safety measures can be easily deactivated by the user, offering a smooth and controlled conclusion to the safety sequence. In conclusion, the research paper underscores the significance of developing systems tailored to women's unique requirements, technological literacy, and cultural perspectives. The proposed Mobile Device Based Communication System represents a robust contribution to women's safety, offering a reliable and user-friendly tool to empower women and provide them with the means to seek assistance promptly in challenging situations. The research findings provide a valuable roadmap for the development of comprehensive women's safety systems, advocating for a safer and more inclusive world.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026819 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NOVEL HERBAL GEL FORMULATION FOR THE TREATMENT OF JOINT PAIN AND METHOD THEREOF

(51) International classification	:A61K36/28, A61K36/61, A61K36/9066, A61K36/9068, A61K9/00, A61P29/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This abstract introduces a groundbreaking herbal gel formulation designed to alleviate joint pain by harnessing the synergistic potential of five distinct herbs: turmeric, ginger, Boswellia, arnica, and eucalyptus. The extraction process, utilizing ethanol and water solvents in varying ratios, extracts bioactive compounds known for their anti-inflammatory and analgesic properties. The methodology involves a meticulous two-week extraction procedure, resulting in versatile herbal extracts capable of addressing diverse joint pain conditions. This innovation bridges Herbal Medicine with Biopharmaceutical principles, emphasizing the fusion of traditional knowledge with modern pharmaceutical standards. By combining these extracts in precise proportions, the formulation aims to synergistically amplify their effects synergistically, providing a non-invasive, natural solution for joint pain management. This invention underscores the pioneering nature of the extraction process, highlighting its potential to revolutionize therapeutic approaches and enhance overall well-being through holistic remedies.

No. of Pages : 27 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026820 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NOVEL HERBAL GEL FORMULATION FOR THE TREATMENT OF HAIR FALL AND METHOD THEREOF

(51) International classification	:A61K36/25, A61K36/53, A61K36/886, A61K36/889, A61K47/02, A61K47/10, A61Q7/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention introduces a pioneering advancement in hair care by developing and validating a series of multi-herbal gel formulations targeting the enhancement of hair health and the resolution of concerns related to hair loss and growth. Through harnessing the potent properties of Aloe vera, Ginseng, Saw Palmetto, and Rosemary, five distinct formulations (Formulations 1-5) were meticulously formulated, each with varying concentrations of these botanical extracts. The core objective of this innovation is to optimize the synergistic effects of these herbs in fortifying hair follicles, stimulating hair growth, and alleviating hair loss. The formulations underwent rigorous validation utilizing a robust scientific methodology encompassing in vitro studies on human hair follicle cells and in vivo assessments utilizing animal models. Findings from the in vitro experiments exhibited the formulations' capability to augment cell viability and substantially increase the expression of key genes associated with hair growth, such as keratin, collagen, and VEGF. Additionally, in vivo studies showcased significant enhancements in hair regrowth, heightened follicle count, and increased dermal thickness, particularly evident in Formulation 5. This innovation represents a significant departure from conventional chemical-based hair care products, offering natural and safer alternatives tailored to diverse hair conditions. The scalability and efficacy of these formulations (Formulations 1-5), validated through stringent scientific processes, underscore their potential as groundbreaking solutions in the domain of hair care, heralding a shift towards safer, more efficacious, and environmentally sustainable approaches to nurturing healthy hair.

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026821 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : POLYMER- COATED NANOPARTICLES FOR TARGETED CANCER THERAPY WITH MINIMIZING SYSTEM TOXICITY

(51) International classification :A61K0009510000, A61P0035000000, A61K0009500000, A61K0047690000, A61K0049000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A Polymer- Coated Nanoparticles for Targeted cancer therapy with minimizing system toxicity comprises core of the nanoparticle typically consists of a biocompatible material such as lipids, polymers, or inorganic materials like gold or silica; which core serves as a carrier for the therapeutic payload and can be engineered to encapsulate drugs, imaging agents, or other therapeutic molecules. The core nanoparticle is coated with a biocompatible polymer layer to provide stability, enhance biocompatibility, and facilitate surface modification. The polymers used for coating include polyethylene glycol (PEG), poly (lactic-co-glycolic acid) (PLGA), chitosan, or polyvinyl alcohol (PVA). The polymer coating also helps to reduce recognition by the immune system and prolongs circulation time in the bloodstream.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2024

(21) Application No.202411026048 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT-CONTROLLED AND FEEDBACK-MONITORING SYSTEM WITH ANALYTICS FOR WATER BOTTLE WASHING IN PLASTIC MANUFACTURING INDUSTRY

(51) International classification :H04L0067120000, B01L0003100000, H04L0041082000, G06F0013400000, C02F0001320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An IoT-Controlled and Feedback-Monitoring System with Analytics for Water Bottle Washing in Plastic Manufacturing Industry comprises of ICFM_WBWCMote (10), RTC Module (A), GSM Modem (B), SD Card (C), Power Supply (D), Buzzer (E), Relay module (F), ESP01 WIFI Board (G) and TI AM69 Processor Board (H). TI AM69 Processor Board, ESP01 WiFi Board, GSM Modem, Relay Module, RTC Module, SD Card Module, Buzzer, and Power Supply are all included in the ICFM_WBWCMote. This device allows for the seamless integration of IoT technology and allows for automated on-off control, real-time monitoring, and remote management via a customized web dashboard, all of which ultimately optimize resource utilization and operational efficiency. The ICFM_WBWCMote's integrated TI AM69 Processor Board is used to coordinate the integration of hardware parts and streamline the automation of water bottle washing procedures. This allows for effective control, data management, and smooth connectivity with cloud-based IoT technologies.

No. of Pages : 13 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026930 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHODS, SYSTEMS, AND ARTICLES OF MANUFACTURE FOR INDIVIDUAL RANKING IN CONTACT CENTER SYSTEMS BASED ON DATA RELATIVE TO OTHER INDIVIDUALS

(51) International classification	:H04M0003523000, G06Q0010060000, G06Q0030000000, H04M0003510000, H04L0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a novel method for estimating customer executive performance in call routing systems. Embodiments of the method involve the determination of a distribution of real customer executive performance for each skill within a set of skills, derived from previous real customer executive performance data. Subsequently, a set of hypothetical customer executives is generated, each with hypothetical customer executive performances ranging from the worst to the best performance for the respective skill. The method further includes calculating a posterior distribution for each hypothetical customer executive, considering actual results of respective actual customer executives in each skill. Iteratively, total probabilities are computed for multiple hypothetical customer executives within the set, reflecting the likelihood of their performance given observed data. Finally, the method determines the actual customer executive's most probable global performance by selecting the hypothetical customer executive with the highest total probability. This invention provides a robust and comprehensive approach to estimating customer executive performance, enhancing accuracy in call routing decisions.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026932 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEMS, DEVICES, AND METHODS FOR IMPLEMENTING ENCRYPTED AND OBFUSCATED ALGORITHMS IN A COMPUTING ENVIRONMENT

(51) International classification	:G06F0021620000, H04L0009080000, G06F0021140000, H04L0009000000, H04L0009060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Embodiments of the present invention disclose a method and system for encrypting and obfuscating algorithms, particularly suited for enhancing data security and privacy in computational processes. The method involves augmenting multiple data inputs, performing linear or nonlinear operations, applying conditional operations based on predefined thresholds, and processing the output for dissemination. The system comprises a data encryptor, algorithm encryptor, conditional operation processor, and data processor, all coordinated by a key generator for generating encryption and obfuscation keys. By encrypting and obfuscating algorithms, sensitive data can be protected from unauthorized access or tampering, making the invention valuable for applications requiring robust data security and privacy measures.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026933 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD FOR TRAINING MACHINE LEARNING ALGORITHMS FOR IMAGE GENERATION AND UTILIZATION THEREOF

(51) International classification :G06K0009620000, G06N0020000000, G06T0005500000, G06T0007120000, G06N0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
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(57) Abstract :
The present invention discloses a method for training a machine learning algorithm, particularly applicable to medical imaging using tomography systems. This method involves generating pairs of images, each comprising a first reconstructed image generated by one algorithm and a second reconstructed image generated by another algorithm, both applied to the same data. The machine learning algorithm is trained to replicate features of the second algorithm using these image pairs, enabling it to simulate the behavior of a more computationally intensive target algorithm. Additionally, the method supports processing of images generated by the first algorithm to produce outputs similar to those of the second algorithm.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026934 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ROBOTIC SURGERY NAVIGATION SYSTEM UTILIZING STEREOTACTIC GUIDANCE FOR PELVIC ORGAN AND SOFT TISSUE NAVIGATION

(51) International classification	:A61B17/00, A61B34/00, A61B34/20, A61B34/30, A61B90/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention introduces a novel navigation reference equipment designed specifically for robotic-assisted surgery in the pelvic region. This equipment offers a range of advantages aimed at enhancing surgical precision, safety, versatility, and ease of use. Key features include a radiotransparent fastening arc with adjustable lateral bars and joining means, facilitating secure attachment to the surgical table and patient anatomy while minimizing interference with scanning equipment. The equipment incorporates arms with versatile fastening mechanisms and adapters for precise patient anchoring, enabling optimal instrument positioning and maneuverability. Integrated reference devices enable accurate navigation and triangulation of spatial positions, enhancing surgical precision and outcomes. Compatibility with robotic navigation systems further enhances functionality, facilitating seamless communication and coordination during surgery.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/04/2024

(21) Application No.202411026947 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR PREPARING A TOPICAL ANALGESIC OINTMENT FOR LOCALIZED ANTI-INFLAMMATORY ACTIVITY

(51) International classification :A61K36/28, A61K36/534A61P29/00, A61K36/81, A61K47/00, A61K8/92, A61K9/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a method (100) for preparing a topical analgesic ointment from natural plant extracts for localized pain relief comprising: extracting one or more active components with pain-relieving properties from a plurality of plant materials (102), wherein the selection of said plant materials (102) is based on their known or suspected anti-inflammatory, anti-arthritic, analgesic, or other pain-modulating properties. The method further comprises combining the extracted components in a predetermined ratio with a safe and pharmaceutically acceptable base (104) composition, said base composition being formulated (108) to optimize characteristics such as consistency, penetration depth, and skin compatibility. The method further comprises forming the resulting combination into a final ointment (122) composition suitable for topical application (124) to a localized area of the body for providing effective pain relief over a predetermined duration.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/04/2024

(21) Application No.202411026961 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ANTI DIABETIC ANTIOXIDANT ACTIVITY OF GREEN SYNTHESIS OF SILVER NANOPARTICLES OF NYCTANTHES ARBOR TRISTRIS L. LEAF

(51) International classification :B01J35/45, B82Y20/00, B82Y30/00, B82Y40/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a method for the green synthesis of silver nanoparticles from plant leaf extracts (100), the method (100) comprises obtaining freshly harvested Nyctanthes arbor tristis L. Leaf Extract leaves (102) that have undergone double distillation for purification. The method includes extracting plant materials (104) from the leaves by mixing fifteen grams of pulverized leaves with one hundred milliliters of distilled water. The method also includes heating the mixture (106) to 100°C for two minutes to facilitate the extraction of constituents. The method also includes filtering the solvent (108) through Whatman 1 filter paper to obtain the leaf extract. The method also includes chilling the extracted solution (110) to room temperature with temperature control at four degrees Celsius. The method also includes formulating an aqueous leaf extract of Nyctanthes arbor tristis L. (102) and adding 10 mL of the formulated leaf extract (114) to 90 mL of a 1 mM aqueous silver nitrate solution.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026398 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART GESTURE-DRIVEN SPEECH INTERFACE SYSTEM FOR AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC) IN SPEECH-IMPAIRED INDIVIDUALS

(51) International classification :G06F0003010000, G09B0021000000, G10L0013000000, G10H0001000000, G06F0003048830
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The VaaniMitra project introduces a groundbreaking assistive technology solution tailored for individuals with speech impairments. As a wearable gesture-based communication aid, it empowers users to translate hand gestures into synthesized speech output, transcending limitations of traditional speech methods. At its core, VaaniMitra integrates cutting-edge hardware - the Arduino Nano R3 microcontroller, SparkFun Flex Sensors capturing nuanced finger movements, an Analog Accelerometer (ADXL335) tracking 3D hand orientation, and an HC-05 Bluetooth Module ensuring wireless connectivity to an Android application interface. Leveraging real-time gesture recognition algorithms, VaaniMitra processes multi-sensor data inputs from the flex and accelerometer modules. The transmitted gesture data is interpreted by the Android app, developed using MIT App Inventor 2, and converted into audio speech output. A key differentiator is VaaniMitra's ability to translate gestures into Indian regional languages, promoting inclusivity across diverse linguistic landscapes. This innovative fusion of hardware and software embodies a holistic, user-centric approach to assistive communication technology. By harnessing the power of gesture interactions, VaaniMitra revolutionizes traditional paradigms, fostering seamless self-expression and enhancing accessibility for individuals facing speech impairments. Its sophisticated methodology and adaptable design underscore VaaniMitra's potential as a transformative solution in the assistive technology domain.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026406 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EFFICIENT REAL-TIME REMOTE MANAGEMENT OF INDUSTRIAL MIXERS IN THE PHARMACEUTICAL SECTOR THROUGH SMART LORA AND IOT-INTEGRATED SOLUTIONS

(51) International classification	:H04L0067120000, H04L0067125000, H04W0004440000, G06Q0010080000, G06Q0050100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT Efficient Real-Time Remote Management of Industrial Mixers in the Pharmaceutical Sector through Smart LoRa and IoT-Integrated Solutions comprises of RTRO_IMATMote (10), Lora RF Module (10A), NuttyFiWiFI Board (10B), Power supply (10C), Buzzer (10D), Indicator (10E), Actuator (10F), RTRO_IMACMote (20), Lora RF Module (20A), GSM Modem (20B), Power supply (10C), Touch screen TFT Display (10D) and NuttyFiWiFI Board (10E). With its integration of Smart LoRa and IoT technologies, the RTRO_IMATMote, outfitted with a NuttyFi WiFi Board, Lora RF Module, Actuator, Indicator, Buzzer, and Power Supply, facilitates real-time remote control and automation of industrial mixers in the pharmaceutical sector, allowing operators to manage the mixers efficiently and guaranteeing precision in critical processes.By incorporating Smart LoRa and IoT technologies along with a GSM Modem and Touch Screen TFT Display, the RTRO_IMACMote—which is outfitted with a NuttyFi WiFi Board, Lora RF Module, GSM Modem, Touch Screen TFT Display, and Power Supply—allows for improved user interaction and control over industrial mixers in the pharmaceutical industry through an extensive and intuitive interface. The NuttyFi WiFi Board, which is built into both of the motes, is utilized to offer wireless connectivity and enable smooth communication between the customized Cloud Server and the industrial mixers. This allows for real-time remote management and the transfer of data for sophisticated analytics in the pharmaceutical industry.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026822 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PROCESS OF MICROENCAPSULATION OF PROBIOTICS FOR GASTROINTESTINAL HEALTH TO ENSURES SURVIVABILITY AND CONTROLLED RELEASE IN THE GUT

(51) International classification :A61P0001000000, A23L0033135000, C12N0001200000, A61P0001040000, A61K0035747000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The microencapsulation process for probiotics aimed at gastrointestinal health involves several key steps to ensure the viability and controlled release of probiotic bacteria in the gut. Robust probiotic strains are carefully selected based on their tolerance to gastric acidity, bile salts, and other gastrointestinal conditions, ensuring their survival and effectiveness. Biocompatible materials such as alginate, chitosan, gelatin, or lipids are chosen as encapsulation matrices to protect probiotic cells during transit through the digestive system. Various methods such as ionic gelation, spray drying, emulsification, coacervation, extrusion, or layer-by-layer assembly are employed to encapsulate probiotic cells within the chosen matrix. Encapsulated probiotics undergo rigorous testing to evaluate their viability and survival under simulated gastrointestinal conditions, including exposure to acidic pH and bile salts.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026823 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LIPOSOMAL ANTIOXIDANT FORMULATION FOR NEUROGENERATIVE DISEASES

(51) International classification	:A61K0009127000, A61P0025280000, A61K0008670000, A61K0031122000, A61P0025000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A Liposomal Antioxidant Formulation for Neurogenerative Diseases comprises Antioxidants: Various antioxidants are chosen based on their neuroprotective properties, including; Polyphenols: Resveratrol, curcumin, epigallocatechin gallate (EGCG); Vitamins: Vitamin E (a-tocopherol), vitamin C (ascorbic acid), vitamin A (retinol); Coenzyme Q10 (CoQ10), alpha-lipoic acid (ALA), glutathione (GSH). The Phospholipids such as phosphatidylcholine, phosphatidylserine, or cholesterol are used to form the liposomal bilayer structure. These lipids ensure stability and integrity of the liposomes. The additional components like stabilizers (trehalose) or coating agents (polyethylene glycol, PEG) are included to enhance stability, prolong circulation time, and prevent premature degradation of liposomes.

No. of Pages : 13 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026846 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : HYDROGEL-BASED CONTACT LENS FOR OCULAR DRUG DELIVERY FOR SLOW, CONTROLLED RELEASE OF MEDICATIONS FOR EYE DISEASES

(51) International classification	:A61F2/16, A61K47/34, A61K9/00, A61K9/70, A61L27/52, A61L27/54, A61P29/00, G02C7/04
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A composition of Hydrogel-Based Contact Lens for Ocular Drug Delivery for Slow, Controlled release of medications for eye diseases comprises Hydrogel Matrix which is contact lens material is primarily composed of hydrophilic polymers, typically based on hydrogels; Drug: Various ophthalmic medications can be incorporated into the hydrogel matrix; and Stabilizers and Coating Agents. Additional components are included to enhance stability and biocompatibility.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026847 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SLEEPING MASK FOR SKIN RENEWAL AND RADIANCE BOOST

(51) International classification :A61Q0019020000, A61Q0019000000, A61Q0019080000, A61K0008340000, A61K0008490000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This study delves into the efficacy and benefits of an overnight sleeping mask in addressing multiple skin concerns and providing comprehensive skincare solutions. The primary focus is on the mask's ability to revitalize the skin overnight, targeting signs of fatigue, dehydration, and stress that commonly affect skin appearance. Unlike traditional night creams or serums, the sleeping mask offers prolonged contact with the skin, facilitating deeper absorption and potential synergistic effects of ingredients for enhanced revitalization. Furthermore, the mask demonstrates promising results in skin brightening and pigmentation correction due to its extended duration of action compared to shorter-acting products. Ingredients targeting pigmentation issues can work more effectively over time, resulting in visible improvements in uneven skin tone, dark spots, and hyperpigmentation. The convenience and efficiency of the sleeping mask are notable advantages, offering a streamlined skincare routine with a single-step application before sleep. This simplicity appeals to individuals with busy schedules while ensuring comprehensive skincare benefits without the need for additional daytime applications. Moreover, the holistic approach of the sleeping mask sets it apart from other skincare products by addressing multiple skin concerns simultaneously. This comprehensive approach simplifies skincare regimens and potentially provides better-rounded results, making it a one-stop solution for individuals with various skin issues. Lastly, continuous and consistent usage of the sleeping mask may lead to long-term benefits, contributing to healthier and more radiant skin over time. The study suggests that the mask's prolonged, targeted care could yield superior long-term results compared to less targeted or sporadic skincare routines.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026407 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS AUTOMATION OF AUTOMOTIVE HYDRAULIC SHEET METAL SHEARING MACHINES USING CC3000 RF AND IOT TECHNOLOGIES

(51) International classification	:H04W0004800000, H04W0084120000, H04W0008000000, G05B0019418000, H04L0067125000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Wireless Automation of Automotive Hydraulic Sheet Metal Shearing Machines using CC3000 RF and IoT Technologies comprises of WAA_HSMSTMote (10), CC3000 RF Module (11), Power Supply (12), 85A Relay Module (13), Indicator (14), STM32 Board (15), WAA_HSMSRMote (50), ESP8266 Wifi Module (51), CC3000 RF Module (52), STM32 Board (53), Power Supply (54), HMI Display (55) and Keypad (56).Automotive hydraulic sheet metal shearing machines can be wirelessly automated with the help of the WAA_HSMSTMote, which is outfitted with an STM32 Board, CC3000 RF Module, 85A Relay Module, Indicator, and Power Supply. It does this by processing commands, controlling the automation's on/off function via the 85A Relay Module, and enabling communication with a cloud server for data analytics.The WAA_HSMSRMote is utilized to provide Internet connectivity, local control through the HMI Display and Keypad, and the transmission of real-time data to a cloud server, enabling remote monitoring and improving the overall efficiency of automotive hydraulic sheet metal shearing machines. It is equipped with an STM32 Board, CC3000 RF Module, ESP8266 Wifi Module, HMI Display, Keypad, and Rechargeable Battery.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026408 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MONITORING AND ALERT SYSTEM FOR OVERHEATING IN INDUSTRIAL BOILERS UTILIZING SX1278 RF-BASED CENTRALIZED DEVICE AND CLOUD-BASED TRENDING DATA LOGGER

(51) International classification :A61K0036730000, G06Q0010060000, A61B0005000000, H04W0004800000, E21B0047060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Monitoring and Alert System for Overheating in Industrial Boilers Utilizing SX1278 RF-Based Centralized Device and Cloud-Based Trending Data Logger comprises of MAS_TSLCMote (100), SX1278 RF Module (100A), Power supply (100B), Pressure sensor (100C), Temperature sensor (100D), Buzzer (100E), Raspberry Pi Processor Board (100F), MAS_TDLRMote (111), SX1278 RF Module (111A), Raspberry Pi Processor Board (111B), Power supply (111C), Led Indicator (111D) and HMI Display (111E). To monitor temperature and pressure in industrial boilers, the MAS_TDLCMote is outfitted with a Raspberry Pi Processor Board, SX1278 RF Module, Temperature sensor, Pressure sensor, Buzzer, and Power Supply. It uses wireless communication and a combination of sensors to send real-time data to the centralized system, facilitating the early detection of overheating and enhancing the overall efficiency and safety of industrial processes.Through its HMI Display and LED Indicators, the MAS_TDLRMote—which is outfitted with a Raspberry Pi Processor Board, SX1278 RF Module, HMI Display, Led Indicator, and Power Supply—enables operators to visually monitor real-time data and system status, thereby aiding in efficient decision-making and guaranteeing optimal performance of industrial boilers.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026409 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ADVANCED SX1272 & IOT-ENABLED CONTROL SYSTEM FOR HOBBING MACHINES WITH AI-DRIVEN PREDICTIVE MAINTENANCE AND ENHANCED SAFETY FEATURES

(51) International classification :A61B0005000000, G05B0023020000, G06N0005040000, G01D0021020000, G01H0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT An Advanced SX1272 & IoT-Enabled Control System for Hobbing Machines with AI-Driven Predictive Maintenance and Enhanced Safety Features comprises of ASIC_HMTCMote (100), SX1272 RF Module (110), Power supply (120), temperature sensors (130), pressure sensors (140), vibration sensor (150), accelerometer (160), STM32 Board (170), ASIC_HMRCMote (300), SX1272 RF Module (310), STM32 Board (320), Power supply (330), Touch HMI Display (340) and GSM Modem (350). The ASIC_HMTCMote is used for health monitoring of Hobbing Machines. It integrates multiple sensors and an RF module to collect real-time data on critical parameters like vibration, pressure, and temperature, enabling proactive maintenance through AI-driven predictive insights. It is equipped with an STM32 Board, an SX1272 RF Module, an accelerometer, a vibration sensor, a pressure sensor, a temperature sensor, and a power supply.The remote control module equipped with an RF module, GSM modem, and Touch HMI display is called ASIC_HMRCMote, and it is equipped with an STM32 Board, SX1272 RF Module, GSM modem, Touch HMI Display, and Power Supply. This allows for user interaction and machine control and offers a simplified interface for real-time alerts, maintenance recommendations, and trending data.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/04/2024
(21) Application No.202411026988 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : HERBAL COMPOSITION FOR NEPHROPROTECTION AGAINST PARACETAMOL-INDUCED NEPHROTOXICITY IN RATS

(51) International classification :A61P0029000000, A61P0009000000, A61P0013020000, A61P0009100000, A61K0031703600
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a herbal composition for nephroprotection against paracetamol-induced nephrotoxicity in rats. The composition, derived from Euphorbia lactea extract, demonstrates efficacy in mitigating renal damage caused by paracetamol administration. Through a comprehensive evaluation using established animal models, including Gentamicin Induced Nephrotoxicity and Ethylene Glycol induced hyperoxaluria, the composition's nephroprotective and anti-urolithiatic activities are assessed. Parameters such as urine and serum analysis, kidney homogenate analysis, and histopathological examination elucidate the composition's therapeutic potential. This herbal composition offers a natural and potentially safer alternative to conventional pharmacological interventions, addressing the critical need for effective treatments against nephrotoxicity and urinary stone formation.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/04/2024

(21) Application No.202411027055 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : ANALYSIS OF AUTONOMOUS VEHICLE AND MACHINE LEARNING APPROACH FOR AGRICULTURE APPLICATION

(51) International classification	:G06N0020000000, G05D0001000000, G05D0001020000, G06Q0050020000, G06T0007000000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
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(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
ABSTRACT The use of autonomous vehicles has been gaining significant attention in recent years, especially in the agricultural sector. These vehicles are equipped with advanced technologies, such as sensors, cameras, and GPS, which allow them to operate without the need for human intervention. This presents a promising solution for improving efficiency, productivity, and sustainability in agriculture. One crucial aspect of implementing autonomous vehicles in agriculture is the application of machine learning techniques. Machine learning involves the use of algorithms and statistical models to enable computers to learn from data and make decisions without explicit programming. This approach can significantly enhance the performance of autonomous vehicles in agricultural applications. The analysis of autonomous vehicles and machine learning for agriculture application involves studying the potential benefits and challenges of using these technologies in farming operations. It also includes exploring the different types of sensors and data that can be collected by autonomous vehicles and how machine learning algorithms can be utilized to process and analyze this data. One of the main benefits of employing autonomous vehicles and machine learning in agriculture is the ability to operate continuously for extended periods with minimal supervision. This can result in increased efficiency and productivity, allowing farmers to cover larger areas and complete tasks such as planting, harvesting, and spraying more quickly. Moreover, the use of autonomous vehicles and machine learning can also lead to more precise and targeted farming practices. By collecting and analyzing data on soil moisture, nutrient levels, and plant health, these technologies can enable farmers to make data-driven decisions and apply resources more efficiently. This can not only improve crop yields but also reduce costs and minimize negative environmental impacts. However, there are also challenges that need to be addressed when implementing autonomous vehicles and machine learning in agriculture. These include issues related to data quality, security, and the integration of these technologies with existing farming practices and systems. In conclusion, the analysis of autonomous vehicles and machine learning for agriculture application is crucial for understanding the potential and limitations of these technologies in the agricultural sector. With further research and development, these advanced technologies have the potential to revolutionize farming practices and contribute to a more sustainable and efficient future for agriculture.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026848 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PEPTIDE-CONJUGATED NANOPARTICLES FORMULATION FOR BRAIN TARGETING

(51) International classification :A61K0009510000, A61K0009000000, A61K0047640000, A61K0031704000, A61K0009127000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Discloses aPeptide-Conjugated Nanoparticles Formulation for Brain Targeting comprises Lipid-Based Nanoparticles comprises Liposomes or lipid nanoparticles composed of phospholipids and cholesterol; and Polymer-Based Nanoparticles: Polymeric nanoparticles made from biocompatible polymers such as poly(lactic-co-glycolic acid) (PLGA) or polyethylene glycol (PEG); and Inorganic Nanoparticles: Nanoparticles made from materials like gold or silica.Short peptides that mimic natural ligands of receptors or transporters expressed on the BBB endothelial cells. Angiopeptides (Angiopep-2), transferrin receptor-targeting peptides (T7 peptide), or cell-penetrating peptides (TAT peptide).Small Molecule Drugs: Hydrophobic or hydrophilic drugs used for the treatment of neurological disorders.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026849 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NANOCRYSTAL FORMULATION FOR IMPROVED DRUG SOLUBILITY TO ENHANCES ABSORPTION AND BIOAVAILABILITY

(51) International classification :A61K47/32, A61K47/38, A61K9/16, B82Y5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A Nanocrystal Formulation for Improved Drug Solubility to Enhances absorption and bioavailability comprises the active pharmaceutical ingredient (API), typically a poorly water-soluble drug, serves as the primary component of the nanocrystal formulation. The Stabilizers or surface modifiers are often added to the formulation to prevent particle aggregation and maintain stability; stabilizers include: Polymers: Such as polyvinylpyrrolidone (PVP), hydroxypropyl methylcellulose (HPMC), or polyethylene glycol (PEG). The Such as Tween 80, sodium lauryl sulfate, or Pluronic F127. Dispersing Agents: Such as sodium dodecyl sulfate (SDS) or lecithin.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026850 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NOVEL INHALABLE DRY POWDER FORMULATION FOR ASTHMA WITH IMPROVED LUNG DEPOSITION

(51) International classification	:A61K31/137, A61K31/56, A61K47/26, A61K9/12, A61K9/14, A61K9/72, A61P11/02, B82Y5/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Discloses herein a novel inhalable dry powder formulation for asthma with improved lung deposition comprises Bronchodilators as ß2-adrenergic agonists (salbutamol, formoterol) or anticholinergics (tiotropium) to relieve bronchoconstriction; and Corticosteroids: as budesonide or fluticasone to reduce airway inflammation; and Combination Therapies: Formulations containing both bronchodilators and corticosteroids for synergistic effects. The Lactose is used carrier due to its inertness, low cost, and good powder flow properties; Mannitol: Another carrier with excellent dispersibility and low hygroscopicity; and Inhalation Grade Excipients: Including magnesium stearate or leucine to enhance powder flow and aerosolization. Coatings or additives like hydroxypropyl methylcellulose (HPMC) or polysorbate to improve particle dispersion and reduce aggregation.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026851 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : BIODEGRADABLE IMPLANTABLE DRUG DELIVERY DEVICE FOR LONG-TERM RELEASE OF THERAPEUTICS FOR CHRONIC CONDITIONS

(51) International classification :A61K0009000000, A61K0047340000, A61K0009160000, A61K0009200000, A61L0031160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
These devices are composed of biocompatible polymers that gradually degrade within the body, releasing therapeutics over extended periods. Key aspects of these devices include: Biodegradable polymers such as PLGA, PLA, and PCL are commonly used due to their ability to degrade into non-toxic byproducts. Therapeutics are encapsulated within the polymer matrix or reservoir of the implant, ensuring uniform drug distribution and controlled release kinetics. Release kinetics can be tailored to achieve desired profiles, including sustained release over weeks to months. These devices offer prolonged drug release, targeted delivery to specific sites, and improved patient compliance by reducing the frequency of dosing. Biodegradable implantable drug delivery devices find applications in various chronic conditions such as hormone replacement therapy, pain management, cancer chemotherapy, and neurological disorders.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026410 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SMART AND ENERGY-EFFICIENT STEAM GENERATOR PRESSURE MONITORING SOLUTION EMPOWERED BY LORA AND IOT TECHNOLOGIES FOR REAL-TIME MONITORING AND ADAPTIVE CONTROL

(51) International classification :H04L0067120000, A61K0036730000, G16H0040670000, H04W0004380000, B60C0023040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A Smart and Energy-Efficient Steam Generator Pressure Monitoring Solution empowered by LoRa and IoT Technologies for Real-time Monitoring and Adaptive Control comprises of RTM_SGPMMote (500), Lora LPWAN Board (510), Relay Module (520), Power supply (530), Buzzer (540), Temperature Sensor (550), pressure Sensors (560), Raspberry processor Board (570), RTM_SGPCMote (600), GSM Modem (610), Raspberry processor Board (620), Power supply (630), HMI Display (640) and Lora LPWAN Board (650). Continuous real-time monitoring of the steam generator is made possible by the RTM_SGPMMote, which is outfitted with a Raspberry Pi Processor Board, Lora LPWAN Board, Pressure sensor, Temperature sensor, Relay Module, Buzzer, and Power Supply. It also makes it easier to wirelessly transmit vital operational data to the centralized device for adaptive control and analysis. The Raspberry Pi Processor Board, Lora LPWAN Board, GSM Modem, HMI Display, and Power Supply equipped RTM_SGPCMote is utilized in this innovation to enable remote monitoring and offer a user-friendly interface for authorized personnel to access real-time insights, alerts, and analytics related to the performance of the steam generator.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026411 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AI-DRIVEN FORECASTING AND RECOMMENDATIONS FOR HEALTH MONITORING IN TEA PACKING MACHINES VIA CLOUD TECHNOLOGY

(51) International classification	:G06N0020000000, G06N0005040000, G05B0023020000, G01H0001000000, H04L0067109700
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT AI-Driven Forecasting and Recommendations for Health Monitoring in Tea Packing Machines via Cloud Technology comprises of ADF_TCMTMote (100), GSM Modem (101), Raspberry Pi Processor Board (102), Power Supply (103), Accelerometer (104), Vibration sensors (105) and Temperature sensor (106). Using a combination of sensors and cloud-based analytics, the ADF_TCMTMote—which is outfitted with a Raspberry Pi Processor Board, GSM Modem, Temperature Sensor, Vibration Sensor, Accelerometer, and Power Supply—enables real-time monitoring, predictive maintenance, and AI-driven recommendations for optimal operational efficiency in tea packing machines. This innovation uses a Raspberry Pi Processor Board as its central processing unit, which coordinates the integration of various sensors, makes data transmission to the cloud server easier, and supports machine learning algorithms for predictive maintenance in tea packing machines. Another innovation in this piece of work is the GSM modem, which facilitates smooth communication and data transfer to a customized cloud server. This guarantees real-time machine monitoring and the availability of machine data for AI-driven insights and analysis in tea packaging machines.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027183 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ROAD SIGNS WITH SAFETY INFORMATION

(51) International classification	:G08G0001010000, G08G0001096700, G08G0001160000, G06Q0030020000, F21S0009030000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The intelligent road sign system to enhance road safety and prevent accidents. It comprises a network of road signs strategically positioned along roadways, each equipped with advanced technology. Integrated communication modules facilitate data transmission between road signs and a central control system. A sensor array detects environmental conditions and traffic parameters, providing real-time data for analysis by processors within each sign. Using artificial intelligence, these processors determine safety information, including real-time traffic conditions, weather alerts, and road hazards. LED display units ensure high visibility and energy efficiency, while solar panels provide renewable energy to power the signs. Historical traffic and safety data are stored within each sign for analysis and reference. Additionally, the system communicates with nearby vehicles equipped with compatible receivers, ensuring that safety information is updated in real-time based on sensor data analysis.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027184 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : GPS TRACKING DEVICE AND SOS FEATURES

(51) International classification	:A61B0005000000, H04W0004900000, G08B0025010000, A61B0005024000, G08B0021040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The personal safety wearable device presented herein integrates multiple functionalities to enhance user safety during emergencies. A GPS tracking module to determine the device's location accurately, coupled with an SOS unit for initiating emergency alerts when needed. A communication module enables the transmission of vital information and SOS alerts to predefined contacts and emergency services. Designed to be comfortably worn by the user, the device features a wearable housing that houses the necessary components. Embodiments include a biometric sensor and processor for monitoring physiological parameters and triggering additional SOS features automatically based on analyzed data. The device's capabilities encompass a panic mode for signaling immediate distress and a fall detection sensor for automatically triggering SOS alerts in case of accidents. Furthermore, embodiments feature a display screen for presenting location information or emergency instructions, enhancing user awareness and decision-making during critical situations.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027185 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : FIRMWARE MECHANISM DEVICE FOR IOT

(51) International classification :G06F0021570000, G06F0008650000, H04L0009080000, H04W0004700000, H04L0009320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The secure firmware update mechanism for Internet of Things (IoT) devices provides a solution for ensuring the security and integrity of firmware updates. It includes a firmware update server unit for storing updates and authenticating connected IoT devices, along with an IoT communication module to establish secure connections. Each IoT device features a firmware verification unit to authenticate updates and a secure boot engine to prevent unauthorized installations. Additionally, a rollback prevention module prevents downgrading to older firmware versions. Encryption modules secure update transmission, while a key management unit manages encryption keys securely. The system supports various security features such as digital signatures, industry-standard encryption algorithms, and secure communication protocols. Furthermore, it maintains a log of update activities for auditing and compliance purposes, enhancing overall security and reliability.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027186 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ONLINE MEETINGS

(51) International classification :G06Q0010100000, G06F0003010000, H04N0007150000, G06F0003140000, G06F0009451000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a dynamic virtual reality environment for online meetings transform the virtual collaboration by introducing a dynamic VR environment personalized for online meetings. The present innovative system goes beyond traditional VR meeting platforms by offering customizable avatars, interactive whiteboards, and spatial audio technology. Users can personalize their avatars, collaborate on digital content in real-time, and experience realistic sound localization, enhancing immersion and engagement during meetings. The present system utilizes AI model to analyse meeting dynamics, adapt the VR environment in real-time, and optimize user experience and productivity. By using these advanced features, the present invention aims to enhance user engagement, encourage collaboration, improve meeting productivity, and provide a seamless and immersive virtual meeting experience.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026502 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A WASHING UNIT FOR DISHWASHERS

(51) International classification : A47L15/42, A47L15/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The invention relates to a washing unit (102) for dishwashers (100). The washing unit (102) includes a chamber (202) positioned within a cavity (204) on an outer surface of a dishwasher (100) in one or more ways. The chamber (202) is configured to operate independently from the dishwasher (100). The chamber (202) includes a plurality of spray nozzles affixed at pre-defined positions within the chamber (202). The plurality of spray nozzles is configured for spraying water of a pre-defined temperature based on a user requirement. The washing unit (102) further includes a lid coupled to the chamber (202) via an opening mechanism, configured for accessing the chamber (202). The opening mechanism include one of a push-pull latch mechanism, a sliding mechanism, a roller-based mechanism, and a link mechanism. [To be published with FIG. 2]

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026602 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ELECTRIC VEHICLE-MOUNTED AERODYNAMIC WIND TURBINE ASSEMBLY

(51) International classification	:F03D0009250000, F03D0013200000, H02K0007180000, F03D0009320000, F03D0001060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
An electric vehicle-mounted aerodynamic wind turbine assembly (100) to harness wind energy for electricity generation is disclosed. The wind turbine assembly (100) includes two wind turbine boxes (102-1,102-2) mounted roof of the electric vehicle. Each wind turbine (102) has an aerodynamically designed body (104), and a rotor assembly (108) with blades to capture wind energy while the vehicle is in motion. A gearbox (112) and a generator (116) positioned inside the body (104) facilitate conversion of mechanical energy from the rotor assembly into electrical energy. The generated electricity is stored in a battery (106) connected to the turbines via electrical wires (104). Additionally, a hook (120) attached to bottom side of the wind turbine boxes (102-1,102-2) facilitates coupling and decoupling of the wind turbine boxes (102-1,102-2) on the electric vehicle.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2024

(21) Application No.202411026603 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD TO DETECT DISEASE IDENTIFICATION IN AGRICULTURAL FIELD USING WAGON

(51) International classification :G06N0003040000, G06Q0050020000, G06T0007000000, G06N0003080000, G16H0050200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system (100) for disease identification and yield estimation in agricultural fields using a wagon (102) is disclosed. The wagon (102) is equipped with LIDAR sensors (104) and advanced data processing capabilities. By capturing detailed images of crops and analyzing key features such as plant height, leaf color, and texture, the system (100) utilizes convolutional neural network (CNN) algorithms to detect disease patterns and assess disease severity. Additionally, the system (100) evaluates crop yield estimation by considering the extracted features and disease information. Real-time feedback on disease severity and yield estimation is provided to farmers through a display device (106) attached to the wagon (102), while data transmission to a computing device (110) enables further analysis and decision-making. Through iterative training and optimization, the system continuously enhances its accuracy and effectiveness in disease identification and yield estimation tasks, empowering farmers with actionable insights for optimized crop management and improved productivity.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027745 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD FOR CONTROLLING WATER TEMPERATURE IN A HEATING SYSTEM AND HEATING SYSTEM THEREOF

(51) International classification :F24D0019100000, G05B0013020000, G07C0005080000, H04W0036240000, H04L0045000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention presents an advanced water heating system incorporating innovative hardware and software components for precise control over water flow and temperature regulation. The system involves microcontroller that performs various functions to ensure optimal performance and user satisfaction. A key feature of the system is its ability to prevent overflow through a feedback control mechanism that dynamically adjusts water flow rates based on real-time water level data. Furthermore, the microcontroller employs machine learning techniques to iteratively refine control strategies, enhancing system efficiency and adaptability. Temperature regulation is achieved through the modulation of resistive heating elements, with the microcontroller using real-time feedback from temperature sensors and historical usage patterns to maintain precise temperature control.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027187 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS POWER TRANSFER SYSTEM

(51) International classification	:H02J0007020000, H02J0050120000, H02J0050800000, H02J0050400000, H04B0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses The wireless power transfer system 100 for IoT bias combines advanced electromagnetic resonance technology with innovative control mechanism to give a flawless, and effective system of powering IoT bias without physical connections. The system comprises a central power transmitter unit, including a power generation module 203, reverberated coil assembly, frequency tuning circuitry, and control interface 204. IoT device 202 receiver units, equipped with reverberated coils, rectification circuitry, energy storehouse rudiments, and communication interfaces, prisoner, and convert electromagnetic energy transmitted by the central unit 201. This connection enables bidirectional communication, synchronization, and adaptive power operation. new features similar as high-permeability core accoutrements, variable capacitors, and security protocols enhance system effectiveness, scalability, and trust ability. Together, these factors form a comprehensive result poised to revise the geography of IoT power delivery.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027188 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ACADEMIC CREDENTIALS MANAGEMENT SYSTEM

(51) International classification	:H04L0009320000, G06Q0020400000, G06F0016230000, G06F0021600000, G06Q0050180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention presents a system that transforms the established processes of issuance, storage, verification, and distribution of academic credentials by introducing a blockchain-based system for the safe administration. By employing strong encryption, and decentralized storage, the system guarantees the security, and integrity of credentials. By using smart contracts, the system quickly, and accurately streamlines the credential issue process by automating it upon the satisfaction of predetermined conditions. A robust verification mechanism allows authorized entities to confirm the authenticity of credentials efficiently. The invention features a user-friendly sharing interface, enabling credential owners to grant controlled access to their academic records. The system's novel update, and revocation method guarantees that it stays up to date and correct, and an interoperability architecture makes it easier to integrate it seamlessly with other professional, and educational platforms.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027189 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ROUTING SYSTEM AND METHOD THEREOF

(51) International classification :H04L0045000000, H04L0041082300, B82Y0025000000, H04L0045300000, H04L0043100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an intelligent routing in delay-tolerant networks, comprises Dynamic Probabilistic Routing (DPR), Reinforcement Learning-Based Routing (RLR), and Genetic Model-Driven Routing (GMR). The present method utilizes DPR to forecast network conditions, RLR to autonomously adapt routing strategies, and GMR to optimize routing configurations. The embodiments of the present invention collaborate within a unified framework, where DPR informs RLR and GMR decision-making, and RLR and GMR adapt routing policies based on real-time feedback. The present invention maximizes data delivery rates and minimizes transmission delays in challenging network environments. The present invention discloses a significant advancement in telecommunications and networking, promising enhanced efficiency and reliability in delay-tolerant communication scenarios.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024

(21) Application No.202411027925 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SODIUM BUTYRATE FORMULATION AND PROCESS FOR PREPARATION THEREOF

(51) International classification	:A61K31/025, A61K47/12, A61K47/26, A61K47/32, A61K47/36, A61K47/38, A61K47/40, A61K9/28
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a sodium butyrate formulation and a process for preparation thereof.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024

(21) Application No.202411027927 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SUSTAINABLE SYSTEM FOR WASTEWATER TREATMENT AND WATER REUSE

(51) International classification	:C02F0001440000, C02F0009000000, C02F0001000000, C02F0003280000, C02F0003300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the Sustainable System for Wastewater Treatment and Water Reuse presents an integrated approach to address water scarcity and environmental degradation. Utilizing advanced treatment technologies, resource recovery strategies, and decentralized modular components, the system achieves wastewater treatment while promoting water sustainability. Advanced processes such as membrane filtration and anaerobic digestion ensure thorough pollutant removal and resource extraction. Treated wastewater is further treated for reuse in irrigation, industrial processes, and groundwater recharge, reducing reliance on freshwater sources. Decentralized components enhance flexibility and resilience, particularly in remote communities. Community engagement initiatives raise awareness and foster participation in sustainable water management practices. Overall, the system contributes to environmental protection, biodiversity conservation, and public health, offering a holistic solution to the global water crisis.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024

(21) Application No.202411027954 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : UNMANNED AIRCRAFT COLLISION AVOIDANCE

(51) International classification	:G08G0005040000, G06N0003080000, G06T0005000000, G06Q0030020000, H01J0037260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention is to provide a system and a method for collision avoidance between unmanned aircrafts by calculating time to loss of separation between the unmanned aircrafts and alerting the same to the users of the unmanned aircrafts. The time to loss of separation is declared after comparing a distance between future positions of the unmanned aircrafts and a separation criteria. Once the calculated distance is less than the separation criteria the time to loss of separation is declared to the users of the unmanned aircrafts. Figure 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028069 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A FORMULATION FROM ESSENTIAL OIL AND METHOD OF ITS PREPARATION THEREOF”

(51) International classification :A61K0036888000, A61K0047140000, A01N0025040000, A61K0036882000, A01N0065000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to a formulation from plant extracts and method of its preparation thereof; i) Acorus calamus in the range of 20% to 50% ii) Artemisia roxburghiana essential oil in the range of 20% to 50% iii) sodium lauryl sulphate in the range of 0.5% to 1% iv) methyl paraben in the range of 1% to 5% v) propyl paraben in the range of 1% to 2% vi) sodium saccharine in the range of 1% to 5% vii) magnesium aluminum silicate in the range of 0.5% to 1% viii) simethicone, and sodium CMC in the range of 0.5% to 1% Fig. 1

No. of Pages : 29 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028071 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “PRIVACY AND SECURITY ENHANCED INTERNET OF THINGS (IOT) SYSTEM”

(51) International classification	:H04L0067020000, G06F0009500000, H04L0067120000, G06F0021570000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Internet of Things (IoT) presents numerous opportunities for connectivity and automation but also introduces significant challenges in terms of privacy and security. This work delves into the complexities surrounding IoT systems and identifies various security and privacy issues, exploring existing approaches and solutions to mitigate these concerns. A novel IoT layered model is proposed, incorporating comprehensive privacy and security components across different layers of IoT-driven applications. The proposed model is implemented and evaluated using a cloud/edge-supported architecture, with IoT nodes deployed on Amazon Web Services (AWS), edge computing facilitated by Raspberry Pi 4 hardware, and cloud services provided by AWS. Security protocols and management sessions are established between layers to ensure user privacy. The system employs security certificates for secure data transfer, effectively addressing security vulnerabilities and bolstering cybersecurity defenses across cloud, edge, and IoT layers

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027190 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : STORAGE FOR PUBLIC SAFETY POLICIES

(51) International classification :H04L0009320000, H04L0009060000, G06F0021640000, G06F0021620000, H04L0009080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The blockchain-backed secure storage system for public safety policies discloses a comprehensive solution designed to ensure the integrity and accessibility of critical policy documents. At its core, the system comprises several interconnected modules and components, including a blockchain network module responsible for storing policies in a distributed and immutable manner. Connected to this is the data storage module, which houses digital copies of the policies, while the cryptographic hashing module generates unique hash values to verify their integrity. An authentication module, equipped with digital signatures, ensures the authenticity of the policies by comparing hash values with those stored on the blockchain. Additionally, an access control module, leveraging smart contracts, regulates permissions to ensure secure access. The accompanying method outlines a series of steps for securely storing policies on the blockchain network, including encryption, hash generation, integrity verification, and access regulation, thereby providing a robust framework for safeguarding public safety policies.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027191 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SHOPPING ASSISTANT

(51) International classification :G06Q0030060000, G06Q0030020000, G06T0019000000, G06Q0010060000, G06Q0050000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an augmented reality-based personalized shopping assistant discloses a ground-breaking system and method for enhancing the shopping experience in retail environments. utilizing Augmented Reality (AR) technology, the present invention overlays product information, reviews, and recommendations onto physical store displays or online shopping interfaces. The present invention provides personalize recommendations based on user preferences, past purchases, and real-time inventory data, thereby offering a tailored shopping experience. The AR-based assistant aims to drive sales and customer engagement by providing interactive features such as virtual try-on, product comparison, and social media integration. Through real-time updates, notifications, and personalized recommendations, the present invention aims to transform the retail industry, leading to increased customer satisfaction, higher conversion rates, and improved business performance.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027192 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : NANO POWER COGNITIVE PROCESSING UNIT SYSTEM

(51) International classification	:G06N0003040000, G06N0003063000, G06N0003080000, G06N0020000000, G06N0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention presents a Nano Power Cognitive Processing Unit (NCPU) system, integrating advanced AI capabilities with nanotechnology for unprecedented efficiency. "Nano power Cognitive Processing Units (NCPU): Advanced AI Integration," this invention combines six novel embodiments such as Nanoscale Integration Architecture, Cognitive Computing programming, Energy-Efficient Hardware Design, Neural Network Acceleration, Adaptive Learning Mechanisms, and Hybrid Integration with Conventiona1 Processors. The NCPU system revolutionizes AI processing by seamlessly integrating nanoscale components, and cognitive computing principles. The nanoscale transistors, optimized programming, and energy-efficient hardware achieve ultra-low-power consumption while maximizing processing performance. Through neural network acceleration, and adaptive learning mechanisms, NCPU units continuously improve, and adapt to evolving tasks, and environments. Additionally, the hybrid integration with conventional processors enhances scalability, and versatility, enabling optimized performance across diverse computational workloads. This abstract encapsulates the advancements in AI integration achieved through the NCPU system, poised to reshape industries, and propel technological innovation forward.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/04/2024

(21) Application No.202411027077 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A RISK ASSESSMENT SYSTEM FOR CRISIS MANAGEMENT IN BUSINESS OPERATIONS

(51) International classification :G06Q0010060000, G06N0020000000, G06Q0040080000, G06Q0030060000, G06N0005020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention discloses a risk assessment system (100) for crisis management in business operations. The system (100) employs advanced data analytics, machine learning algorithms, and real-time monitoring capabilities to identify, evaluate, and mitigate potential risks to business continuity. By collecting data from diverse sources including financial records, market trends, and external factors, the system (100) provides actionable insights to decision-makers. It facilitates proactive measures to mitigate risks and enhance resilience in the face of crises. The system (100)'s adaptive nature allows for continuous improvement and customization to address evolving threats and business environments. Through its modules, including data processing and analysis, risk identification, mitigation strategies, real-time monitoring, adaptive learning, and user interface, the system (100) offers a holistic approach to risk management. Ultimately, it empowers organizations to navigate challenges effectively and maintain operational stability amidst uncertainties.

No. of Pages : 12 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027166 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SOLAR BASED UNIVERSAL DC POWER SUPPLY SYSTEM

(51) International classification	:F21Y0115100000, H02J0007350000, H02M0003155000, H02J0007000000, H02J0007140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT In an aspect of the present disclosure, a solar based universal dc power supply system (100) includes a 5V regulated supply (102) for transistor-to-transistor logic (TTL) circuits; 15V regulated supply (104) for 555 Timer based circuits; 18V regulated supply (106) for Transistorized Circuits; ±15V regulated supply for Op-Amp based circuits; a constant current source (CCS) (108); a Digital Storage Oscilloscope (DSO); and a mobile charging point (200), 18W DC fan (300) and a LED illumination (400) of 10 Watts. All these supplies follow the same route, 220 V AC utility is reduced to lower value of AC voltage using transformer which in turn is converted to regulated DC voltage by Rectification, Filtration & Regulation. The system (100) stores the energy from the photovoltaic solar panel (112) to a 12 V 26Ah battery (110) to energize all the power supplies simultaneously. Figure 2

No. of Pages : 26 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027168 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PORTABLE SOLAR BASED POWER HOUSE SYSTEM

(51) International classification :H02J7/00, H02S10/40, H02S40/30, H02S40/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT In an aspect of the present disclosure, a portable solar based powerhouse system (100) includes at least two 40W 12 V solar panels (102) arranged in parallel; and a storage battery (104); a charge controller (106). The charge controller (106) disconnects the panel from the battery when tend to overcharge and disconnects the load in case of the battery tends to under discharge. The DC loads (108) with less wattage consumption than an AC load are connected directly to the system (100). The system (100) obtains total 80W wattage and the voltage is 12V. The system (100) generates a current of 80/12 = 6.66 Amps. The storage battery (104) has 26Ah capacity. The system (100) comprises at least a charging port. Figure 1

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027169 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EARTHQUAKE SENSING INSTRUMENTATION SYSTEM

(51) International classification	:H01M0010480000, G01V0001000000, A61N0005060000, G06F0003020000, H02H0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT In an aspect of the present disclosure, an earthquake sensing instrumentation system (100) includes at least four sensors, an arrangement, a green LED (102), an orange LED (104), a red LED (106), and a warning system. Each sensor is provided with an equivalent number corresponding to a voltage. The arrangement is made to display the activated sensors of the at least four sensors. The green LED (102) glows till the voltage at the sensor are below 33 on the display. The orange LED (104) glows till the voltage at the sensor is between 33 and 66. The red LED (106) glows when the corresponding voltage reaches the voltage corresponding to 66 to 99. The warning system gets activated when red light is activated; wherein the glowing of Red LED (106) indicates that the physical parameter has exceeded a predefined critical value. Figure 1

No. of Pages : 23 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028074 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : "A HIGH-TEMPERATURE SUPERCONDUCTING HYDRIDE COMPOUND AND METHOD OF PREPARATION THEREOF"

(51) International classification	:H01L0039240000, H01L0039120000, A61K0049040000, H01B0012020000, H01L0029660000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a high-temperature superconducting hydride compound, comprising: i) A transition metal element; ii) A light element capable of forming hydrides; iii) A crystal structure stabilized under high pressure conditions; and iv) Superconducting properties exhibited at temperatures above traditional superconducting temperatures. A method for achieving high-temperature superconductivity in hydrides, comprising: i) Selecting a hydride compound with a transition metal element and a light element capable of forming hydrides at high pressures; ii) Subjecting the hydride compound to high pressure conditions sufficient to induce superconductivity at temperatures above traditional superconducting temperatures; and iii) Optionally doping the hydride compound with additional elements to enhance superconducting properties and stability. Figure 1.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028075 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A SYSTEM FOR NUMERICAL ANALYSIS ON ENVIRONMENTAL MODELLING AND METHOD THEREOF”

(51) International classification :G06F0111100000, G06F0030200000, G16B0005000000, G06F0030000000, G06F0017100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system for numerical analysis on environmental modeling, comprising: i) Data processing modules for acquiring, preprocessing, and integrating environmental data from diverse sources; ii) Numerical modeling modules for simulating environmental processes using mathematical models, algorithms, and computational methods; iii) Data assimilation and validation modules for integrating observational data, refining model parameters, and evaluating model performance; and iv) Visualization tools for displaying model results, spatial maps, time series, and other graphical representations of environmental simulations. Figure 1.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024
(21) Application No.202411028076 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METFORMIN HCL MATRIX TABLET COMPOSITION BY USING GRAFT POLYMER OF ALOVERA GEL POWDER AND ACRYLAMIDE

(51) International classification :A61K31/155, A61K47/34, A61K47/58, A61K9/20, A61K9/22, A61K9/28, A61K9/32, A61K9/36
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The invention relates to the synthesis and characterization the graft copolymer of acrylamide and AVLGP and to evaluate its drug release behaviour. The objective of this invention is to evaluate the in vitro release behaviour of graft co-polymer of AVLGP with un-grafted AVLGP by formulating the matrix tablet using Metformin HCl as the model drug. AVLGP was selected as a natural polymer and AVLGP-g-PAA as synthetic polymer was prepared by Microwave assisted method. The matrix tablets of Metformin HCl were prepared by using drug, polymer, diluents and lubricant blended in pestle mortar followed by direct compression in a single punching machine. Graft copolymer is defined as the attachment of one or more branches of polymer to the main chain of polymer commonly known as trunk polymer either linearly or branched and thus it can modify the structural, physical and chemical properties of a natural polymer.

No. of Pages : 30 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028078 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SELF-POWERED SMART SHOES FOR BLIND PEOPLE

(51) International classification :A61H0003060000, G01J0005120000, G01S0007521000, G09B0019000000, H04W0004380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
In an aspect of the present disclosure, a self-powered smart shoe (100) for blind people includes a battery (102), a plurality of sensors (104), and an Arduino (108). The ultrasonic sensor, the proximity sensor and the water sensor installed on the shoes to detect the objects, water or mud, pits and/or other obstacles. The gas sensor and a color sensor installed to detect the gas leakage and recognition of color. The infrared thermopile sensor installed to detect the fire or measure the temperature of hot objects. Figure 1A

No. of Pages : 24 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026852 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CHITOSAN-BASED WOUND HEALING GEL TO ACCELERATES WOUND CLOSURE AND PREVENTS INFECTIONS

(51) International classification	:A61K31/722, A61K47/36, A61K9/06, A61L27/52, A61L27/54, B82Y5/00, C08J3/075, C08L5/08
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Discloses herein a method of preparation of chitosan-based wound healing gel comprising the steps of: Solution Mixing: Chitosan and other components are dissolved in water or another suitable solvent to form a homogeneous solution, which is then allowed to gel through chemical or physical crosslinking; Ionic Gelation: Chitosan is mixed with a crosslinking agent, such as tripolyphosphate (TPP), in the presence of a cationic solution, leading to gel formation through ionic interactions; pH Adjustment: Chitosan solutions undergo gelation when the pH is adjusted to certain levels, typically by adding acidic or basic solutions.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026853 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INNOVATIVE NANO EMULSION- BASED DRUG DELIVERY SYSTEM FOR ENHANCES SOLUBILITY AND BIOAVAILABILITY OF POORLY WATER-SOLUBLE DRUGS

(51) International classification :A61K0009000000, A61K0009107000, A61K0047140000, A61K0047440000, A61K0047100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
An innovative Nano emulsion-based drug delivery system comprises a formulation of a stable Nano emulsion containing lipids, surfactants, co-surfactants, and the poorly water-soluble drug; wherein the method encompasses formulation, optimization, characterization, and evaluation stages to ensure enhanced solubility, bioavailability, and therapeutic efficacy of the drug. The phase comprises lipids or oils, which are typically hydrophobic and serve as carriers for the poorly water-soluble drug; and Common lipids include triglycerides, medium-chain triglycerides (MCTs), or long-chain fatty acids. The aqueous phase consists of water or aqueous solutions, providing a medium for dispersing the lipid phase and drug molecules; and it also contains co-solvents or co-surfactants to enhance solubility and stability.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026854 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LIQUID-BASED VESICLES FOR VACCINE TO ENHANCED STABILITY AND IMMUNOGENICITY

(51) International classification :A61K0009127000, A61K0039000000, A61K0039390000, A61P0035000000, A61K0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A composition of Liquid-Based Vesicles for Vaccine to Enhanced stability and immunogenicity comprises Lipid-Based Vesicles (Liposomes): Phospholipids: Main structural component forming lipid bilayers; and Cholesterol: Enhances stability and fluidity of lipid bilayers; and Antigen: Vaccine antigen encapsulated within the lipid bilayers; and Adjuvant: Immunostimulatory molecules co-encapsulated or conjugated with the antigen. The Amphiphilic Block Copolymers: Form self-assembled structures with hydrophobic and hydrophilic segments; and Antigen: Encapsulated within the hydrophobic core or conjugated to the polymer backbone; Adjuvant: Incorporated into the polymer matrix or conjugated to the hydrophilic segments.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026855 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : POLYMERIC CONTROLLED-RELEASE MATRIX TABLET FOR DIABETES MANAGEMENT TO REGULATED RELEASE OF INSULIN OR OTHER ANTIDIABETIC AGENTS

(51) International classification	:A61K31/155, A61K47/34, A61K47/38, A61K9/22, A61K9/24, A61K9/28, A61K9/52, A61P3/10
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A composition of Polymeric Controlled-Release Matrix Tablet for Diabetes Management to Regulated release of insulin or other antidiabetic agents comprises Polymeric Matrix, Antidiabetic Agent, and Stabilizers and Excipients. The Hydrophilic Polymers: Examples include hydroxypropyl methylcellulose (HPMC), polyvinylpyrrolidone (PVP), or sodium carboxymethylcellulose (NaCMC); and polymers form a gel-like matrix upon hydration, controlling the release of the drug. The Hydrophobic Polymers: Such as ethyl cellulose or poly (lactic-co-glycolic acid) (PLGA), which degrade or erode slowly, providing sustained release. The insulin drug is used for diabetes management; and It is incorporated directly into the polymeric matrix or encapsulated within microspheres or nanoparticles dispersed throughout the matrix.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027174 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PHARMACEUTICAL COMPOUND PRODUCTION

(51) International classification	:C12N0015700000, C12N0009100000, A61K0048000000, C12N0009120000, C12M0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention offers a novel synthetic biology method for the long-term, sustainable synthesis of pharmaceutical compounds such as therapeutic agents. The innovation utilizes the capability of biosynthesis to produce therapeutic chemical agents by introducing genetic constructs that have been engineered into host species, such as Saccharomyces cerevisiae, and Escherichia coli. In order to increase productivity, these micro-organisms are cultivated in bioreactor systems that have ideal environmental control, and scalability. Utilization of altered metabolic pathways improves productivity, and product specificity by optimizing the biosynthetic process in micro-organism. Pharmaceutical compound production is made more efficient, scalable, and sustainable by utilizing integrated purification processes that includes techniques such as chromatography to ensure the isolation of high-purity pharmaceutical components.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027175 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CRIME SCENE RECONSTRUCTION SYSTEM

(51) International classification :G06N0005040000, A61B0005110000, G06T0017000000, G06F0003010000, G06T0015000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The system and method of the present invention transform crime scene reconstruction by integrating biomechanics and artificial intelligence. The system captures complete physical evidence utilizing an array of data collection sensors, including 3D scanners, motion capture cameras, accelerometers, and global positioning system (GPS) tracking devices. Advanced biomechanical analysis software employs finite element analysis and step analysis techniques to model human anatomy and dynamics accurately. Artificial intelligence programming models, utilizing machine learning, to process and interpret biomechanical data, predict event sequences, and validate reconstructions against known evidences. The visualization tools of the system, including virtual reality and augmented reality, enable immersive exploration of reconstructed crime scenes. The system provides law enforcement with a powerful tool for reconstructing complex events by combining these innovative technologies, aiding forensic investigations, and ultimately contributing to the administration of justice.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027176 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART PILL SYSTEM

(51) International classification	:A61B0005000000, A61B0005145000, G16H0040630000, G16H0020130000, G16H0020100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention describes a smart pill system 100 that integrates novel sensor technologies, including pH sensors 202, temperature sensors 203, and biochemical sensors 204, within a compact pill form factor. These sensors, strategically positioned within the gastrointestinal tract, monitor crucial parameters related to drug absorption, metabolism, and physiological responses 103. Coupled with a wireless communication module 300, the system enables real-time transmission of sensor data 106 to external devices 305 such as smartphones, and wearable monitors. Data processing programming methods within the smart pill provide insightful analysis, facilitating prompt intervention, and adjustment of treatment plans. Furthermore, the system incorporates features such as encryption protocols, and timestamping capabilities to ensure data integrity, and security 500. This innovative solution revolutionizes medication management, offering unparalleled insights into drug efficacy studies, and patient compliance for improved healthcare outcomes.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028081 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AUTOMATIC SMART PLANT WATERING SYSTEM

(51) International classification	:A01G0027000000, A01G0025160000, H02N0011000000, E05B0047000000, H02S0010100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In an aspect of the present disclosure, an automatic smart plant watering system (100) includes moisture sensors (102); a water source (104); Solenoid valves (106); a power supply (108); a remote control and monitoring module (110); and a remote control and monitoring module (110), a raindrop sensor (112), and a water cycle management mechanism (114). The present invention also provides a process (200) for watering plants using the system (100). Figures 1 & 2

No. of Pages : 30 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028092 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A THERMOELECTRIC HYBRID PHOTOVOLTAIC SYSTEM FOR CONTROLLING WATER PUMPS”

(51) International classification	:A01G25/16, F24D3/02, H02S10/30, H02S40/30
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a thermoelectric hybrid photovoltaic system for controlling water pumps, comprising: i) a photovoltaic panel array configured to generate electrical power from incident solar radiation; ii) a thermoelectric generator array integrated with the photovoltaic panel array, the thermoelectric generator array configured to generate electrical power from waste heat dissipated by the photovoltaic panel array; iii) one or more water pumps connected to the photovoltaic panel array and the thermoelectric generator array; iv) a control unit configured to regulate the operation of the water pumps based on electrical power output from the photovoltaic panel array and the thermoelectric generator array, wherein the control unit dynamically adjusts the power supply to the water pumps to optimize energy utilization and pump performance. Figure 1.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028093 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A SYSTEM FOR IMPROVING POWER QUALITY IN DISTRIBUTED GENERATION SYSTEMS”

(51) International classification :H02J13/00, H02J3/00, H02J3/01, H02J3/18, H02J3/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system for improving power quality in distributed generation systems, comprising: i. one or more distributed generation sources; ii. a power quality improvement device connected to the distributed generation sources; iii. a controller configured to monitor power quality parameters and control the operation of the power quality improvement device to mitigate power quality issues. A method for improving power quality in distributed generation systems, comprising the steps of: i) monitoring power quality parameters at one or more distributed generation sources; ii) detecting power quality issues based on the monitored parameters; iii) activating a power quality improvement device to mitigate the detected power quality issues; and iv) adjusting the operation of the power quality improvement device based on real-time power quality data. Figure 1.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028094 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “AN INTERNET OF THINGS (IOT) ENABLED WATER MONITORING SYSTEM”

(51) International classification :H04L0067120000, G01N0033180000, H04Q0009000000, G05B0019418000, A61B0005145000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to an Internet of Things (IoT) Enabled Water Monitoring System, comprising; i) A network of IoT-enabled sensors configured to measure various water parameters including but not limited to pH level, temperature, turbidity, dissolved oxygen, and conductivity; ii) Communication modules within each sensor for transmitting real-time data to a central data processing unit; iii) A centralized data processing unit equipped with data analytics algorithms for processing, analyzing, and visualizing the collected sensor data; iv) User interface elements for displaying water quality metrics, trends, and alerts to stakeholders via web-based dashboards or mobile applications. Figure 1

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027193 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATED GAS DETECTION SENSORS

(51) International classification :G01N0033000000, G06N0020000000, H04W0004800000, H04Q0009000000, G01N0027120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The smart clothing system discloses gas detection sensors, a processing unit, an analysis module, and an alerting mechanism to enhance personal safety. Gas detection sensors divided throughout the clothing to detect various gases, which includes carbon monoxide, methane, and volatile organic compounds, providing comprehensive coverage. A processing unit analyses sensor data using machine learning algorithms for accuracy. An alerting mechanism generates alerts based on gas detection data analysis, comprising visual indicators, auditory alarms, and feedback mechanisms. A communication module enables wireless transmission of gas detection data and alerts via protocols such as Bluetooth and Wi-Fi. The analysis module correlates gas detection data with environmental factors like temperature and humidity. The system's flexible gas detection sensors adapt to the clothing's shape, while the processing unit executes adaptive algorithms to adjust sensor sensitivity based on user preferences and environmental conditions.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027194 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENERGY HARVESTING SYSTEM

(51) International classification	:A61N0001372000, H02N0002180000, A61N0001378000, H01L0035300000, H02J0050000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to an advanced biocompatible energy harvesting system designed for powering implanted medical devices through the conversion of body movements and heat into electrical energy. The main part of the system is a nano-generator using piezoelectric materials such as polyvinylidene fluoride (PVDF) or zinc oxide (ZnO) nanowires, and a thermoelectric generator (TEG) utilizing bismuth telluride alloys within a micro-scale thermocouple array. An advanced energy management circuit, equipped with smart programming models for dynamic power management, bridges these components, ensuring optimal energy conversion and stable power supply. The system is encapsulated within a biocompatible, fluid-impermeable material, which also facilitates thermal energy transmission and mechanical flexibility. This complete approach not only promises extended longevity and efficiency for implanted medical devices but also represents a significant rise towards self-sustaining medical implant technology, minimizing the need for surgical interventions for battery replacements.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027195 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : DESIGN THINKING SYSTEM

(51) International classification	:G09B0019000000, G06F0012081100, G06F0008200000, A61K0009510000, G09B0007020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention, titled "Inclusive Design Thinking Challenges," relates a system and method for the development of empathy, innovation, and inclusivity in design towards enhancing accessibility for individuals with disabilities. This inventive framework integrates a competition framework, curriculum development, evaluation criteria, an inclusive innovation toolkit, and a global inclusive design challenge network. The competition framework guides participants through empathetic engagement, ideation, prototype development, and solution presentation, emphasizing the creation of accessible solutions. The curriculum development educates participants on inclusive design principles, complemented by Evaluation Criteria that prioritize innovation, inclusivity, and feasibility. The inclusive innovation toolkit equips participants with resources for prototype creation, while the global inclusive design challenge network facilitates idea sharing and collaboration. This interconnected system aims to develop a culture of inclusive design thinking, connecting gaps in accessibility through education, innovation, and global collaboration.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027177 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PLANNING AND OPTIMIZATION FOR TELECOMMUNICATION SYSTEMS

(51) International classification	:H04L0009320000, H04W0004400000, H04L0009300000, G06Q0020380000, G06Q0020400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The Blockchain-Based Authentication System for Vehicle-to-Everything (V2X) communication discloses secure and transparent communication among vehicles and entities. It features a blockchain network unit storing V2X communication data, and V2X communication units within vehicles. Each unit includes a communication module, blockchain client module, cryptographic module, processor, consensus unit, and distributed ledger unit. These components ensure authentication, verification, validation, and recording of V2X communication transactions. The system adheres to V2X communication standards like DSRC and C-V2E and communicates with permissioned blockchain networks. It employs smart contracts for rule enforcement and integrates Elliptic Curve Digital Signature Algorithm for generating digital signatures. The accompanying method encompasses digital signature generation, transaction initiation, consensus achievement, and ledger updating, maintaining tamper-resistant records of V2X communication transactions.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027178 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : RESOURCE MANAGEMENT SYSTEM

(51) International classification	:G06F0009500000, H04L0067100800, H04L0067101200, H04L0067102900, H04L0041147000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
The present invention discloses a dynamic resource allocation system 100 for Cloud-RAN infrastructures, integrating new features similar as hierarchical global resource operation, predictive analytics, predictive interference management, adaptive energy operation, dynamic load balancing, and fault forbearance mechanisms 200. The system optimizes resource allocation by continuously covering network conditions, and business demands, using predictive analytics, and machine literacy methods to anticipate unborn requirements. The predictive interference management medium proactively mitigates implicit sources of hindrance based on literal data, and environmental factors. Adaptive energy operation techniques stoutly acclimate power consumption across network rudiments, while dynamic load balancing mechanisms redistribute business to help traffic. Fault forbearance mechanisms ensure continued service by rerouting business in response to failures, and outages. This comprehensive approach enhances network performance, scalability, and inflexibility in wireless telecommunications networks.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027179 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : QUANTUM NETWORK SYSTEM

(51) International classification :H04L0009080000, H04B0010700000, G06N0010000000, B82Y0010000000, H04W0088060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
The present invention relates to a quantum communication network utilizing quantum entanglement for secure, efficient, and instantaneous data transmission over long distances. The quantum entanglement generation and distribution mechanism, utilizes nonlinear crystals or quantum dot materials to produce entangled photon pairs. Quantum repeaters, equipped with quantum memory and teleportation units, ensure fidelity in the transmission of quantum states. A secure Quantum Key Distribution (QKD) system, employing protocols such as BB84 and E91, enables the distribution of cryptographic keys with inherent security against eavesdropping. The network's operation is optimized by an advanced quantum network routing model, dynamically adjusting to network conditions. Quantum error correction mechanisms are integrated to combat decoherence and quantum noise, while an end-to-end encryption system, grounded in quantum cryptographic techniques, secures data payloads, ensuring a revolutionary advance in communication technology.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028116 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD AND SYSTEM FOR PROVIDING INDIRECT VISUALIZATIONACCESS OF A DATA-LAKE

(51) International classification	:G06F0021620000, G06Q0040020000, H04L0009320000, H04L0061453500, H04L0065101600
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A method (400) and system (100) of providing indirect and visualization access to data of a data-lake (114) is disclosed. A user request from a user to access the data of the data lake is received. A user profile from a plurality of user profiles associated with the user is determined based on a first level of authentication. The first level of authentication is based on the domain object name and the public key. A user defined function (UDF) from a plurality of predefined UDFs associated with the user profile is determined based on the first level of authentication. A portion of the data of the data-lake (114) requested in the user request is selectively rendered based on a second level of authentication. The second level of the authentication is based on the domain object name and the private key. (To be published with FIG. 1)

No. of Pages : 29 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024

(21) Application No.202411028270 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND A COMPUTER IMPLEMENTED METHOD FOR TALENT SCREENING

(51) International classification	:G06F40/20, G06Q10/0631, H04L51/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention pertains to computer systems, specifically addressing a system and method designed for the assessment and evaluation of talents suitable for employment positions or roles within an organization or company. More particularly, the present invention pertains to a user interface which is incorporated on a computing device wherein said user interface including the computing device is configured to analyze and match candidate skills and generate a profile of ideal candidate based on the performance data associated with said ideal candidate, wherein said ideal candidate profile comprises a best fit profile of one or more top performers associated with the organization, and said processor includes a generative artificial intelligence component configured to generate said best fit profile based on said performance data.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/04/2024

(21) Application No.202411028423 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METAL OXIDE-CARBON NANOTUBE NANOCOMPOSITE AND PREPARATION METHOD THEREOF

(51) International classification	:B01J21/06, B01J35/39, B01J35/45, B82Y30/00, B82Y40/00, C01B32/158, C01F17/235, C01G23/047
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides for a highly efficient metal oxide-carbon nanotube nanocomposite and the preparation method of the same. In particular, the invention provides metal oxide-carbon nanotube nanocomposite that is efficient photo catalyst and is capable of removing active pharmaceutical compounds and other pollutants such as dyes simultaneously from waste water. Moreover, the present invention provides a method of preparing metal oxide-carbon nanotube nanocomposite that is economic, environment friendly and highly efficient.

No. of Pages : 20 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/04/2024

(21) Application No.202411028519 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYNTHESIS, CHARACTERIZATION OF SOME 4-(4-(2-(1-(AMINOMETHYL)-2-OXOINDOLIN-3-YLIDENE)HYDRAZINE-1-

(51) International classification	:A61K31/404, A61K31/41/55, C07D209/04, C07D209/12, C07D231/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Aromatic organic heterocyclic containing pyrazole scaffolds possesses two nitrogen atoms of five-member ring. A series of substituted pyrazole compounds were synthesized and their structure was characterized by melting point, TLC, m, NMR and Mass analysis. Pyrazole derivatives have widespread pharmacological activity such as antitumor, anti-inflammatory, antimicrobial, antidepressant, antifungal, anti- malarial, enzyme inhibitors, anti-diabetic, and anticonvulsant. All "the synthesized compounds (Hil-9) were evaluated for diuretic activity and the compounds (HI7, HI5, HI6) showed significant diuretic activity.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027196 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PH-SENSITIVE DRUG DELIVERY SYSTEM

(51) International classification :A61K0009000000, A61P0035000000, A61K0009127000, A61K0009510000, A61B0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention presents a pH-sensitive medication delivery system offering targeted therapy by employing customized vehicles responsive to tissue pH changes. Medications, encapsulated within pH-responsive matrices, and coatings, ensure controlled release of medicine based on acidic, and alkaline environments. Exploiting pH gradients in clinical conditions such as tumors, and inflammation, precise drug localization minimizes off-target effects. Versatility allows for customization with various therapeutic substances, and delivery methods, broadening its medical applicability. Innovative embodiments, including pH-responsive hydrogels, and liposomal vesicles, optimize drug targeting, and release kinetics. Functionalized nanoparticles with targeted ligands enhance tissue selectivity, while implants, and micro-devices offer sustained drug administration. This paradigm shift in drug delivery ensures tailored treatments, potentially transforming medical therapies across diverse ailments, propelled by pH responsiveness, and advancing customized medicine.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027197 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART WEARABLES COMMUNICATION NETWORKS

(51) International classification :A61B0005000000, A61B0005024000, G06N0020000000, A61B0005145000, A61B0005020500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The smart wearables communication network discloses a plurality of smart wearable units for transmitting and receiving data, each equipped with sensors and communication modules. These units are interconnected via a communication unit to facilitate connectivity with other devices. A central processing unit manages functions and communication between the smart wearable devices, supported by a network infrastructure module that creates a communication network between devices. The system encompasses various smart wearable types, from smartwatches to fitness trackers, each capable of data collection and transmission. Additionally, the central processing unit employs both cloud-based and local servers for flexible deployment, utilizing wireless communication protocols for data exchange. This network enables personalized recommendations, alerts, and notifications, supported by biometric sensors for health monitoring and activity tracking. Insights and analytics are generated from collected data, further enhanced by machine learning algorithms for predictive modeling.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027199 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : FORMULATION OF HERBAL HAIR GEL AND EVALUATION OF ITS ANTI DANDRUFF POTENTIAL

(51) International classification :A61Q0005000000, A61Q0005120000, A61K0009060000, A61Q0019000000, A61K0008979400
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to novel herbal hair gel formulation and evaluation of its anti dandruff potential along with nourishment to the hair. The formulation comprises varying amounts of herbal extracts including flaxseed, aloe vera, and nettle, along with essential ingredients such as methylparaben sodium, carbopol, glycerine, PEG, and triethanolamine. These ingredients work synergistically to form a flexible yet resilient matrix over the hair strands, providing hold and structure to hairstyles while moisturizing and conditioning the hair. The hair gel is prepared through a simple method involving dissolution, incorporation, neutralization, and mixing steps. Physicochemical evaluations demonstrate the formulation's suitability for application, exhibiting clearness, appropriate pH, viscosity, extrudability, and spreadability. Moreover, the formulation exhibits significant antifungal activity, making it suitable for combating scalp infections.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026888 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE-DRIVEN COMMUNICATION SKILL DEVELOPMENT SYSTEM

(51) International classification :G09B0019000000, C07K0007080000, G09B0005020000, G09B0005000000, G06Q0010100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Our proposed invention is an Artificial Intelligence-Driven Communication Skill Development System that revolutionizes traditional approaches to enhancing interpersonal communication abilities. Utilizing advanced AI algorithms, the system offers personalized coaching and feedback tailored to individual users' needs, facilitating self-awareness and skill refinement. Through immersive simulations and real-time practice sessions, users can hone their verbal articulation, active listening, and emotional intelligence skills in diverse communication scenarios. The system's adaptability ensures inclusivity, catering to learners of all levels and backgrounds. By democratizing access to communication skill development, our invention empowers individuals to thrive in professional, social, and academic settings. With its potential to foster collaboration, understanding, and societal progress, this system represents a transformative leap forward in communication education.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026889 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SECURING DATA

(51) International classification :G06F21/62, H04L9/06, H04L9/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A method implemented in a source computing device (102) for securing data is disclosed. The method includes obtaining an IMEI number associated with the source computing device (102) and receiving one of: an IMEI number associated with a destination computing device (104) or a set of digits from a user of the destination computing device (104). The method also includes obtaining a unique serial number associated with an external storage device (106) fetching the data to be secured from a memory (120) associated with the source computing device (102) and generating an encoding key. Further, the method includes encoding the fetched data by using the generated encoding key. The method also includes storing the encoded data in the external storage device (106). <>

No. of Pages : 31 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026893 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SELF-ADJUSTABLE CLOTHING BELT

(51) International classification : A41F9/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a self-adjustable clothing belt designed to revolutionize traditional belt designs and enhance user comfort and functionality. It comprises of dual shafted DC powered motor with control unit 102, pressure sensors unit 104, power supplies 106, non-returning locking mechanism 108, flat shaped rack 110, leather belt 112 and rack and pinion mechanism 114. This belt dynamically adapts to the wearer's physical condition and activity level. As pressure on the belt's surface changes, the pressure sensors unit detects these variations and signals the motor to adjust the belt's tightness accordingly. Reference Fig 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026894 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART TABLE WITH ADJUSTABLE DIMENSIONS

(51) International classification	:C02F0001280000, H03F0003240000, A47B0009200000, A47B0083000000, A47B0013020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a smart table with adjustable dimensions 100 representing a novel furniture system designed to optimize spatial usage and enhance user experience. It comprises of table structure 102, belt and pulley system 104, adjustable mechanisms system 106, power unit 108, slip sensor 200 comprising of electrodes 202, air gap 204, dielectric substance 206, and a polymer film 208 and slip sensor circuitry 300 comprising of Supply Adjustable Voltage Regulator Circuit 302, 3-Stage Amplifier Circuit 304, the Wheatstone Bridge Circuit 306 and 5th Order Bessel Filter 308. The adjustable mechanisms system, activated based on feedback from the slip sensor, enables seamless modifications to the table's length, breadth, and height. Reference Fig 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027180 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR BUILDING CERTIFICATIONS

(51) International classification	:G06Q0010060000, G06Q0050080000, G06F0030130000, G06Q0010100000, G06Q0010080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention discloses a system and method for optimizing green building certifications through artificial intelligence (AI). It includes a data collection module, AI optimization module, certification tracking module, and interface unit. The data collection module collects data on usage of building energy, materials, environmental and climate impact by sensors. The AI optimization module analyzes data to optimize building design and operations for green certifications. The certification tracking module monitors progress and offers improvement recommendations, while the interface unit enables stakeholders to access real-time insights and make informed decisions. The method involves data collection, AI-driven analysis, progress monitoring, and provision of personalized recommendations and notifications. AI, this system enhances sustainability efforts and streamlines the green building certification process.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027181 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ASSISTANCE SYSTEM WITH EMBEDDED TECHNOLOGY FOR DRIVER

(51) International classification	:G02B0027010000, G01S0013931000, B60W0050140000, G06F0003010000, G08G0001160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Advanced Driver Assistance System (ADAS) embedded technology discloses a solution for enhancing vehicle safety and driver assistance. It encompasses a plurality of sensors strategically positioned to detect various environmental parameters surrounding a vehicle, including LiDAR, radar, ultrasonic, and GPS sensors. These sensors interface with a central processing unit (CPU) equipped with integrated database storage containing predefined models and algorithms for analyzing sensor data. An artificial intelligence (AI) engine within the CPU utilizes these models and algorithms to interpret sensor data and provide real-time assistance to the driver. Additionally, an output interface communicates with the driver through visual, auditory, and haptic feedback based on the analysis performed by the AI engine. The technology further includes features such as a camera sensor, emergency braking system, heads-up display (HUD), auditory alerts, voice commands, and a driver monitoring module to enhance safety and convenience.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027182 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CHATBOTS FOR CRISIS COMMUNICATION

(51) International classification	:H04L0051020000, G06F0016332000, G06N0020000000, A61B0005000000, G06F0040300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The emergency response chatbot system for crisis communication provides a complete package to enable efficient support and communication in times of need. It consists of a chatbot module that communicates with users, an emergency database module that stores pertinent data, a natural language processing (NLP) module that analyzes user queries, a real-time alert module for important updates, and a feedback unit for ongoing enhancement. The NLP module uses machine learning to improve accuracy, while the chatbot module provides individualized help. Through the emergency database module, the system guarantees access to precise emergency protocols and recommendations. Email and SMS are two of the ways via which real-time warnings are sent. The feedback unit evaluates customer satisfaction and pinpoints areas in need of development. All in all, the system expedites crisis communication through effective analysis of user inquiries, pertinent information provision, and feedback collection for improvement.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027242 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : OPTIMIZING PH FOR EFFICIENT AND STABLE MICROBIAL ELECTROMETHANOGENESIS OF CO2

(51) International classification	:C12P0005020000, C12M0001000000, C02F0003280000, C12M0001107000, C02F0011040000
(86) International Application No	:NA
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(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
The method for the development of the concentration of the buffer, the applied voltage, and the content of bicarbonate all enhanced the rate of methane synthesis within a certain range. In addition to wasting resources, excessive carbonate concentration and applied voltage also reduced methanogen activity. The AnGS bio cathode was able to tolerate pH levels over 9, alkaline circumstances, and oxygen exposure for 24 hours. The dominance of hydrogenotrophic methanogen was revealed by Illumina sequencing findings. This work provides insight into the creation of scalable, effective, and affordable bio cathodes for the manufacture of biofuels and value-added chemicals by employing AnGS as the bio cathode for CH4 synthesis. The CO2 concentration of the biogas generated during anaerobic digestion may be successfully reduced by microbial electrochemical CO2 reduction and in-situ biogas upgrading, which will lower CO2 emissions and achieve carbon reduction. Since pH has a substantial impact on the solubility and forms of CO2 in the aquatic phase, it is a crucial indication in this process. Embodiments of the present invention provide biological processes that include the provision of an electromethanogenic reactor with an anode, a cathode, and a number of methanogenic microorganisms arranged on the cathode for the production of methane gas and the capture of carbon from carbon dioxide. FIG.1

No. of Pages : 17 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027368 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ASSEMBLY FOR HOUSING ONE OR MORE MEDICAL INSTRUMENTS

(51) International classification :A61L0002260000, A44C0005240000, A61M0025020000, A61B0050200000, A61B0090000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Provided is an assembly (100) for housing one or more medical instruments (102). The assembly comprises a tray (104), one or more fixed clasp elements (106), and a locking member (300). The tray is adapted for accommodating one or more medical instruments. The one or more fixed clasp elements (106) have a first end (202) and a second end (204). The first end (202) is fixedly attached on an upper surface of the tray (104). The second end (204) comprises an attachment member (206) that is adapted to engage with respective locking member (300). The locking member comprises a pair of spring-loaded push buttons (302) and a movable clasp element (304). The pair of spring-loaded push buttons (302) is adapted for controlling corresponding movable clasp element (304) to maneuver a formed aperture with respect to the attachment member (206) to secure and release the one or more medical instruments.

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027387 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR ACHIEVING THRESHOLD ADAPTATION IN LEAKY INTEGRATE AND FIRE (LIF) NEURON USING A MAGNETIC DOMAIN WALL (DW) DEVICE

(51) International classification :G06N0003040000, G06N0003063000, G06N0003080000, G11C0019080000, H03K0019000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an efficient methodology for achieving threshold adaptation in leaky integrate and fire (LIF) neuron using a single magnetic domain wall (DW) device with minimal extra circuitry overhead. Threshold adaptation is ensured by leaky behavior of the DW that is governed by shape of the DW device. This method enables efficient emulation of biological neuron behavior in neuromorphic Spiking Neural Networks (SNNs), while offering high accuracy, low area and power consumption, and reduced training time as compared to fixed-threshold neurons. The proposed methodology can also be incorporated to other complementary metal-oxide-semiconductor (CMOS) and spintronics based fixed-threshold neuron designs to achieve adaptive threshold functionality. It addresses a significant gap in spintronic-based LIF neuron adaptations. Published with Figure 1

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/04/2024

(21) Application No.202411027421 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : THERMAL CATALYTIC DECOMPOSITION OF BIOGAS AND NATURAL GAS TO GENERATE MULTI-WALLED CARBON NANOTUBES AND HYDROGEN

(51) International classification :, B01J8/18, B01J8/24, B82Y30/00, C01B 32/158, C01B3/24, C01B3/50, D01F9/127
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A method (100) for thermal catalytic decomposition of biogas and natural gas to generate multi-walled carbon nanotubes and hydrogen is disclosed. The method includes flushing by a fluidized bed reactor chamber, to remove existing gases by utilizing nitrogen gas. Further, the method includes removing methane gas biogas and natural gas. Furthermore, the method includes splitting the methane gas into a plurality of multi-walled carbon nanotubes and the hydrogen from the methane gas wherein the methane gas undergo thermal catalytic decomposition at a predefined temperature. Moreover, the method includes isolating the plurality of multi-walled carbon nanotubes from the hydrogen to ensure that the hydrogen is clean and free from a plurality of contaminants. Additionally, the method includes purifying the plurality of multi-walled carbon nanotubes from the plurality of contaminants to achieve purity of the plurality of multi-walled carbon nanotubes in a desired standard by utilizing a condensation technique. FIG. 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/04/2024

(21) Application No.202411027496 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : ANALYSIS OF THE SIGNIFICANCE OF E- COMMERCE IN EMERGING MARKETS

(51) International classification	:G06Q0030060000, G06Q0010080000, G06Q0030020000, G06Q0010060000, G06Q0040040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The rise of e-commerce has had a significant impact on the global economy, particularly in emerging markets. As technology continues to advance and digital connectivity beco mes more accessible, the potential for growth in these markets is immense. In this technical abstract, we will analyze the significance of e-commerce in emerging markets, highlighting its various benefits and challenges. One of the major advantages of e-commerce in emerging markets is its ability to bridge the gap between sellers and buyers. It provides a platform for small and medium-sized businesses to reach a wider market, both domestically and internationally. This has opened up new avenues for growth and increased competition, leading to improved product offerings and lower prices for consumers. E-commerce has also streamlined the supply chain process, making it more efficient and cost-effective. With the help of digital platforms and tools, businesses can now track inventory, manage orders, and monitor shipments in real-time. This has reduced the overall cost of doing business, making it easier for companies to enter and compete in emerging markets. Moreover, the growth of e-commerce has also led to the creation of new job opportunities in these markets. With the rise of online marketplaces and platforms, there is a growing demand for skilled professionals in areas such as digital marketing, logistics, and data analytics. This creates a ripple effect, as these jobs contribute to economic growth and improve the standard of living. However, the implementation of e-commerce in emerging markets also comes with its own set of challenges. One of the main barriers is the lack of digital infrastructure and connectivity. Many regions, especially in rural areas, face challenges such as poor internet connectivity and insufficient digital literacy. This makes it difficult for businesses to fully utilize e-commerce and for consumers to access online shopping platforms. Another challenge is the lack of regulatory frameworks and consumer protection laws in some emerging markets. This creates a sense of uncertainty for businesses and consumers, as they may be hesitant to engage in online transactions due to concerns over data privacy and security. In conclusion, the significance of e-commerce in emerging markets cannot be ignored. It has transformed the way businesses operate and has opened up a new world of opportunities. However, there are still challenges that need to be addressed for e-commerce to reach its full potential in these markets. Governments, businesses, and other stakeholders must work together to improve digital infrastructure, implement effective regulations, and promote digital literacy to fully reap the benefits of e-commerce in emerging markets.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027533 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR MULTI-OBJECT RECOGNISING AND SPECIFYING RETRIEVAL USING CONVOLUTIONAL NEURAL NETWORKS

(51) International classification :G06N0003080000, G06N0003040000, G06K0009620000, G06N0007000000, A63B0021000000
(86) International Application No :NA
Filing Date :NA
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(57) Abstract :
A method (100) for multi-object recognising and specifying retrieval using convolutional neural networks comprises acquiring a dataset of images (102) containing objects of interest via data collection module; labelling the objects within the images manually, specifying their location and type via data annotation (104) module. The method further comprises modifying artificially the labelled images to increase the diversity and robustness of the training data, potentially involving techniques. The method further comprises defining a deep learning (116) architecture, such as a convolutional neural network (CNN), specifically suited for object detection tasks via network architecture module. The method further comprises setting hyperparameters for the training process, including learning rate, optimizer choice, and training epochs via training parameters (118) module. The method further comprises training process, feeding the annotated and augmented data (108) through the deep learning (116) model for iterative learning and refinement of its object detection capabilities.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027574 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SOLAR ALGAL HYBRID REACTOR FOR TREATMENT OF DYE CONTAMINATED WASTEWATER AND TREATMENT METHOD THEREOF

(51) International classification :F24S0023740000, C02F0003320000, C02F0001000000, C02F0001720000, C02F0001140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a solar algal hybrid reactor consisting of combination of two components i.e., solar parabolic trough reactor (6) having transparent glass tubes (8) over parabolic aluminum surface (7) treating the contaminated water with solar energy and second component is the algal chamber (9) consisting of immobilized C. pyrenoidosa algal dosages as an adsorbent for dye contaminated water decontamination. The radiations enhances the breakdown of toxic non-biodegradable chemicals and the algal chamber (9)with immobilized C. pyrenoidosa is attached in such a way, that the dye contaminated textile waste water flow through the algal chamber after solar treatment for efficient decontamination/remediation of dye contaminated waste-water. The combination of solar and algal approach innovatively reduce the COD, BOD and colour content by 90%, 77% and more than 98% respectively.

No. of Pages : 27 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027627 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A REAL-TIME TEXT AND VOICE TRANSLATION SYSTEM AND METHOD THEREOF

(51) International classification :G06N0003040000, G06N0003080000, G06T0007110000, H04L0051520000, G06F0040200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Disclosed herein is a real-time text and voice translation system (100) using deep learning techniques. The system (100) comprising a user interface (102), the user interface (102) further including a data collection unit (104) configured to collect audio and parallel text corpora and a pre-processing unit (106) receiving input from the data collection unit, the pre-processing unit (104) configured to pre-process the collected audio and parallel text corpora. The user interface (102) also has a real-time processing unit (112) receiving input from the pre-processing unit (106), the real-time processing unit (112) configured to provide translations in real-time. The user interface (102) further has a feedback unit (114) proving input to the real-time processing unit (112), the feedback unit (114) configured to collect and store reported inaccuracies in the translation for providing feedback.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027635 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PERSONAL HEALTH MANAGEMENT SYSTEM

(51) International classification :A61B5/00, G06F3/01, G06N20/00, G16H50/00, G16H80/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The personal health management system comprises wearable unit 102 installed with an information capturing module 104 gathers user health data and transmits it to a paired memory unit. An interactive user interface 112 on a computing unit 110 enables users to upload medical history, create profiles, and access captured data through voice commands. An AI module 108 analyzes this data, setting health goals tailored to the user's real-time health condition. A communication module 106 connects the AI module 108 to a cloud server, enabling access to nearby healthcare experts based on the user's location and medical history. In emergencies, alerts are transmitted to relevant experts via a computing unit 110. This system offers personalized health management, proactive intervention, and seamless connectivity to expert assistance, enhancing user well-being. Refer to Figure 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027654 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : TEMPERATURE-REGULATED GLOVES WITH REMOTE MOBILE ACCESS

(51) International classification :G06F0003010000, A61B0005000000, A61F0007020000, A61B0005020500, A61B0005110000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure discloses a temperature-regulated glove (100) for managing hand temperature in diverse environmental conditions. Equipped with a body (102) filled with sodium acetate and water for efficient heat absorption and release, the glove (100) includes a heating element (104) with multiple heat zones, alongside temperature and biometric sensors (106, 108) strategically positioned to monitor internal and external conditions. Additionally, gesture sensors (110) detect hand gestures, facilitating intuitive control. Operatively coupled to these components is a control unit (114) that adjusts heating levels based on received data and gestures, providing customizable warmth for different hand areas. Conductive materials in the heating element (104) enable efficient heat transfer, while machine learning techniques enhance adaptability. The glove allows user control via a computing device (122), with physiological parameters transmitted for further analysis. Integrated safety sensors (112) ensure user well-being by monitoring environmental variables and alerting to abnormalities.

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027656 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR CONTINUOUS OXIDATIVE TORREFACTION OF BIOMASS

(51) International classification	:C10L0009080000, C10L0005440000, C10B0053020000, C10G0001020000, E21B0047005000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system (100) and a method for continuous oxidative torrefaction of biomass. The system (100) includes a cylindrical moving bed reactor (102) includes an air inlet and distribution assembly (104) configured to provide preheated air to the reactor (102) through air rings positioned at different heights along the reactor (102), an auger assembly (106) having counterclockwise moving augers connected to a first motor for conveying of the torrefied biomass, an annulus (108) surrounding the moving augers for preheating the air by cooling the torrefied biomass, and an ignition port (114) for ignition of a part of biomass within the reactor (102) to initiate combustion. A feeder assembly (110) includes a feed hopper connected to the augers through a second motor for continuous biomass feeding to the reactor (102), and a condenser (112) for condensing flue gas and collecting liquid produced during torrefaction of the biomass.

No. of Pages : 28 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026895 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM FOR UTILIZING DOMESTIC AIR CONDITIONER WASTE HEAT FOR OPERATING INDOOR SOLAR STILLS

(51) International classification	:C02F0001140000, F24F0005000000, F24F0008100000, F24F0013280000, F24F0011880000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT System for Utilizing domestic Air Conditioner Waste Heat for operating Indoor Solar Stills The present disclosure introduces a system for utilizing domestic air conditioner waste heat for operating indoor solar stills 100 which is designed to address the challenge of limited sunlight access in indoor environments, particularly in multi-storey apartments, by repurposing a byproduct of air conditioning systems. It comprises of exhaust pipe 102, basin liner 104, glass cover 106, compressor 108, expansion valve 110, condenser coils 112, evaporator coils 114, fan 116, fan axle 118 and blower 120. Waste heat from the air conditioner is directed through the exhaust pipe to heat water in the solar still setup, where it evaporates and condenses on the glass cover, resulting in purified water. REFERENCE FIG 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026896 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : FORMULATION AND EVALUATION OF URSOLIC ACID NANOSTRUCTURED LIPID CARRIERS FOR ITS ANTICANCER POTENTIAL

(51) International classification	:A61K47/28, A61K47/34, A61K8/11, A61K8/14, A61K9/107, A61K9/127, A61K9/51, B82Y5/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present invention relates to a ursolic acid loaded Nanostructured Lipid Carrier, comprising of an organic phase comprising ursolic acid as an active ingredient, a lipid mixture comprising at least one solid lipid and one liquid lipid, a solvent to make up the organic phase and an aqueous phase comprising a surfactant mixture, to form a ursolic acid loaded nanostructured lipid carrier. The invention also relates to a process of preparation of the ursolic acid loaded NLC using solvent evaporation method. FIG 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026897 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : HELIX PRESSURE KINETIC TURBINE

(51) International classification :F03B3/00, F03B3/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a helix pressure kinetic turbine 100 which represents a novel approach to decentralized power generation, addressing the inefficiencies of traditional turbine designs. Featuring hollow blades arranged in a helical configuration, this turbine efficiently captures energy from fluid flow through both pressure differentials and kinetic extraction mechanisms. Anchored by a central hub, the turbine assembly ensures stability and uniform rotation of the blades. It comprises of hollow blades 102, hub 104, shaft 106, inlet base 108, base 110, shaft groove 112, outlet 114 and vertical support 116. Reference Fig 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026898 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AUTOMATED ROBOTIC UTILITY SET FOR INDIVIDUALS WITH PARKINSON'S DISEASE

(51) International classification :B25J0009160000, A61B0034000000, A61B0034300000, B25J0011000000, B25J0009100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure discloses an automated robotic utility (102) for assisting individuals with impaired limb control during eating and drinking, comprising a robotic arm system (104) configured to hold and manipulate a silicon spoon, a glass holder with straw, and a fork, an Arduino-based control system (106) for coordinating the movement and position of the robotic arm system, a user-controlled feeder system (108) for dispensing liquid and semi-solid food onto the silicon spoon, adjustable based on individual needs and dietary requirements and a joystick interface (110) for intuitive user control of the robotic arm system, facilitating precise positioning of the utensils. FIG. 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026899 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD FOR ENHANCED OPTIMIZATION IN TWO-DIMENSIONAL SPACES USING A MODIFIED SNAKE OPTIMIZER (MSO)

(51) International classification :B25J0009160000, A61B0034000000, A61B0034300000, B25J0009100000, B25J0011000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure discloses an automated robotic utility (102) for assisting individuals with impaired limb control during eating and drinking, comprising a robotic arm system (104) configured to hold and manipulate a silicon spoon, a glass holder with straw, and a fork, an Arduino-based control system (106) for coordinating the movement and position of the robotic arm system, a user-controlled feeder system (108) for dispensing liquid and semi-solid food onto the silicon spoon, adjustable based on individual needs and dietary requirements and a joystick interface (110) for intuitive user control of the robotic arm system, facilitating precise positioning of the utensils. FIG. 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026900 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : EDIBLE ALL-NATURAL CANDY COMPOSITION

(51) International classification :A61K0036534000, A61K0036280000, A23L0033105000, A61P0015120000, A61K0036906800
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an edible composition, comprising of chamomile, coffee, dark chocolate, jaggery, mint, rose petals and jaggery and water to form an all-natural candy composition which can be used in menstruation and menopause, especially for PMS. The present invention also discloses the process for preparation thereof.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026902 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : TOPICAL KETOCONAZOLE TRANSFEROSOME HAIR CARE COMPOSITION

(51) International classification :A61K31/454, A61K47/10, A61K47/24, A61K8/14, A61K9/107, A61K9/127, A61Q5/00, A61Q7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a ketoconazole transferosome, comprising of ketoconazole as an active ingredient, phospholipids to create the lipid bilayer, a mixture of solvents, surfactants, penetration enhancers to form a transferosome, wherein the ketoconazole is incorporated into a topical base to form a topical hair care composition and a method of preparation thereof. Reference Fig 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026903 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : RODENT DETERRING DEVICE

(51) International classification :F16K0031060000, A01M0029180000, A01M0029120000, G01P0005240000, A01N0037060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces rodent deterring device 100 that integrates advanced technology with natural repellents for effective and humane rodent deterrence. It comprises of microcontroller 102, ultrasonic repellent chamber 104, Ultrasonic Transducers 106, water sprinkler chamber 108, motion sensor 110, water sprinkler 112, control circuit 114, solenoid valve 116, pump and trigger system 118, natural spray chamber 120, natural spray substances 122 and power supply unit 124. Ultrasonic repellent chamber 104 emits high-frequency sound waves, water sprinkler chamber 108 triggers controlled bursts of water upon detecting rodent movement, and natural spray chamber 120 disperses odor-based repellents. These chambers are coordinated by microcontroller 102, ensuring synchronized operation and optimal efficacy. Furthermore, a power supply unit 124 provides continuous electrical energy to sustain the system's operation. Reference Fig 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026904 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : DRIVER ASSIST AND COLLISION AVOIDANCE SYSTEM FOR CRANE VEHICLES

(51) International classification	:G06N0003080000, B60R0001000000, B60Q0009000000, B60W0030080000, B60W0010200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces driver assist and collision avoidance system for crane vehicles 100 revolutionizes industrial vehicle safety by addressing visibility challenges and mitigating collision risks. It comprises of wide-angle cameras 102, deep learning algorithms 104, controller 106, ultrasonic sensors 108, display unit 110, automatic speed reduction system 112, alert system 114, side object detection technology 116 and distance calculation system 118. The camera, sensor, deep learning algorithms 104, and side object detection technology work synergistically to provide comprehensive surveillance of the vehicle's surroundings. Reference Fig 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026905 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : IMPLANTABLE HEALTH MONITORING DEVICE

(51) International classification :A61F0002240000, A61B0005010000, A61B0005000000, H01Q0001480000, H01Q0021000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure discloses an implantable health monitoring device (102) comprising an L-shaped radiator antenna (104) designed for implantation within biological tissue, a substrate material (106) providing support for the L-shaped radiator antenna, a ground antenna (108) modified as an L-shaped defected ground structure to enhance resonance frequency and radiation characteristics and a low-loss superstrate biocompatible material (110) covering the conducting part of the L-shaped radiator antenna (104) to isolate it from surrounding tissue. FIG. 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026906 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MICROSTRIP ANTENNA SYSTEM

(51) International classification :H01Q1/38, H01Q1/48, H01Q1/52, H01Q13/10, H01Q9/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure discloses a microstrip antenna system (102) comprising a rectangular patch antenna (104) comprising a substrate (106), a radiating element (108) formed on said substrate (106), a ground plane (110), a square slot (108) etched on said radiating element and an inverse L-shaped strip attached to said ground plane (110) to improve isolation between said radiating element and said ground plane. FIG. 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026907 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : TOPICAL ETODOLAC-PHOSPHOLIPID COMPLEX FORMULATION

(51) International classification	:A61K31/104, A61K31/437, A61K47/10, A61K47/24, A61K47/50, A61K47/58, A61K47/69, A61K9/70
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a Etodolac- phospholipid complex, a topical formulation thereof in the form of a transdermal film, consisting of polymers, plasticizer, Etodolac- phospholipid complex and an aqueous solvent and a method of preparation of the same. Reference fig 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026908 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PHENYL SULPHONE COMPOSITION FOR SELECTIVE TARGETING OF GLUTATHIONE PEROXIDASE

(51) International classification	:A61K31/10, A61K47/26, A61K47/36, A61K47/38, A61K47/50, A61K47/69, A61K9/28, A61K9/40
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a phenyl sulphone composition for selective targeting of glutathione peroxidase for treatment of Parkinson’s disease and formulations thereof.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026909 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM FOR IMPROVEMENT OF EMOTIONS IN VERBAL COMMUNICATION

(51) International classification :G06N0003040000, G06N0003080000, G10L0025240000, G06F0003160000, G10L0025630000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a system for improvement of emotions in verbal communication 100, a deep learning-based system designed to enhance emotional expression and comprehension in individuals with Social (Pragmatic) Communication Disorders. Employing advanced algorithms such as LSTM and Bi-LSTM, the system operates through user interface, displaying predefined emotions for users to interact with during verbal communication exercises. The system comprises of screen display 102, microphone 104, database 106, feedback system 108, preprocessing system 110, user interface 112, reward system 114 and deep learning system 116. The microphone captures users' verbal expressions, which are processed using Mel-Frequency Cepstral Coefficients (MFCCs) for emotion analysis. Reference Fig 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026917 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONFORMAL ULTRA-WIDEBAND (UWB) ANTENNA FOR WEARABLE AND HEALTHCARE MONITORING APPLICATIONS

(51) International classification	:H01Q1/27, H01Q1/38, H01Q1/52, H01Q13/10, H01Q21/06, H01Q5/25, H01Q9/04
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present disclosure discloses a conformal ultra-wideband (UWB) antenna (102) for wearable and healthcare monitoring applications, comprising a flexible substrate (104), a coplanar waveguide (CPW) feed arrangement (106) on said flexible substrate, a metamaterial unit cell (108) exhibiting negative permeability integrated on said flexible substrate, said metamaterial unit cell arranged to enhance the gain characteristics of the antenna and an array of metamaterial unit cells (110) serving as a ground plane beneath the UWB antenna, said ground plane configured to enhance bandwidth, radiation characteristics, and gain of the antenna (102). FIG. 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026918 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : VIBRATING HEATING NECKBAND FOR CERVICAL PAIN

(51) International classification :A61F5/055, A61F7/00, A61F7/08, A61H11/00, A61H23/00, A61H39/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a vibrating heating neckband 100 which provides a novel system for cervical pain management. It comprises of heating gel 102, temperature sensing device 104, vibrator 106, screen 108, rechargeable battery 110, control panel 112, ON/OFF switch 114, temperature control button 116 and indicator 118. This innovative device combines advanced heating technology with gentle vibration therapy to provide effective and non-invasive relief for individuals suffering from neck discomfort. Reference Fig 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026919 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PRIVACY PRESERVED CLASSIFICATION SYSTEM FOR SEARCHING WIFI CONNECTED DEVICES THROUGH INDOOR LOCALIZATION

(51) International classification	:G06F0021620000, H04L0067010000, G06N0020000000, H04W0004330000, G01S0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces privacy preserved classification system for searching wifi connected devices through indoor localization. It provides groundbreaking approach to WiFi-based positioning in indoor environments while prioritizing data privacy. It comprises of hardware processing and memory unit 102, federated learning algorithm 104, centralised server 106 and client server architecture 108. Leveraging federated learning algorithms 104, the system enables collaborative model training across distributed client nodes, ensuring that WiFi data remains confidential throughout the process. A centralized server 106 orchestrates model aggregation and distribution, facilitating seamless communication and coordination between client nodes. The client-server architecture 108 offers real-time indoor localization capabilities, empowering users with accurate device positioning within complex indoor environments such as campuses and shopping malls. REFERENCE FIG 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026920 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATED WIND POWER SYSTEM FOR SUSTAINABLE ELECTRIC VEHICLES

(51) International classification :B60K16/00, B60L8/00, F03D9/32, H02J7/14
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The present disclosure introduces a integrated wind power system for sustainable electric vehicles 100 which is pioneering system to enhance electric vehicle (EV) charging efficiency by harnessing wind energy. This innovative system integrates miniature wind turbines onto vehicles, allowing for the generation of electricity while in motion. It comprises of rotor 102, gearboxes 104, electric generators 106, electric wires 108, utility hooks 110, outer body 112, low-speed shaft 114 and high-speed shaft 116. These components work synergistically to convert wind energy into electrical power, which is stored in the vehicle's batteries. Reference Fig 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026921 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : GAS LEAKAGE DETECTION SYSTEM USING INTERNET OF THINGS

(51) International classification :F24C0003120000, F23N0005240000, C09D0005180000, F23N0005200000, G01M0003200000
(86) International Application No :NA
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(87) International Publication No : NA
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(57) Abstract :
ABSTRACT The present disclosure introduces a gas leakage detection system Internet of Things 100 which provides an innovative system to enhance safety in household environments where gas stoves are commonly used. Comprising a combination of sensor technology and automated controls, this system detects and prevents gas leaks effectively. It comprises of flame thermostat sensor 102, automated ignition circuit 104, battery system 106, weight sensor 108, gas stove 110, knob 112, burner 114, wires 116, buzzer 118, controller 120 and IoT connectivity 122. Flame thermostat sensor detects the presence of a flame on the burner, triggering an automated ignition circuit to ignite the burner if necessary. REFRENCE FIG 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026923 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A ROBUST AND INTERPRETABLE MACHINE LEARNING MODEL FOR MEDICAL DIAGNOSIS AND METHOD THEREOF

(51) International classification	:G06N0020000000, G16H0050200000, G16H0010600000, G16H0080000000, G06Q0040080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention introduces a robust and interpretable machine learning model tailored for medical diagnosis, designed to address the challenges of integrating artificial intelligence into healthcare diagnostics with a focus on transparency and actionability. Unlike existing solutions, which often compromise either accuracy for interpretability or vice versa, this model achieves a high degree of both. It employs advanced data processing and machine learning algorithms to accurately analyze diverse and complex medical datasets, including imaging, genetic information, and clinical notes. A key feature of this model is its novel interpretability framework, which enables healthcare professionals to understand the rationale behind each diagnosis. This feature not only facilitates greater trust in the AI's diagnostic recommendations but also enhances decision-making by providing clear, actionable insights derived from data analysis. The model is designed to be adaptable across various medical specialties, offering a scalable solution to improve diagnostic accuracy, efficiency, and patient outcomes in the healthcare industry. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026925 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SURGICAL SYSTEM WITH ACOUSTIC FEEDBACK BASED ON TOOL POSITION TRACKING

(51) International classification :A61B17/56, A61B34/10, A61B90/00, G06F3/01
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
1)Kamred Udham Singh
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(57) Abstract :
This patent presents a surgical system for orthopedic joint replacement, offering haptic guidance during procedures. The system consists of a computing unit, a haptic device, and a tracking system. Collaboratively, they simulate the human tactile system, generating computer-controlled forces to immerse the user in a virtual environment. During surgery, the system detects collisions between virtual tools and objects, calculates haptic reaction forces, and maps these forces onto virtual objects, providing tactile feedback through the haptic device. Key features include enhanced precision, realistic tactile feedback, error prevention, and improved surgical training.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026926 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PATH PLANNING METHOD AND SYSTEM FOR UNMANNED WATER VEHICLES UTILIZING ENHANCED GENETIC ALGORITHMS

(51) International classification :G05D0001020000, G05D0001100000, G06N0003120000, G08G0005000000, G01C0021200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
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(57) Abstract :
The invention introduces a method for autonomous navigation in unmanned water vehicles, employing a genetic algorithm-based path planning approach. It encompasses the collection and preprocessing of heading and position data, transforming them into a navigable format. The genetic algorithm optimizes route sequencing, considering environmental factors and obstacle data to determine the most suitable trajectory. Real-time adjustments to speed and steering of the unmanned water vehicle's steering gear ensure precise navigation. The system dynamically corrects trajectory deviations during navigation, enhancing adaptability to changing conditions. Overall, this method facilitates efficient and autonomous navigation in marine environments, offering a robust solution for unmanned water vehicle operations.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024
(21) Application No.202411026927 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENHANCED DEVICES AND METHODS FOR REMOTE IMAGE CAPTURE WITH DRONE-MOUNTED CAMERAS

(51) International classification :B64C0039020000, B64D0047080000, H04N0007140000, B64C0027080000, G03B0017560000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention introduces devices and methods aimed at enhancing the capacity for remotely and manually capturing images using a camera integrated with or attached to a drone. A display screen positioned on the drone body facilitates the viewing of captured image data. Booms are structured to fulfill the dual function of supporting the drone's flight components while also permitting manipulation. Additionally, boom handles enable users to grasp and manually adjust the camera's aim.

No. of Pages : 12 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/04/2024

(21) Application No.202411027670 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : APPARATUS TO DETERMINE WORKABILITY OF SELF-COMPACTING CONCRETE (SCC) AND METHOD THEREOF

(51) International classification :G01N0033380000, G01N0033574000, C04B0040000000, C04B0024380000, C22C0038420000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure pertains to an apparatus and a method for assessing workability parameters of self compacting concrete (SCC). The apparatus includes a table (101) configured to accommodate slump cone (102) containing SCC, to measure filling ability of SCC. A trapezium box (107), equipped with reinforcements (108) and a sliding plate (103), is attached to the bottom of table to assess passing ability of SCC. A V-funnel (104) attached to bottom of trapezium box (107) and equipped with a trap door (105), is configured to accumulate SCC for a predetermined time, subsequently assessing segregation resistance by allowing SCC to fall through trap door (105) into a container (106). The method (200) includes placing slump cone on the table and lifting to measure filling ability, evaluating passing ability when SCC passes through reinforcements (108) in trapezium box (107), assessing segregation resistance by accumulating SCC in V-funnel (104).

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202414025259 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SECONDARY BATTERY AND ELECTRONIC DEVICE

(51) International classification	:H01M0010052500, H01M0004660000, H01M0004620000, H01M0004360000, H01M0004020000
(31) Priority Document No	:202310339397.6
(32) Priority Date	:31/03/2023
(33) Name of priority country	:----------
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A secondary battery includes a positive electrode plate (10). The positive electrode plate (10) includes a current collector (11), a conductive layer (12), a first active substance layer (13) and a second active substance layer (14). The conductive layer (12), the first active substance layer (13) and the second active substance layer (14) are sequentially stacked on a surface of the current collector (11). By providing the conductive layer (12) between the first active substance layer (13) and the current collector (11), the defect of electrochemical corrosion on the surface of the current collector (11) can be effectively overcome, thus reducing the interface impedance between the current collector (11) and the second active substance layer (14) and improving the performance of the secondary battery. FIG. 2

No. of Pages : 40 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202414025357 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : BATTERY PACK AND ELECTRICAL DEVICE

(51) International classification	:H01M10/658, H01M50/204, H01M50/24, H01M50/244, H01M50/271
(31) Priority Document No	:202310322524.1
(32) Priority Date	:29/03/2023
(33) Name of priority country	:----------
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
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(57) Abstract :
Some embodiments of this application relate to the technical field of secondary batteries, and in particular, to a battery pack (1000) and an electrical device. The battery pack (1000) includes a shell (10), a battery cell assembly (20), a heat insulating member (30) and an upper cover assembly (40), the shell (10) is provided with a accommodating cavity (10a) and an opening (10b) communicated with the accommodating cavity (10a), the battery cell assembly (20) is disposed in the accommodating cavity (10a), the battery cell assembly (20) includes a plurality of battery cells, the plurality of battery cells are electrically connected to each other, a first channel (10c) is formed between the plurality of battery cells and an inner wall of the shell (10), the upper cover assembly (40) is disposed on the opening (10b) in a covering mode, the upper cover assembly (40) is provided with a pressure relief portion (40b), the heat insulating member (30) is at least partially located in the accommodating cavity (10a), the heat insulating member (30) is disposed on a side of the plurality of battery cells close to the opening (10b), the heat insulating member (30) includes a substrate (301), a first heat insulating plate (302) and a second heat insulating plate (303), the substrate (301) and the battery cell assembly (20) are disposed in a first direction (Z), the first heat insulating plate (302) connects the substrate (301) with the second heat insulating plate (303), and in the first direction (Z), a projection of the second heat insulating plate (303) has an overlap with a projection of the first channel (10c). In this way, some embodiments of this application can improve the safety performance of the battery pack (1000).

No. of Pages : 25 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202417025155 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : DISPLAY PANEL AND ENCAPSULATION METHOD THEREFOR, AND DISPLAY APPARATUS

(51) International classification	:G02F 1/13, G09F 9/30, G01L 1/16
(31) Priority Document No	:202210733594.1
(32) Priority Date	:27/06/2022
(33) Name of priority country	:----------
(86) International Application No Filing Date	:PCT/CN2022/137227 :07/12/2022
(87) International Publication No	:WO 2024/001052
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed in the present application are a display panel and an encapsulation method therefor, and a display apparatus. The display panel comprises a display panel main body, wherein the display panel main body comprises a display area and an encapsulation area. The display panel further comprises a deformation detection apparatus, wherein the deformation detection apparatus comprises: an electroluminescent display module, which comprises one or more electroluminescent display units; and a piezoelectric module, which is arranged on the surface of at least one deformable functional layer included in the display panel main body and is located in the encapsulation area. The piezoelectric module comprises two or more piezoelectric units, at least two piezoelectric units are arranged spaced apart from each other on the surface of the same deformable functional layer, two adjacent piezoelectric units have a voltage difference, and the two piezoelectric units are connected in series by means of one electroluminescent display unit. In the present application, whether a display panel deforms can be detected in real time by means of a deformation detection apparatus included in the display panel.

No. of Pages : 32 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202417025251 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ELECTROCHEMICAL DEVICE, PREPARATION METHOD THEREFOR, AND ELECTRONIC DEVICE

(51) International classification :H01M 50/105
(31) Priority Document No :202210333826.4
(32) Priority Date :30/03/2022
(33) Name of priority country :----------
(86) International Application No :PCT/CN2023/071134
Filing Date :07/01/2023
(87) International Publication No :WO 2023/185200
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An electrochemical device, comprising a packaging bag, an electrode assembly and current conducting plates. The packaging bag comprises a main body part and a sealing part. The electrode assembly is arranged in the main body part, and the current conducting plates are electrically connected to the electrode assembly. The main body part comprises a first end wall and a second end wall which are oppositely arranged in a first direction, and further comprises a first side wall and a second side wall which are oppositely arranged in a third direction. The sealing part comprises a first sealing part and a first folded-edge part. The first sealing part is connected to the first end wall, and the current conducting plates extend out of the packaging bag through the first sealing part. The first folded-edge part is connected to the first side wall, the first folded-edge part and the first side wall being oppositely arranged in the third direction. The first sealing part and the first folded-edge part intersect in a transition area. The electrochemical device is provided with folded-corner structures, each folded-corner structure being formed by folding the transition area at least twice towards the first end wall after the first folded-edge part is formed. Further provided in the present application are a preparation method for the electrochemical device and an electronic device. The present application can increase energy density.

No. of Pages : 22 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/03/2024

(21) Application No.202417025269 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CELL AND ELECTRIC DEVICE USING SAME

(51) International classification	:H01M 50/50, H01M 4/13, H01M 10/0587
(86) International Application No Filing Date	:PCT/CN2021/122417 :30/09/2021
(87) International Publication No	:WO 2023/050405
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A cell, comprising a first electrode plate and a second electrode plate, which are alternately stacked, wherein a separation film is provided between the first electrode plate and the second electrode plate; the first electrode plate comprises a first current collector, and a first active substance layer, which is arranged on a surface of the first current collector; the second electrode plate comprises a second current collector, and a second active substance layer, which is arranged on a surface of the second current collector; the first electrode plate further comprises a first recess, which is formed by removing the first active substance layer, and a first tab, which is arranged in the first recess; the second electrode plate comprises a second recess, which is formed by removing the second active substance layer; in the thickness direction of the cell, the first recess and the second recess are arranged opposite each other; a surface of the first tab is provided with a first insulating layer; and the second recess is provided with a first insulating spacer. Therefore, the present application is helpful for improving the structural flatness and safety of a cell.

No. of Pages : 19 No. of Claims : 29

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026928 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SUBSEA CONDUCTOR PIPE AND CASING INSTALLATION APPARATUS AND METHODS

(51) International classification	:E21B0007200000, E21B0043100000, E21B0021000000, E21B0041000000, E21B0017100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a drilling and casing apparatus and method for use in well construction operations, particularly in deep water environments. The apparatus includes a drill casing and a drilling latch mechanism connected to a drill pipe, facilitating the coupling of the drill pipe to the drill casing by engaging a drilling profile formed on the inner surface of the casing. Upon completion of drilling, the drilling latch mechanism is released from the casing, allowing retrieval of the drill pipe. Additionally, the apparatus features a casing latch mechanism on the exterior of the drill casing, which engages a casing profile on a previously installed conductor pipe, enabling axial locking of the drill casing relative to the conductor pipe. This invention provides advantages such as efficient drilling and casing operations, improved casing placement, and facilitated retrieval of drilling equipment, particularly in challenging subsea environments.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202411026929 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEMS AND METHODS FOR VIRTUALIZING USER-DEFINED ALGORITHMIC ELECTRONIC TRADING

(51) International classification	:G06Q0040040000, G06Q0040060000, G06F0009455000, G06N0005020000, G06F0008200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
This invention presents a computer-implemented system for designing and executing trading algorithms, stored on non-transitory computer-readable media. Users arrange blocks within a design interface to define algorithm functionality, with live feedback values dynamically determined based on market data. Selected blocks can be grouped into virtualized groups, facilitating the instantiation of new algorithm instances in response to discrete events. The system includes features for detecting discrete events, providing indicators, and monitoring connection states to algorithm servers. It streamlines algorithmic trading processes, enhancing efficiency and flexibility in designing and executing trading strategies. Operating at the intersection of financial technology and software engineering, this invention offers advanced tools for algorithmic trading in digital environments.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/01/2024

(21) Application No.202417006578 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LYOPHILIZED SOVATELTIDE-BASED INJECTABLE FORMULATION AND A PROCESS FOR PREPARATION

(51) International classification	:A61K0009000000, A61K0009190000, A61K0047260000, F26B0005060000, A61K0047120000
(31) Priority Document No	:18/343087
(32) Priority Date	:28/06/2023
(33) Name of priority country	:----------
(86) International Application No Filing Date	:PCT/IB2023/062892 :18/12/2023
(87) International Publication No	:WO 2024/057296
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A lyophilized Sovateltide-based injectable formulation, comprising sovateltide in the range from about 0.01 to about 0.02% w/w, trisodium citrate dihydrate is present in the range of from about 20 to about 80% w/w and mannitol is present in the range of from about 20 to about 80% w/w. A reconstituted liquid composition comprising sovateltide; trisodium citrate; mannitol and water or 0.9% aqueous sodium chloride solution and process for the preparation of a lyophilized pharmaceutical composition of sovateltide comprising: dissolving sovateltide, trisodium citrate dihydrate and mannitol in water for injection; filter the solution through 0.2µ membrane filter; fill the individual vials up to the target fill volume; and lyophilization of the filled vials.

No. of Pages : 75 No. of Claims : 53

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2024

(21) Application No.202417026844 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CELL AND ELECTRICAL APPARATUS

(51) International classification	:H01M 50/627, H01M 50/183, H01M 50/325
(31) Priority Document No	:202111211612.1
(32) Priority Date	:18/10/2021
(33) Name of priority country	:----------
(86) International Application No Filing Date	:PCT/CN2022/123488 :30/09/2022
(87) International Publication No	:WO 2023/066024
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(72)**Name of Inventor :**
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(57) Abstract :
The embodiments of the present application relate to the technical field of batteries. Disclosed are a cell and an electrical apparatus. The cell comprises a cell body and a housing, the housing having an accommodation cavity, the cell body being accommodated in the accommodation cavity, and the housing has a liquid injection hole in communication with the accommodation cavity. The cell also comprises: a sealing nail vertically installed at the liquid injection hole and fixed to the casing, the sealing nail having a first through hole in communication with the accommodation cavity; a thermal deformation portion disposed in the first through hole and fixed with the sealing nail; and an elastic member having a second through hole, the elastic member being sleeved on the sealing nail by means of the second through hole and fixed with the liquid injection hole. The thermal deformation portion is configured to undergo deformation when the temperature is above a preset threshold, so as to cause a pressure relief passage in communication with each of two ends of the first through hole to be formed in the first through hole, making it possible to discharge gas in the cell and reduce the safety hazard of the cell exploding. In addition, providing an elastic member can improve sealing of the liquid injection hole.

No. of Pages : 12 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024

(21) Application No.202417027878 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : BATTERY AND ELECTRIC DEVICE

(51) International classification :H01M 50/271, H01M 50/258
(86) International Application No :PCT/CN2022/101414
Filing Date :27/06/2022
(87) International Publication No :WO 2024/000093
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Embodiments of the present application provide a battery and an electric device. The battery comprises a housing, battery cells, and a stabilizing assembly; the housing comprises, in a height direction of the housing, a top and a bottom which are opposite; a plurality of battery cells are inversely arranged in the housing; top cover plates of the battery cells face the bottom of the housing; and the stabilizing assembly is fixedly connected to the battery cells. According to the embodiments of the present application, the structural stability and safety of the battery can be improved.

No. of Pages : 27 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/09/2022

(21) Application No.202221055889 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : A WIRELESS ADD-ON DEVICE FOR WRITING INSTRUMENTS

(51) International classification :G06K0009000000, G06K0009220000, G06F0003035400, G06F0040169000, A63F0013211000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a wireless add-on device for writing instruments, the device comprising: a cuboid device with two inertial measurement unit (IMUs) embedded on two faces of the device perpendicular to each other; a plurality of electronic components comprising; a microcontroller; a plurality of Analog to Digital Converters (ADCs); a rechargeable battery and its charging circuit; a bluetooth module for communication; and a flash memory for storage of data; a computing device equipped with a self-learning module to identify a plurality of strokes made by the said writing instruments from the captured motion data from the IMUs; a computing device equipped with a self-learning module to identify a plurality of strokes made by the said writing instruments from the captured motion data from the IMUs; wherein the computing device, being equipped with appropriate application, is able to identify the stroke data of IMU as a character of any language, wherein the device can identify the characters by the movement of the writing instrument hence eliminating the need of any surface such as paper.

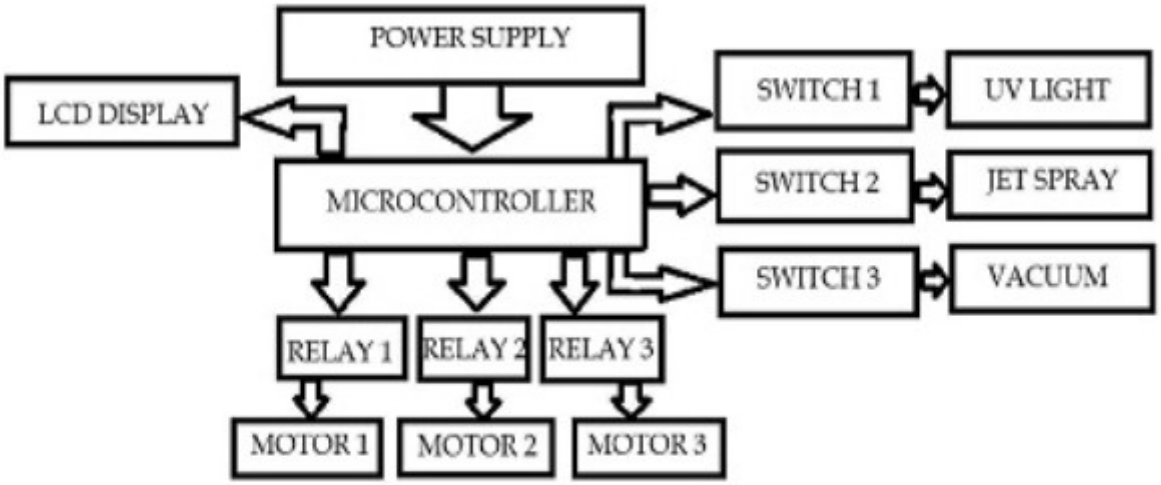

Figure 1

No. of Pages : 15 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/10/2022

(21) Application No.202221060476 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD TO INCREASE VISIBILITY OF TWEETS

(51) International classification :H04L0051000000, G06F0003048400, G06F0040300000, G06F0008650000, G06F0012020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In accordance with the present invention, a system to increase visibility of tweets is disclosed comprising: a processing device consisting of a user interface wherein, the said user interface comprises of a plurality of options in a graphical user interface; a plurality of information comprising of a plurality of keywords and a plurality of tags; and the said plurality of information is pre-processed for: removing, a plurality of unwanted characters; updating, a plurality of text; standardizing, and preventing, word replacement; using, vocabulary recognition; and converting, the said plurality of text to a vector wherein, the said plurality of information is subjected to a feature extraction technique in conjunction with the processing device consisting of the said user interface; and the said plurality of information is also subjected to evaluation technique.

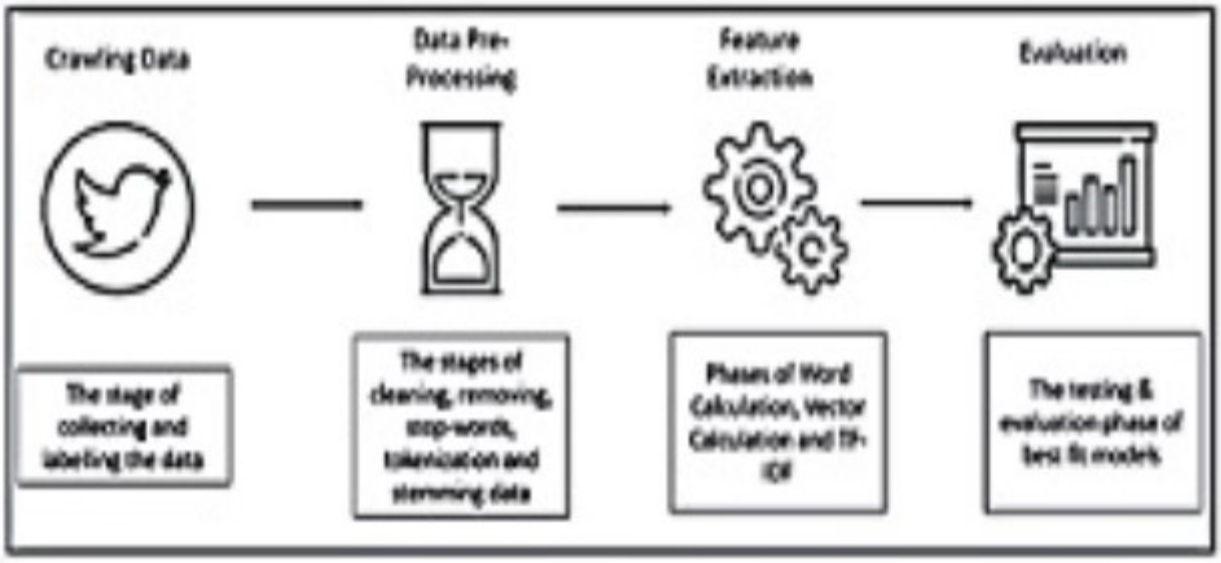

Figure 1

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/10/2022
(21) Application No.202221060477 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM FOR ANALYSIS AND DETECTION OF PRE-EPILEPTIC SEIZURES

(51) International classification	:A61B0005000000, A61B0005145500, A61B0005024000, A61B0005020500, A61B0005024500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system for analysis and detection of pre-epileptic seizures comprises of; a pulse oximeter (MAX 30100) circuit for monitoring heart rate and the oxygen level in blood; a controller circuit for providing output of heart rate and oxygen level in blood in digital form; a MEMS(Micro-electro-mechanical sensor-ADXL 330) circuit for finding of muscular movements; a digital signal processor (TMS 320) for processing the signals from human body; a LCD; and a GSM module. The MAX 30100 sensor is placed on the fingertip of the patient and ADXL is placed at the wrist. The pulse oximeter emits a red infrared light on the fingertip that calculates the heart rate and the oxygen level in the bloodstream. The ADXL330 is a three axes accelerometer which gives an output of muscular movements. The output of the sensors is processed and the results are shown on the LCD.

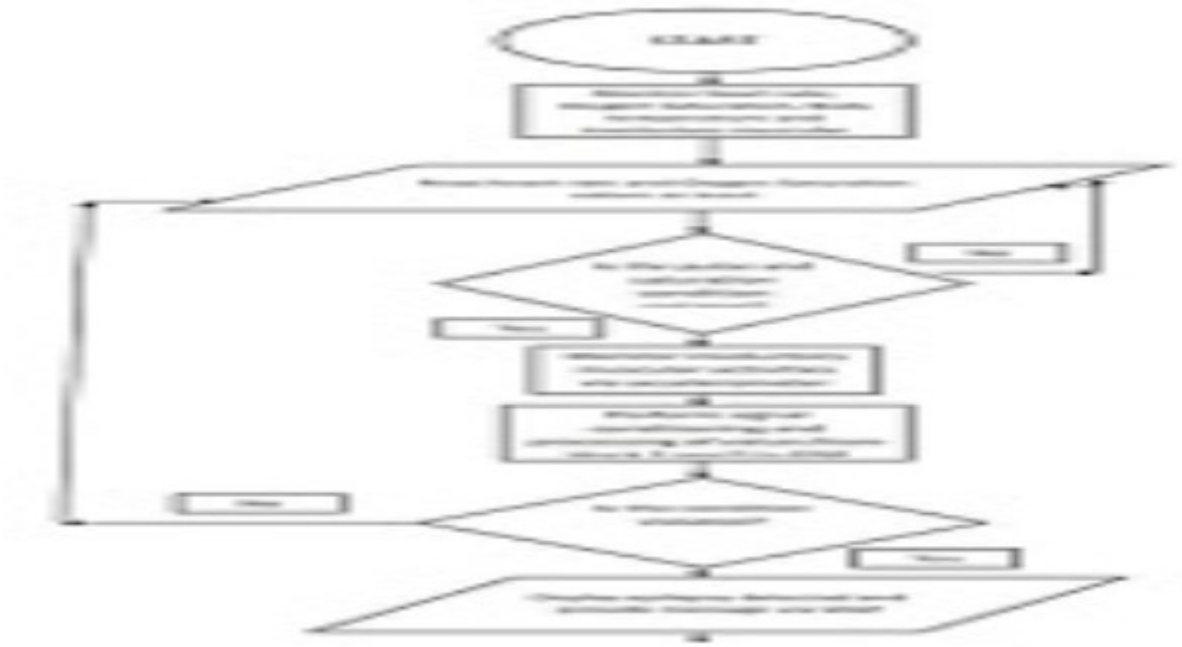

Figure 1

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/09/2022

(21) Application No.202221056032 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : A ROBOTIC SYSTEM AND METHOD THEREOF

(51) International classification :A61B0090000000, B25J0009000000, B25J0005000000, A61B0017000000, B25J0009160000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a robotic system and method thereof. More particularly, the present invention relates to the robotic system which is capable of identifying, localizing, grasping, and transporting a plurality of items by means of an actuated framing, shelf system, and a plurality of sensors -all- in conjunction with the said robotic arm which utilizes the said end-effector and the grasper. Figure 1

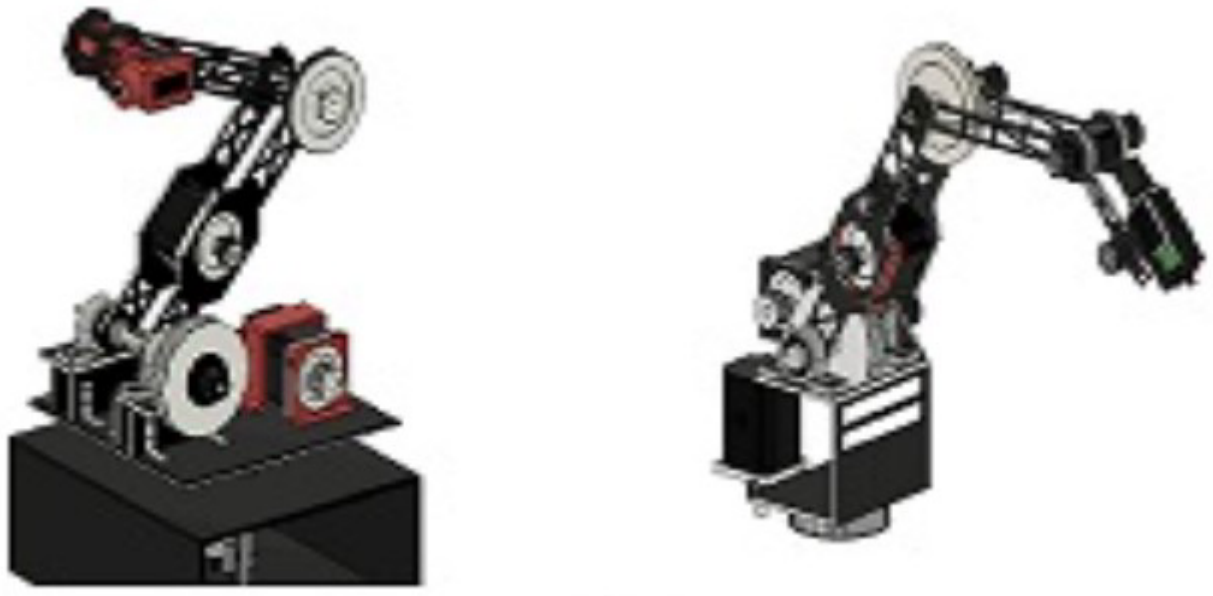

Figure 1

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/11/2022

(21) Application No.202221062501 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM FOR LOCATING A PARKING SPACE AVAILABILITY AND A METHOD OF USING THEREOF

(51) International classification	:G08G0001140000, G06Q0030020000, G06F0003060000, B62D0015020000, B60Q0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system for locating a parking space availability, the system comprising: a user interface; a camera module; a microcontroller; a plurality of microprocessors; a plurality of Infra-Red sensors for detecting movement of vehicles; and a control unit and a method of using thereof also provided.

Figure 1

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/11/2022
(21) Application No.202221062502 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM FOR GRAPHICAL PASSWORD AUTHENTICATION USING DECENTRALIZATION AND A METHOD OF USING THEREOF

(51) International classification :G06F0021360000, H04L0045122000, G06F0021460000, G06F0009500000, H04W0004020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system for graphical password authentication using decentralization, the system comprising of: a plurality of user; a user interface and a user database and a method for graphical password authentication using decentralization, the method comprising the steps of: selecting, a series of graphic images in a prearranged pattern; creating, a graphical password using the said graphic images pattern; and saving, the graphical password using decentralization wherein the user will require to use the same said graphical images pattern while trying to login.

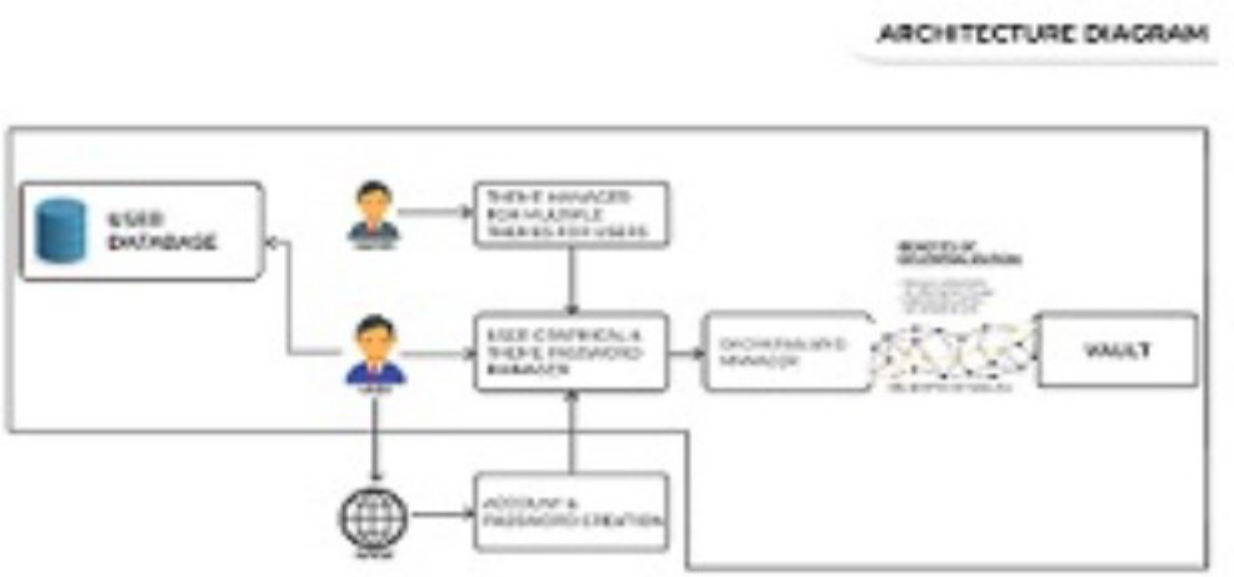

Figure 1

No. of Pages : 8 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/11/2022

(21) Application No.202221062503 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM FOR PERFORMANCE ASSESSMENT OF MULTI-CRYSTALLINE SILICON PHOTOVOLTAIC MODULE AND A METHOD OF USING THEREOF

(51) International classification :G06N0020000000, G06K0009620000, H01L0031180000, G05B0023020000, G06Q0030020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a system for performance assessment of multi-crystalline silicon photovoltaic module a plurality of modules; a plurality of data loggers; a plurality of sensors; a plurality of parameters; a computing device; and a dataset and the method comprising the steps of: selecting, a plurality of parameters; estimating, the performance of the said plurality of parameters using Decision Tree Regression machine learning algorithm; determining, a difference between actual and predicted performance value; and applying, the estimated performance of the said parameters to silicon solar cells in order to acquire their maximum performance.

Figure 1 mc-Si PV module installed at NISE

No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2022

(21) Application No.202221062718 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM FOR SOLID WASTE MANAGEMENT

(51) International classification	:B65F0001140000, G06Q0010080000, B65F0001160000, G06F0013420000, G05B0013020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In accordance with the present invention, a system for solid waste management is disclosed, comprising of a communication device consisting of a user interface; a control unit wherein the control unit is operably connected to the communication device; and the said control unit comprising of a microcontroller; a server unit wherein the said server unit comprising of a processing device and a dedicated user interface for the server unit; an ultrasonic sensor is configured in a garbage bin; and is connected to the said microcontroller of the control unit; and an infrared sensor is configured in the said garbage bin; and is connected to the said microcontroller of the control unit.

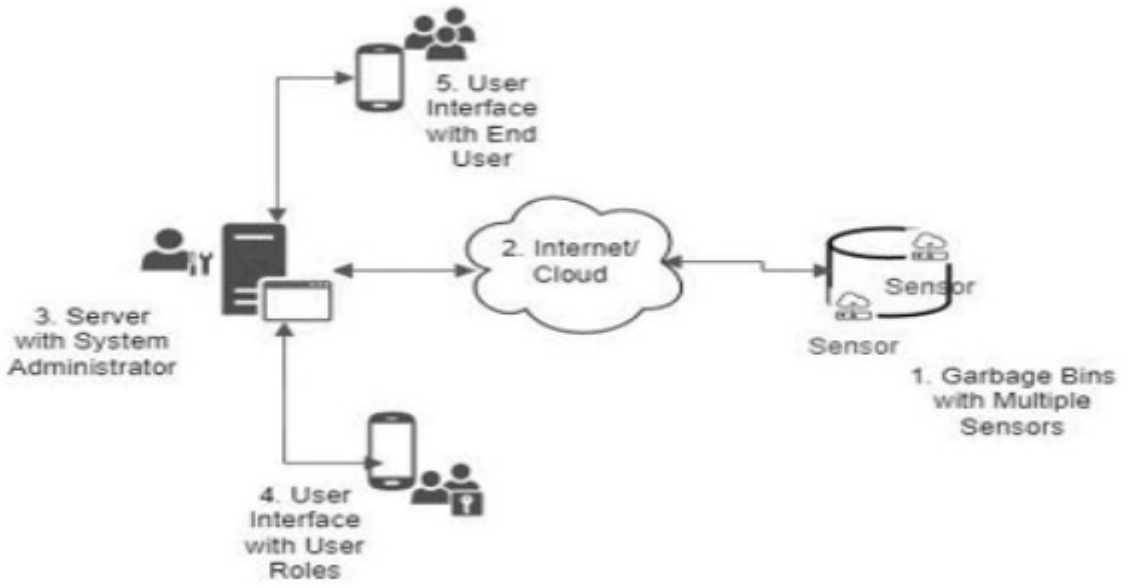

Figure 1

No. of Pages : 10 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/10/2022

(21) Application No.202221061709 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR THE IDENTIFICATION OF BLIND COMPOSITE IMAGE FORGERY DETECTION

(51) International classification	:G06T0003400000, E06B0009240000, G06T0001000000, B42D0025240000, H04N0005265000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a method for blind composite image forgery detection. More particularly, the present invention relates to a method for the identification of blind composite image forgery detection (BCIFD) that applies to both copy-move and splicing and even for combination of both.

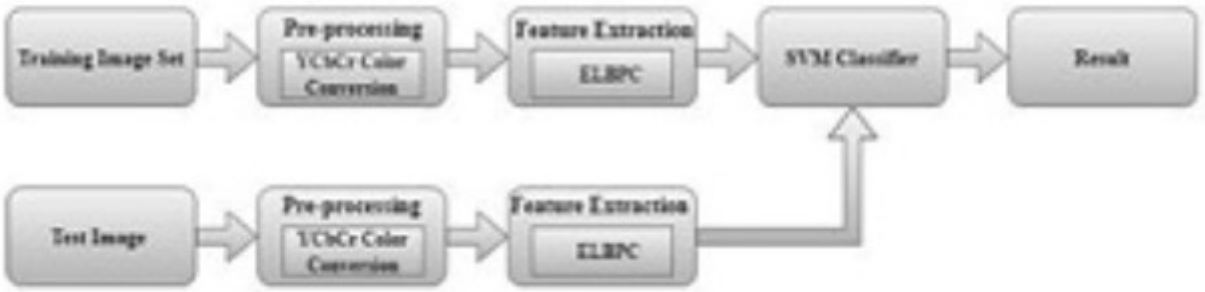

Figure 1

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/11/2022
(21) Application No.202221061732 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT-BASED WATER-BORNE DISEASES PREDICTION SYSTEM

(51) International classification	:G16H0050700000, G06N0005040000, C02F0001000000, G06Q0040040000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention presents an IoT-based water borne disease prediction system for real-time prediction of water-related diseases. It integrates five key components: data collection, cleansing, feature selection, an innovative JBO-SMOTE algorithm, and disease prediction modules. Leveraging real-time water quality data from the WBPCB portal, this system ensures informed decision-making for long-term water management. Through robust data cleansing and feature selection, it addresses missing data and outliers, enhancing data reliability. The novel JBO-SMOTE algorithm effectively manages imbalanced data, improving predictive accuracy. Utilizing various classifiers like decision trees and gradient boosting, it selects the best-performing model for disease prediction. The results showed that proposed system achieved excellent accuracy of 98.13 %, providing that proposed system outperforms the existing system. As a result, our IoT-based system has the potential to be quickly deployed in rural parts of the country, making it incredibly beneficial for local water management planners and authorities to implement appropriate measures.

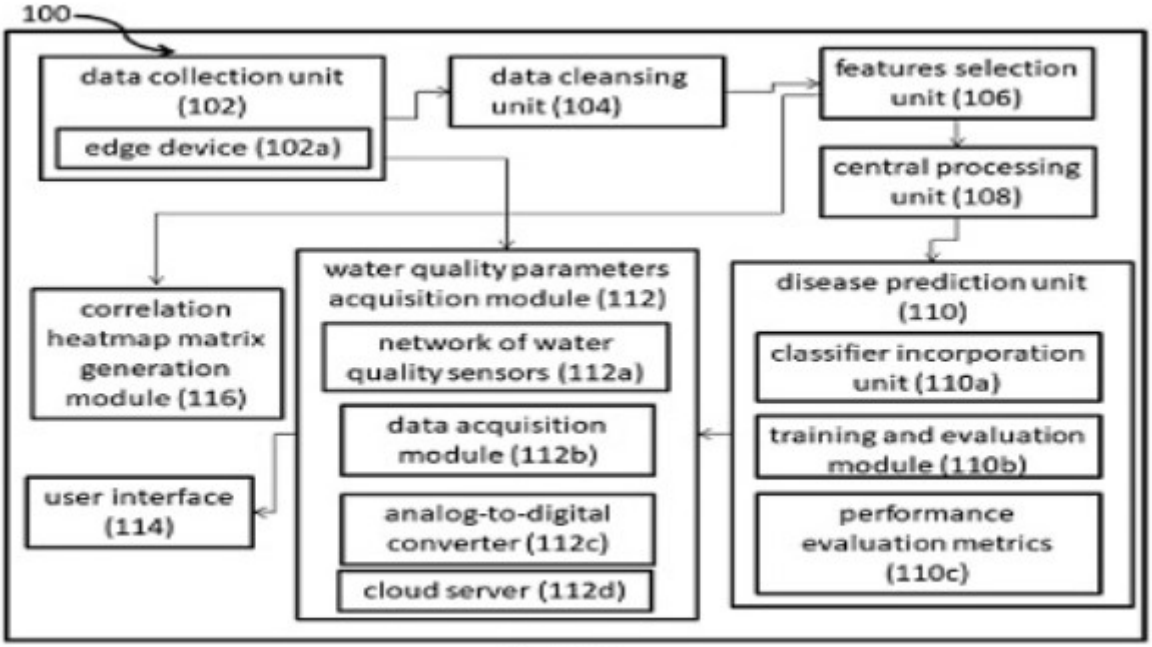

Figure 1

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/12/2022

(21) Application No.202221071133 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : FATTY ACIDS AND ?6 DESATURASE INDEX THRESHOLD AS INDICATORS OF PREECLAMPSIA AND METHOD OF DETECTION

(51) International classification	:G01N0033680000, C12N0009020000, G01N0033920000, C12Q0001687600, A01K0067020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The present invention discloses Fatty acids and ?6 desaturase index threshold as indicators of preeclampsia and the method of its detection in the subject. The present invention discloses sampling and tracking the samples taken from pregnant women at different stages of gestation. In the present invention early pregnancy fatty acid ratio yielding ?6D index predates the diagnosis of early onset preeclampsia. The present invention provides routine screening of pregnant women and helps in predicting women who are at risk for developing preeclampsia.

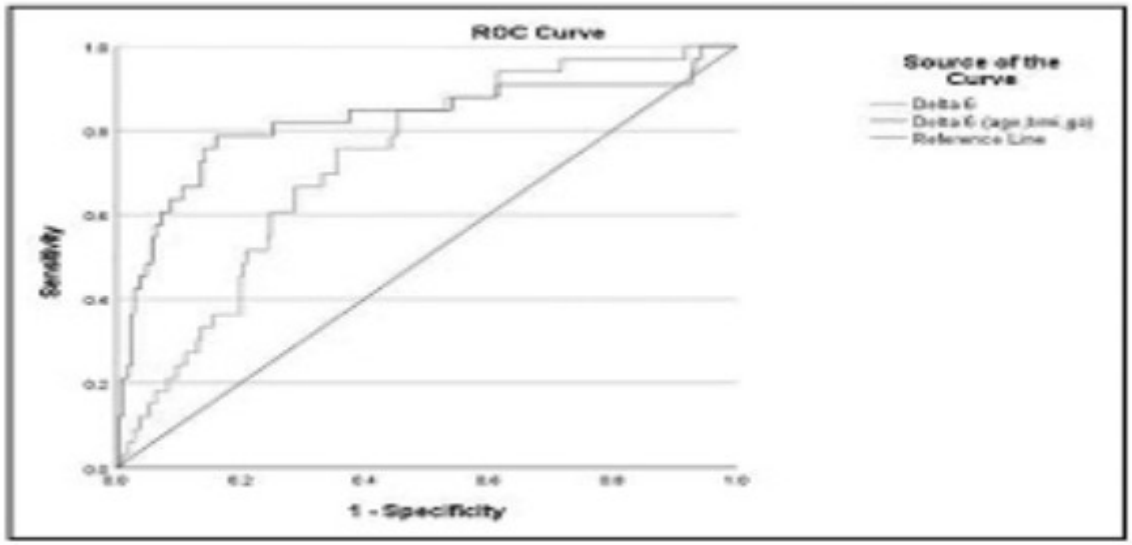

Fig 2

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/12/2022

(21) Application No.202221075381 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : A PORTABLE ULTRAVIOLET TORCH FOR DETECTING AND DISINFECTING CONTAMINATED SURFACES

(51) International classification	:C02F0001320000, A61L0002100000, C12Q0001040000, G06F0003035400, A61M0001160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to a portable ultraviolettorch for detecting and disinfecting contaminated surfaces. This proposed portable ultraviolet (UV) torch rapidly detects contamination (especially the presence of microorganisms) and disinfects the area. This device is a torch-like device with two UV lights of different wavelengths; one is for detection, and the second is for disinfection. A professional-grade UV light system that emits UV rays at extended frequencies of 100 to 400 nanometers was used to detect bacteria on surfaces. a handle (101), main body (102), adjustable stand (103), and front protective guard (104) for UV light emission.This device immediately detects the microorganism by focusing light on the desired area, and another UV light in wavelengths between 200 and 300 nm can inactivate microorganisms, such as bacteria and viruses, thus disinfecting air and solid surfaces. This innovation enhances infection control measures, promoting patient safety and efficient healthcare operations.

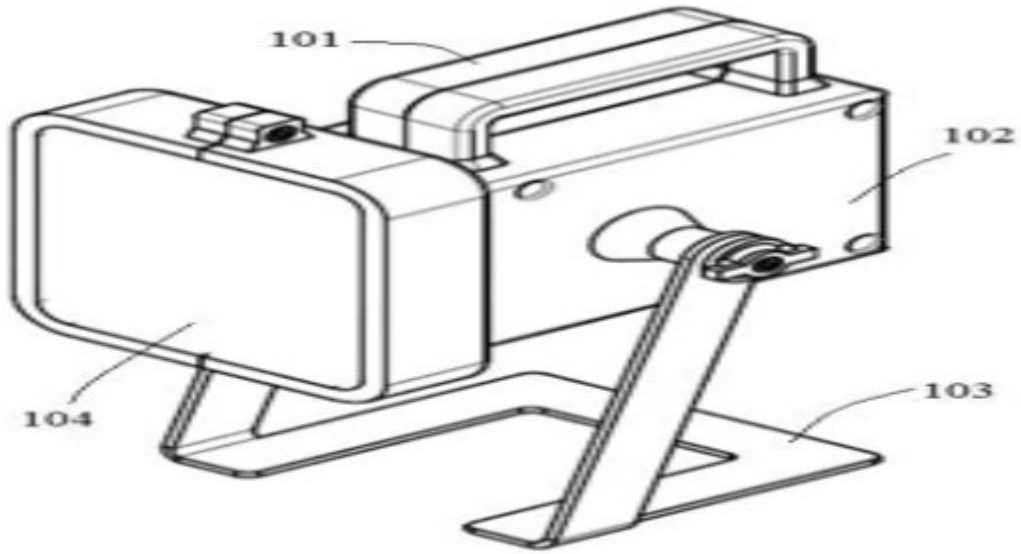

Figure 1

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/02/2023
(21) Application No.202321006468 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENERGY STORAGE SYSTEM FOR ELIMINATING CIRCULATING CURRENT

(51) International classification :B60L58/22, G01R31/36, H01M10/42, H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ENERGY STORAGE SYSTEM FOR ELIMINATING CIRCULATING CURRENT The present disclosure describes energy storage system (100). The system (100) comprises a plurality of battery racks (102), at least one comparator circuit (106), and at least one boost converter (108). The battery rack (102) comprises a plurality of battery packs (104). The comparator circuit (106) is connected between two battery racks (102) of the plurality of battery racks (102). The boost converter (108) is connected with the comparator circuit (106) between the two battery racks (102). Figure 1

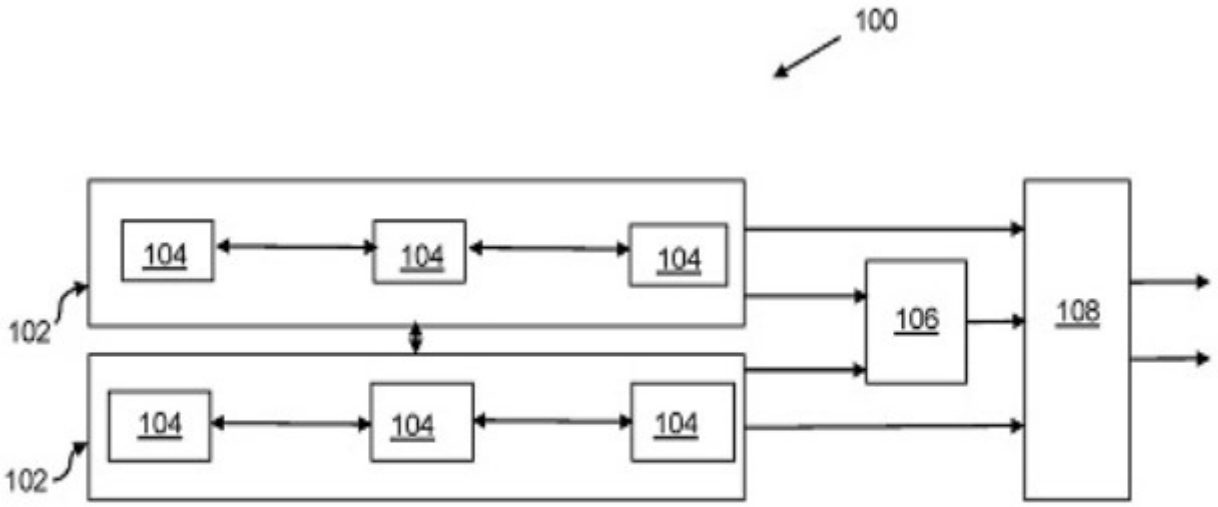

FIG. 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/02/2023

(21) Application No.202321006469 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : INTELLIGENT BATTERY SWAPPING SYSTEM FOR ELECTRIC VEHICLE

(51) International classification	:B60L15/00, B60L50/60, B60L53/12, B60L53/126, B60L53/24, B60L53/30
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT INTELLIGENT BATTERY SWAPPING SYSTEM FOR ELECTRIC VEHICLE The present disclosure describes a battery swapping system (100) for an electric vehicle. The battery swapping system (100) comprises a vehicle control unit (102), a first terminal device (104), a second terminal device (106), and a server arrangement (108), communicably coupled with the vehicle control unit (102), the first terminal device (104), and the second terminal device (106), wherein the server arrangement (108) is configured to receive a swapping request from the first terminal device (104); perform a second authentication process, via the second terminal device (106) to generate a second authentication information; and instruct the vehicle control unit (102), based on the first authentication information and the second authentication information, to control a battery pack compartment (110) of the electric vehicle for swapping of at least one battery pack (110a) from the battery pack compartment (110). Figure 1

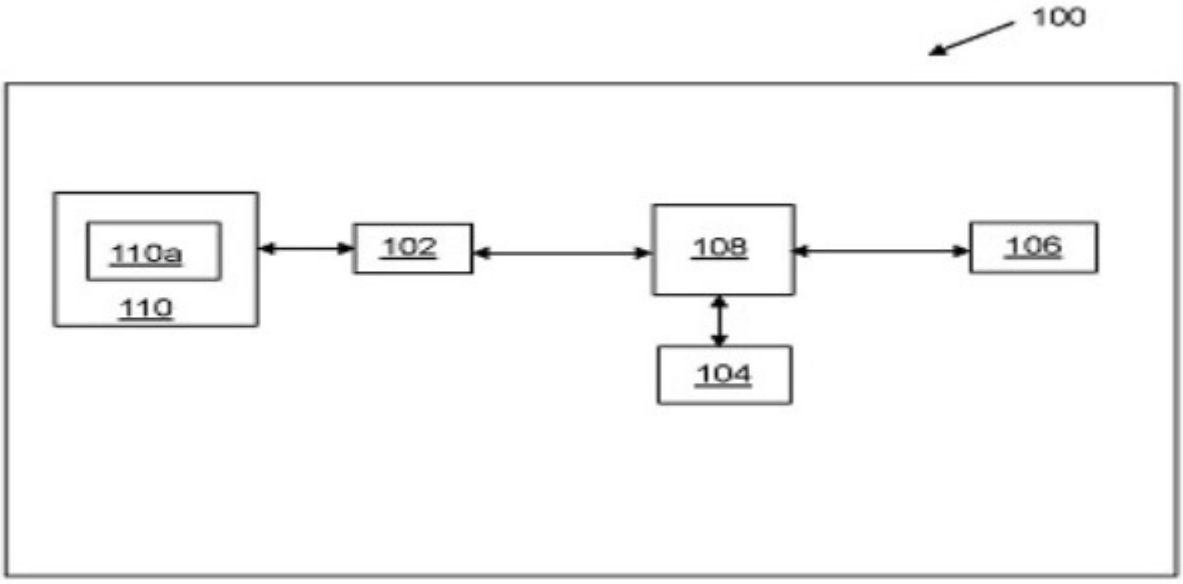

FIG. 1

No. of Pages : 25 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/02/2023
(21) Application No.202321006470 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD TO DETERMINE HEALTH OF BATTERY PACK

(51) International classification :G01R31/36, G01R31/3842, G01R31/389, G01R31/392
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD TO DETERMINE HEALTH OF BATTERY PACK The present disclosure describes a battery management system (100) with integrated state of health determination of at least one battery pack (102). The battery management system (100) comprises at least one current source (104), at least one voltage measurement circuit (106) and a control unit (108). At least one current source (104) is connected to the at least one battery pack (102). At least one voltage measurement circuit (106) is connected to the at least one battery pack (102). The control unit (108) is communicably coupled with the at least one current source (104) and the at least one voltage measurement circuit (106). The control unit (108) is configured to instruct the at least one current source (104) to generate a periodic signal, receive a measured voltage of the periodic signal from the at least one voltage measurement circuit (106), determine impedance of the at least one battery pack (102) based on the measured voltage of the periodic signal and determine the state of health of the at least one battery pack (102) based on the determined impedance of the at least one battery pack (102). Figure 1

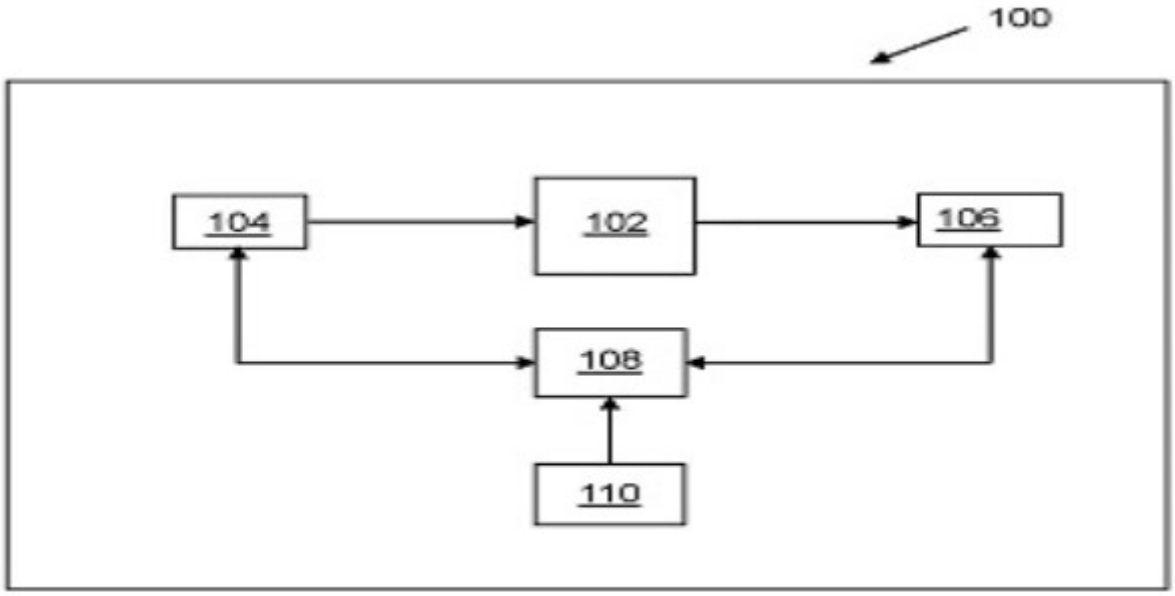

FIG. 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/02/2023
(21) Application No.202321006471 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SWAPPABLE POWER PACK FOR ELECTRIC VEHICLE

(51) International classification :B60L53/22, B60L53/80, B60L58/10, B60S5/06, H01M10/42, H02J7/00, H02M3/335
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SWAPPABLE POWER PACK FOR ELECTRIC VEHICLE The present disclosure describes a swappable power pack (100) for an electric vehicle. The power pack (100) comprises at least one battery module (102), a battery management system (104), and an integrated bi-directional power converter (106). The integrated bi-directional power converter (106) is configured to convert DC power received from the at least one battery module (102) into AC power, to drive a motor (108) of the electric vehicle, when the swappable power pack (100) is connected in the electric vehicle for driving the electric vehicle. The integrated bi-directional power converter (106) is configured to convert AC power received from a power source (110) into DC power, to charge the at least one battery module (102), when the swappable power pack (100) is connected to the power source (110). Figure 1a

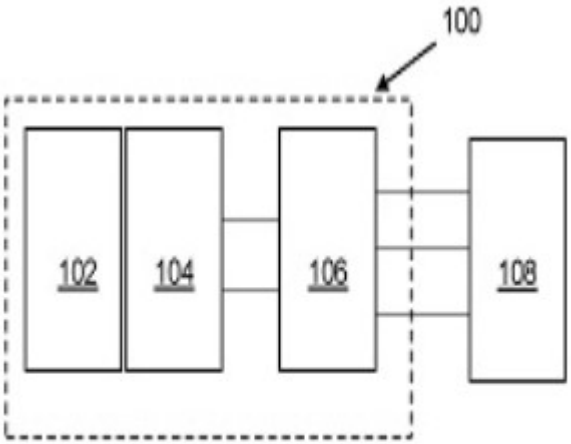

Figure 1a

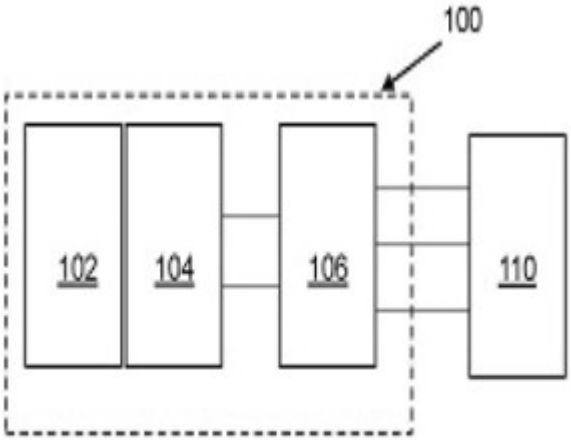

Figure 1b

No. of Pages : 23 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/02/2023
(21) Application No.202321007587 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM FOR CHARGE CONTROL OF DOMESTIC UNINTERRUPTED POWER SUPPLY

(51) International classification :B60L53/53, B60L53/80, H02J7/00, H02J9/06, H02M3/335
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM FOR CHARGE CONTROL OF DOMESTIC UNINTERRUPTED POWER SUPPLY The present disclosure describes a system (100) for charge control of a domestic uninterrupted power supply. The domestic uninterrupted power supply comprises an internal battery pack (102). The system (100) comprises an active front-end AC-DC converter (106); a bidirectional DC-DC converter (108); a control unit (112) configured to control operation of the active front-end AC-DC converter (106) and the bidirectional DC-DC converter (108); and at least one electro-mechanical connector (110) for connecting at least one external battery pack (104) with the domestic uninterrupted power supply. Figure 1

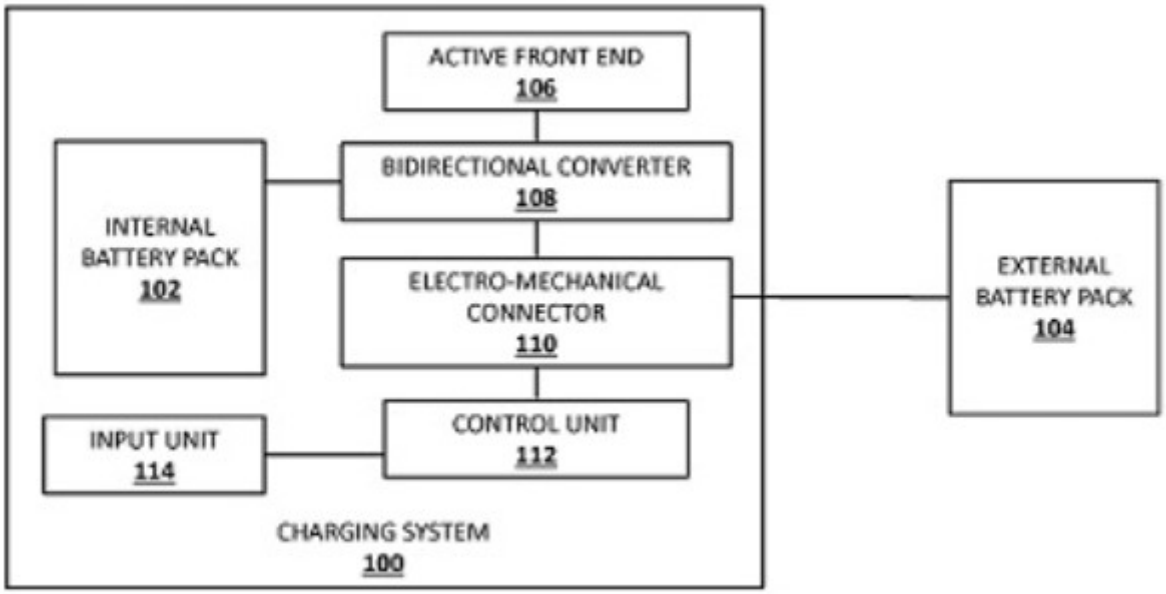

Figure 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/02/2023

(21) Application No.202321007588 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : HOME INVERTER CUM SWAPPABLE BATTERY CHARGING STATION

(51) International classification :B60L53/53, B60L53/80, H02J7/00, H02J9/06, H02M1/14, H02M3/335

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT HOME INVERTER CUM SWAPPABLE BATTERY CHARGING STATION The present disclosure describes a home inverter cum swappable battery charging station (100). The home inverter (100) comprises a plurality of battery packs (102) comprising at least one swappable battery pack; at least one battery pack compartment (104) for receiving the plurality of battery packs; an active front-end AC- DC converter (106); a DC-DC converter (108); and a control unit (116) configured to control operation of the active front-end AC-DC converter (106) and the DC-DC converter (108). The DC-DC converter (108) comprises a hybrid network configured within the DC-DC converter (108). The DC-DC converter (108) comprises a high frequency DC-AC converter (110), a high frequency transformer (112), and a high frequency AC-DC converter (114). Figure 1

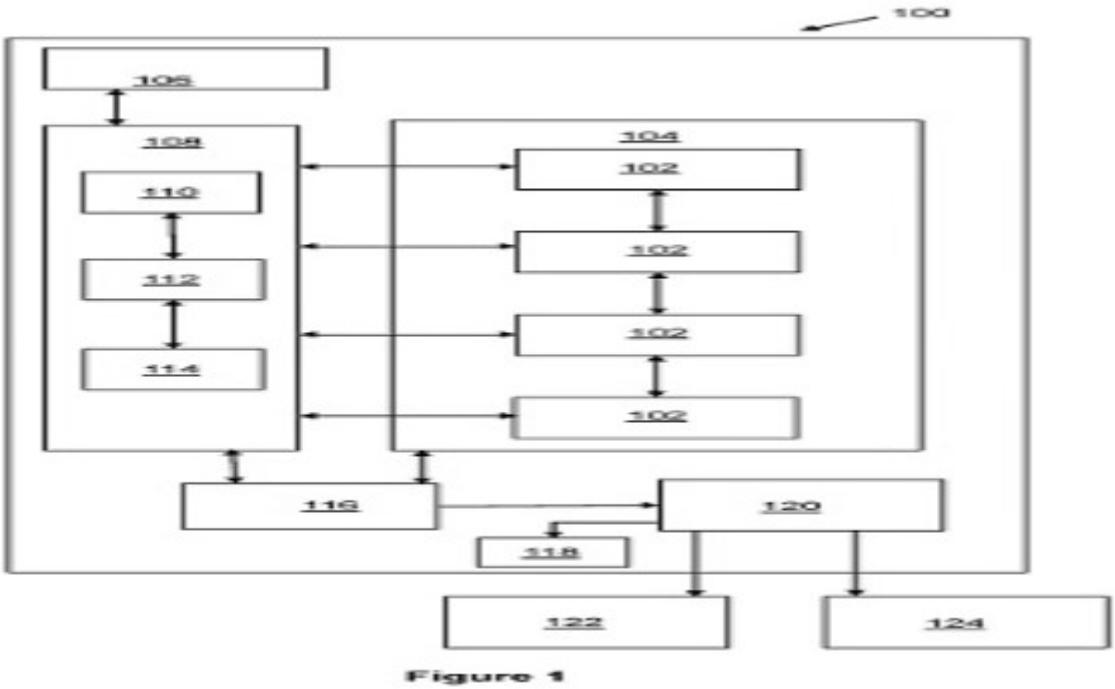

Figure 1

No. of Pages : 25 No. of Claims : 18

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/02/2023
(21) Application No.202321007589 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM FOR CONVERTING HOME INVERTER IN SWAPPABLE BATTERY CHARGING MODULE

(51) International classification :B60L53/16, B60L53/80, H02J7/00, H02J9/06, H02M3/335
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM FOR CONVERTING HOME INVERTER IN SWAPPABLE BATTERY CHARGING MODULE The present disclosure describes a system (100) for converting home inverter in swappable battery charging module. The system (100) comprises an input connector (102) configured to connect the system (100) with a DC output of the home inverter, a bidirectional DC-DC converter (104), an output selector (106) configured to select an output parameter, a control unit (108) configured to control operation of the bidirectional DC-DC converter (104), and at least one output connector (110) configured to removably connect at least one swappable battery pack (112) with the system (100). Figure 1

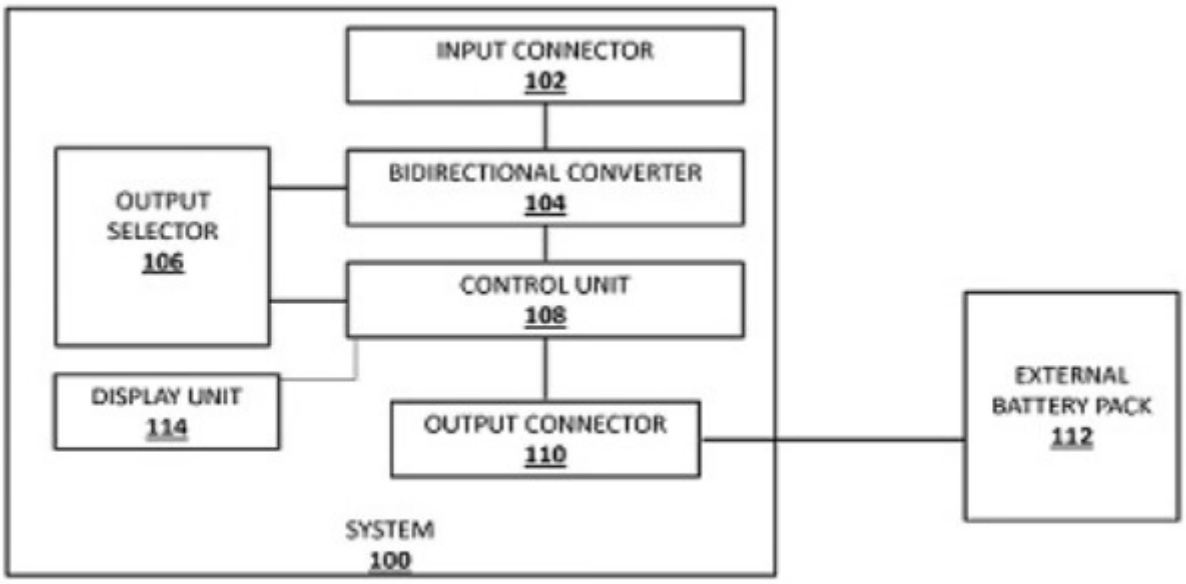

Figure 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/02/2023
(21) Application No.202321012848 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : BELT-TYPE CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE

(51) International classification :B60K6/543, B60W10/101, F16H61/66, F16H9/04, F16H9/16
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT BELT-TYPE CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE The present disclosure provides a belt-type continuous variable transmission (CVT) drive (100), comprising: a first drum (102) to receive rotational motion, a second drum (104), a driving belt (106) simultaneously looped around both of the first drum (102) and the second drum (104), wherein the driving belt (106) transfers the rotational motion from first drum (102) to second drum (104), a belt tensioning mechanism (108) connected to driving belt (106), wherein belt tensioning mechanism (108) enables to modify the effective length of driving belt (106) according to the change in the radius associated with first drum (102) and/or second drum (104). Wherein first drum (102) and second drum (104) are deformable to change a first radius and a second radius associated with the first drum (102) and second drum (104), respectively. Further, effective length associated with driving belt (106) is modifiable. FIG. 1

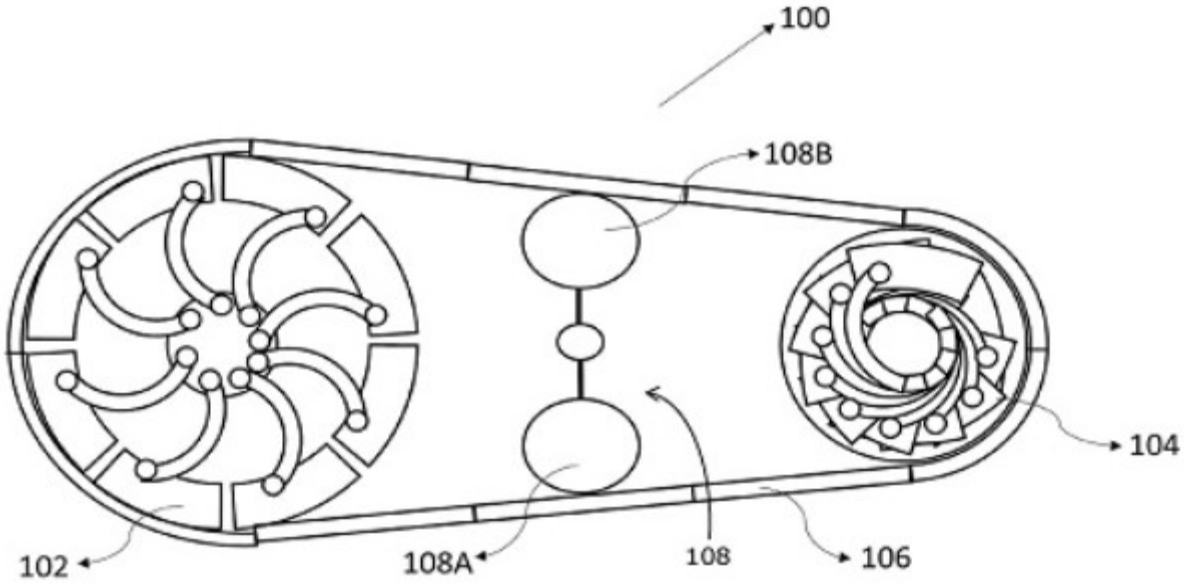

Fig. 1

No. of Pages : 25 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/02/2023
(21) Application No.202321012243 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ONBOARD FAST CHARGER FOR ELECTRIC VEHICLE

(51) International classification :B60L53/22, H02J7/00, H02M1/00, H02M3/335, H02M7/48
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ONBOARD FAST CHARGER FOR ELECTRIC VEHICLE The present disclosure describes an onboard fast charger (100) for an electric vehicle. The onboard charger (100) comprises an active front-end AC-DC converter (102), a DC-DC converter (104) and a control unit (112). The DC-DC converter (104) comprises a hybrid network configured within the DC-DC converter (104). The DC-DC converter (104) comprises a high frequency DC-AC converter (106), a high frequency planar transformer (108) and a high frequency AC-DC converter (110). The control unit (112) is configured to control operation of the active front-end AC-DC converter (102) and the DC-DC converter (104). Figure 1

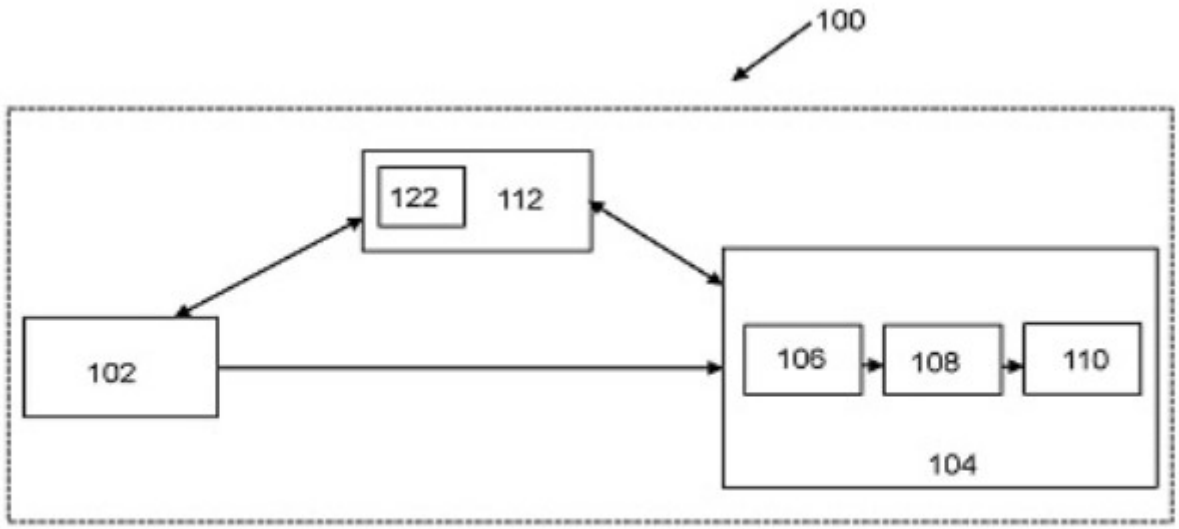

FIGURE 1

No. of Pages : 35 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/02/2023
(21) Application No.202321012244 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE

(51) International classification :F16H 1/28, F16H 3/44, F16H 57/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :301, PARISHRAM BUILDING, 5B RASHMI SOC., NR. MITHAKHALI SIX ROADS, NAVRANGPURA AHMEDABAD, GUJARAT, INDIA - 380009 Ahmedabad ---------- ----------

(57) Abstract :
ABSTRACT CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE The present disclosure provides a transmission system (100) for an electric vehicle. The transmission system (100) comprises a planetary gearbox (102) that includes a sun gear (104) rotationally located at the centre of the planetary gearbox (102). The sun gear (104) receives rotational input. The transmission system (100) further comprises a carrier (106) and plurality of planetary gears (108) rotationally disposed on the carrier (106). Each planetary gear (108) simultaneously engages with the sun gear (104) to receive the rotational input from the sun gear (104). Moreover, the transmission system (100) comprises a ring gear (110) disposed along an external periphery of the plurality of planetary gears (108). Additionally, the transmission system (100) includes a shifter (112) that selectively engages the sun gear (104) to provide a first rotational output and the carrier (106) to provide a second rotational output. FIG. 1

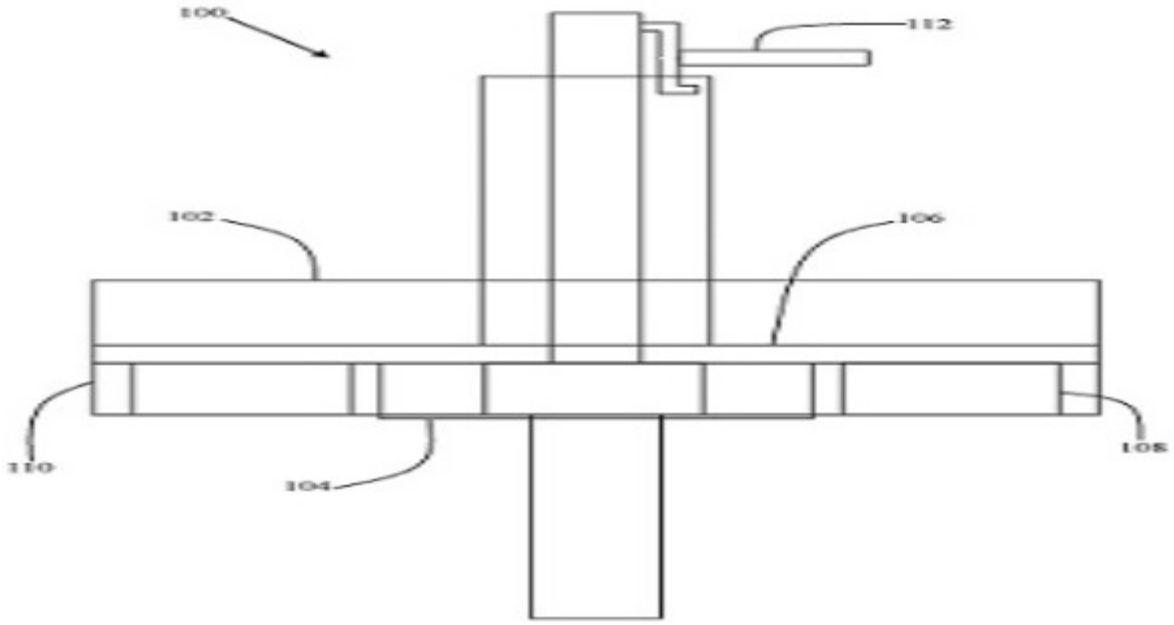

FIG. 1

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/02/2023
(21) Application No.202321012245 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : COMPACT CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE

(51) International classification :F16H 1/28, F16H 3/44, F16H 57/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT COMPACT CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE The present disclosure provides a transmission arrangement (100) for an electric vehicle comprising a cylindrical housing (102) with multiple gear teeth (104) circumferentially disposed on an inner surface thereof. The cylindrical housing (102) comprises a gearbox (106) housing a central gear (108) rotationally positioned at a centre of the gearbox (106). The central gear (108) receives rotational input. Additionally, a carriage is aligned coaxially with the central gear (108) and multiple orbit gears (112) are rotationally mounted on the carriage. Further, each orbit gear (112) simultaneously engages with the central gear (108) to accept rotational input and with the multiple gear teeth (104) of the cylindrical housing (102). Moreover, a shifter (114) is provided that selectively engages the central gear (108) to deliver a first rotational output and the carriage (110) to deliver a second rotational output.

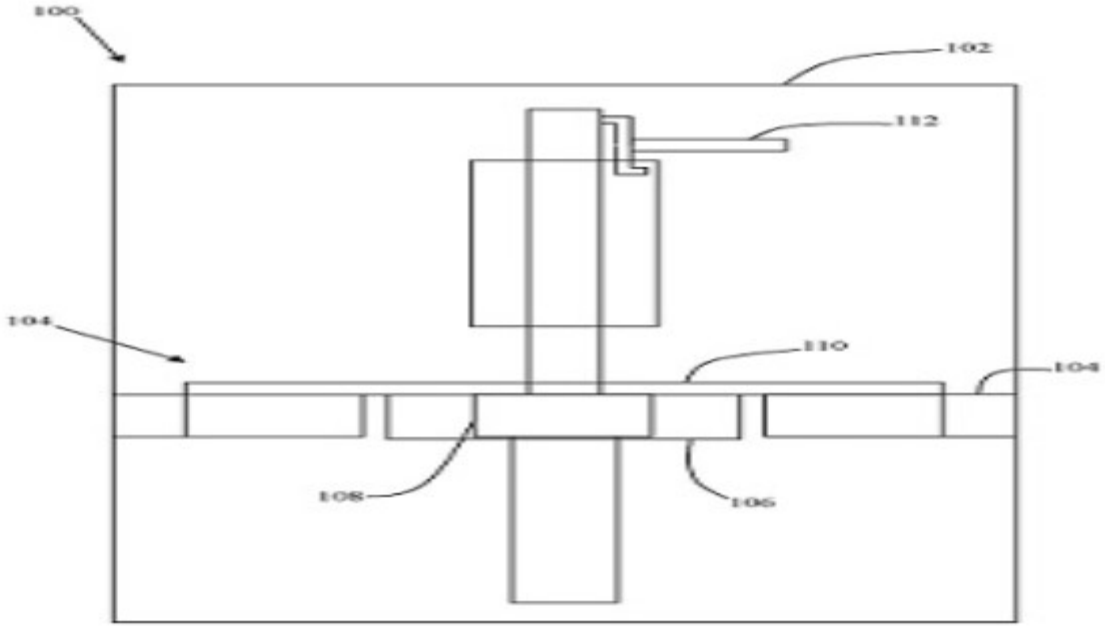

FIG. 1

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/02/2023

(21) Application No.202321012246 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE

(51) International classification :F16H 15/38, F16H 57/04, F16H 61/664
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE The present disclosure provides a toroidal continuous variable transmission (CVT) drive (100) for an electric vehicle, the CVT drive (100) comprising an input cone (102) mounted on an input shaft (104) for receiving rotational input; an output cone (106) mounted on an output shaft (108); and a roller (110) configured to simultaneously engage with the input cone (102) and the output cone (106). The roller (110) transmits the rotational input from the input cone (102) to the output cone (106). Further, at least one of the input cone (102) and the output cone (106) is deformable for providing a variable cone angle to adjust the rotational input transmitted from the input cone (102) to the output cone (106) by the roller (110). FIG. 2

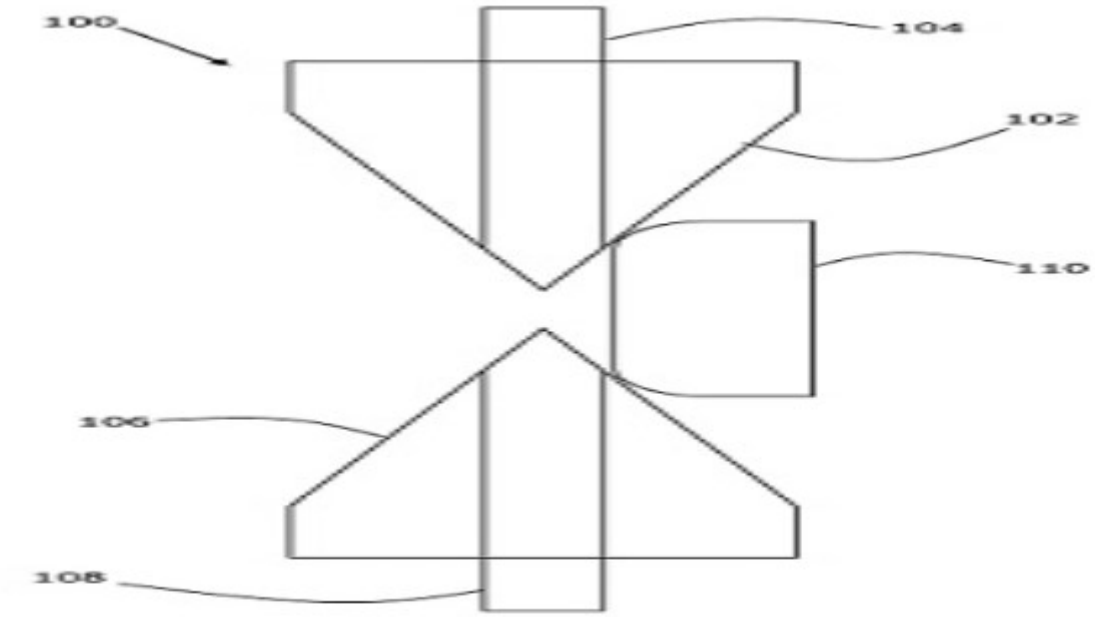

FIG. 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/02/2023

(21) Application No.202321012849 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE

(51) International classification	:F16H61/66, F16H9/04, F16H9/16
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE ABSTRACT The present disclosure provides a belt-type continuous variable transmission (CVT) system (100) comprising: a driven pair of discs (102) having a first variable gap (d1) therebetween, wherein the driven pair of discs (102) receive rotational motion; a driving pair of discs (104) having a second variable gap (d2) therebetween; and a variator mechanism (106) simultaneously connected to the driven pair of discs (102) and the driving pair of discs (104), wherein the variator mechanism (106) enables a variation of the first variable gap (d1) to create a variation in the second variable gap (d2). Fig. 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/02/2023

(21) Application No.202321012850 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS CHARGING ECOSYSTEM FOR SWAPPABLE POWERPACK

(51) International classification	:B60L53/122, B60L53/80, H01M10/42, H02J50/12, H02J7/00, H02M1/00, H02M3/335, H02M7/48
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT WIRELESS CHARGING ECOSYSTEM FOR SWAPPABLE POWERPACK The present disclosure describes a system (100) for wireless charging of at least one swappable power pack (102). The system (100) comprises a home inverter cum swappable battery charging station (104) and the at least one swappable power pack (102). The home inverter cum swappable battery charging station (104) comprises a first magnetic coil (106). The swappable power pack (102) comprises a second magnetic coil (108). The first magnetic coil (106) and the second magnetic coil (108) form a high-frequency air core transformer (110) to enable transfer of electrical energy between the home inverter (104) and the at least one swappable power pack (102). Figure 1

No. of Pages : 30 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/02/2023

(21) Application No.202321012852 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD AND SYSTEM FOR CONTROLLING DEMAGNETIZATION IN A MOTOR

(51) International classification :B60L15/20, G06N3/088, G06N3/09, H02P21/06, H02P21/14, H02P29/66
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT METHOD AND SYSTEM FOR CONTROLLING DEMAGNETIZATION IN A MOTOR The present disclosure describes a system (100) for controlling demagnetization conditions in a motor. The system (100) comprises at least one sensor (102) configured to detect at least one motor parameter and a data processing arrangement (104). The data processing arrangement (104) is configured to receive the at least one motor parameter from the at least one sensor arrangement (102), employ a pre-trained digital twin model to determine at least one rotor parameter based on the received at least one motor parameter, determine a real time field distribution inside the motor, and control at least one operation parameter of the motor based on the determined real time field distribution. Figure 1

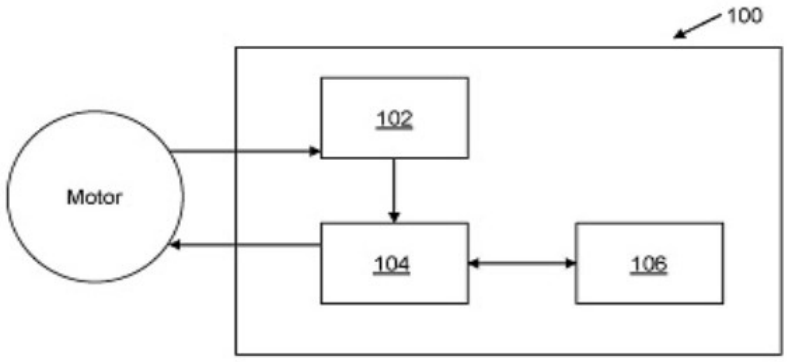

Figure 1

No. of Pages : 22 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/02/2023

(21) Application No.202321012853 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE

(51) International classification :F16H15/04, F16H61/66, F16H9/04, F16H9/16
(86) International Application No :NA
Filing Date :NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
CONTINUOUS VARIABLE TRANSMISSION SYSTEM FOR ELECTRIC VEHICLE ABSTRACT The present disclosure provides a belt-type continuous variable transmission (CVT) drive (100) comprising an input pair of discs (102) with a first variable gap (d1) therebetween, wherein the input pair of discs (102) receive rotational motion; an output pair of discs (104) having a second variable gap (d2) therebetween; a gap adjustment mechanism (106) simultaneously connected to the input pair of discs (102) and the output pair of discs (104), wherein the gap adjustment mechanism (106) enables a change in the first variable gap (d1) to create a change in the second variable gap (d2); and an adjustor (108) connected to a first disc (102a) of the input pair of discs (102), wherein the adjustor (108) enables to change the first variable gap (d1). Fig. 1

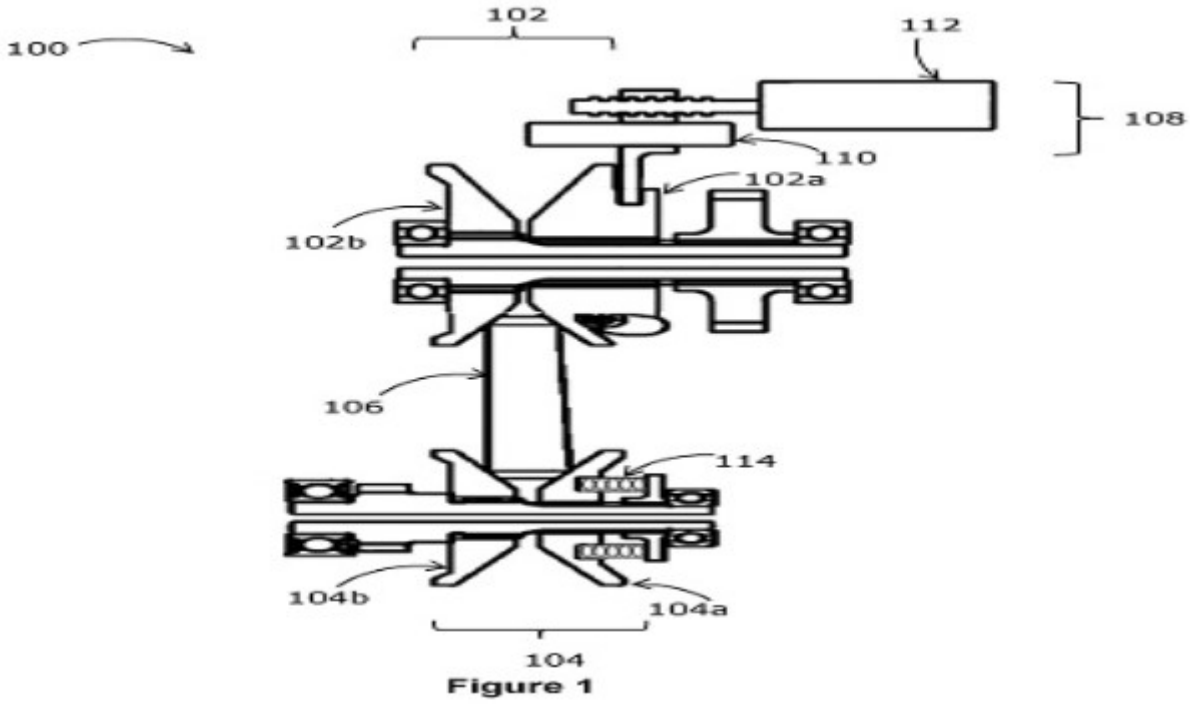

Figure 1

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/05/2022

(21) Application No.202221030125 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SECURED RESTRICTED ACCESS TO COMMUNICATION SYSTEMS AND METHOD THEREOF

(51) International classification	:H04M0003420000, H04L0029060000, H04M0007120000, H04N0007160000, H04M0003510000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SECURED RESTRICTED ACCESS TO COMMUNICATION SYSTEMS AND METHOD THEREOF The proposed invention relates to a computer implemented system (1) for providing a secured restricted access, wherein said system consists of a server computing device/server (2), at least two communication devices (3,4), a memory unit (7), an input module (9) including other associated device operationally coupled with each other. The system provides an automated, secure and unique solution for secured restricted access to the previously registered users or scheduled users. The server is used to set-up a communication between the first communication device (3) and second communication devices (4) based on the criteria of caller device's identification as input to the server. The server computing device (2) matches it with a set of identifications stored in a relational database (8) inside in the memory (7) and a dialling message is sent to the caller's device for required identifications/credentials. After providing inputs by caller, the server matches it with the relational databases tables credentials and is comparison satisfies, the server establishes a call between the caller and receiver devices (3,4). {Please find attached FIG.1}

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/12/2022

(21) Application No.202221077122 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENERGY-EFFICIENT, VARIABLE TEMPERATURE-CONTROLLED HYDRONIC REFRIGERATION SYSTEM

(51) International classification	:F24D0019100000, F25D0011000000, F25B0049020000, F04D0015000000, F25D0011020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is an inventive stability testing chamber (01) equipped with a variable temperature-controlled hydronic refrigeration system for walk-in stability chamber applications. From an operational budget, energy-savings of up to around 90% are achieved via logic of controlled intelligent actuation, strictly on a need-to-basis, of the components responsible for cooling, heating, dehumidification and humidification. Also from the operational budget, water consumption is reduced by up to 70% by recirculation of water among the components responsible for cooling, heating, dehumidification and humidification.

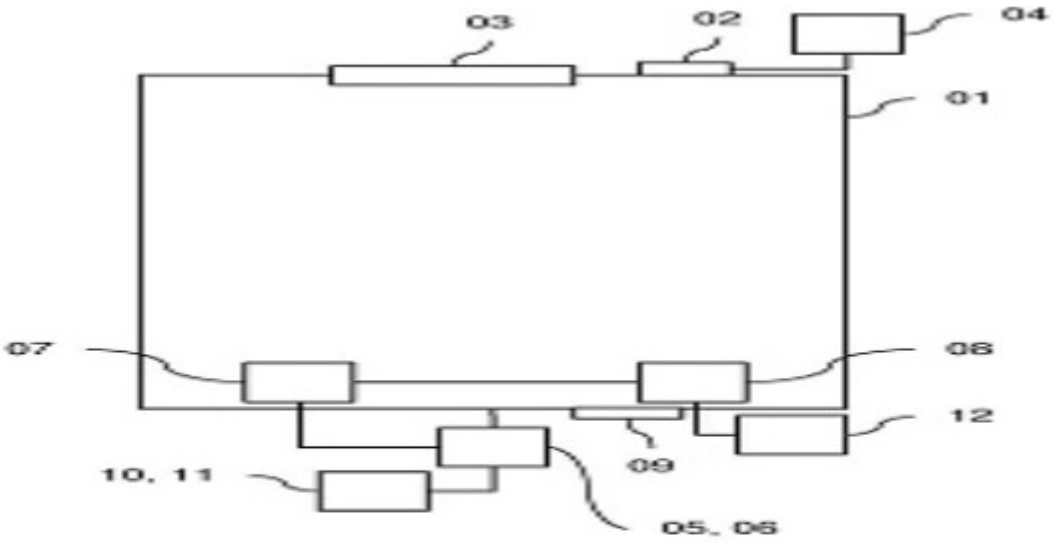

FIGURE 2

No. of Pages : 33 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/01/2023

(21) Application No.202321001917 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD OF OPERATING CHARGER FOR CHARGING BATTERIES OF DIFFERENT VOLTAGE RATINGS

(51) International classification :H02J7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT METHOD OF OPERATING CHARGER FOR CHARGING BATTERIES OF DIFFERENT VOLTAGE RATINGS
The present disclosure describes a method (100) of operating a charger (200) for charging batteries of different voltage ratings. The method (100) comprises operating an AC-DC converter (202), operating a DC-DC converter (204), comprising a hybrid network (206) having at least two switching legs (208a, 208b) configured in a full bridge configuration, a resonant tank (222), a high frequency transformer (210) and a rectifier (212), and operating the full bridge configuration of the DC-DC converter (204) in a half bridge configuration for charging batteries of different voltage ratings. Figure 1

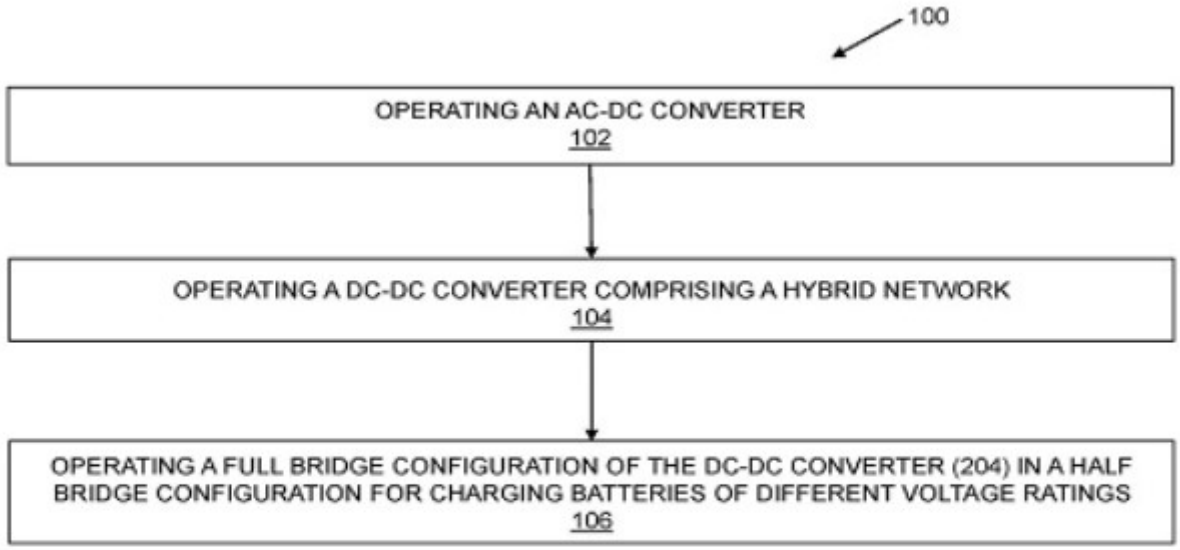

Figure 1

No. of Pages : 28 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/03/2023
(21) Application No.202321013933 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A STACKER CRANE AND METHODS THEREOF

(51) International classification :B65G1/00, B65G1/04, B66F9/07
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
1)Mahendra Raghunath Patil
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(57) Abstract :
A STACKER CRANE AND METHODS THEREOF The disclosure herein generally relates to automated storage and retrieval systems and more particularly, to a stacker crane. The stacker crane (100) includes a pair of column frame legs (101), a modular column frame assembly (102), a bottom carriage (104), a lifting carriage (106), a hoist motor (108), a control panel (110), a maintenance platform (112), a plurality of top mast pulleys (114) and a plurality of top guide rollers (116). The stacker crane (100) is in-expensive. The stacker crane (100) is easy to manufacture, handle and transport. Installation of stacker crane (100) on site is quicker, and skilled technicians are not required on site for performing alignments/assembling of the stacker crane, and electrical wiring work on site is reduced, and exporting the stacker crane is easier by shipping the stacker crane via compact containers. Fig. 1

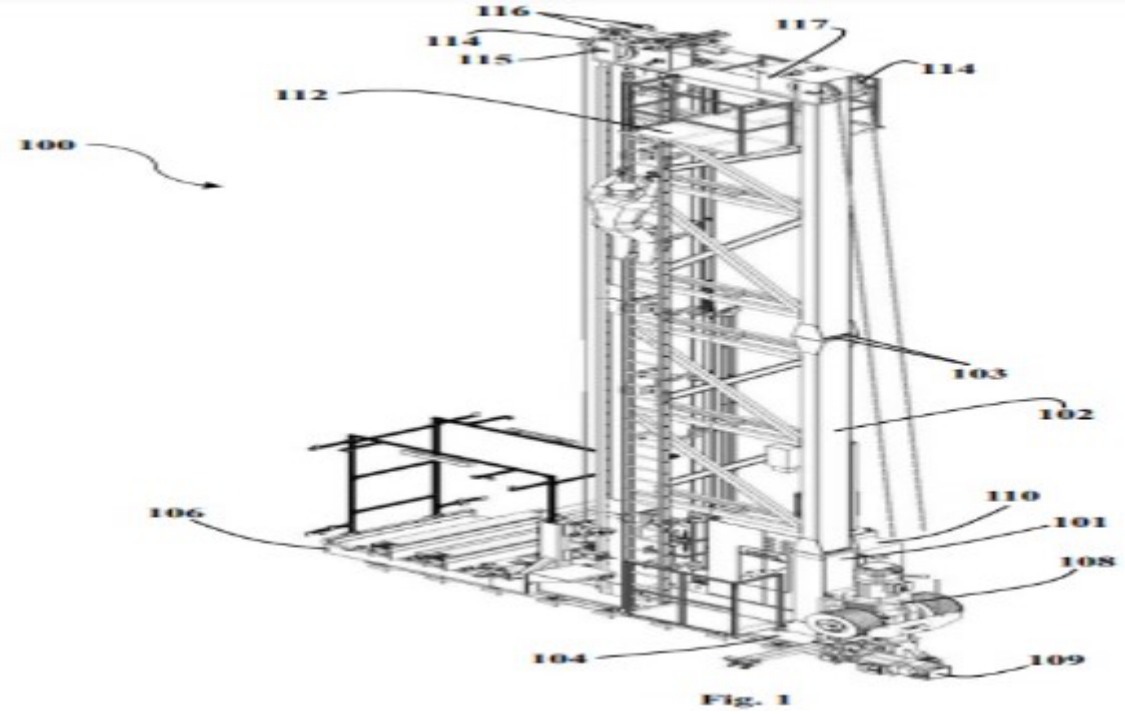

Fig. 1

No. of Pages : 30 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/02/2023

(21) Application No.202321012854 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTINUOUS VARIABLE TRANSMISSION FOR ELECTRIC VEHICLE

(51) International classification :B60K6/543, B60W10/101, F16H61/66, F16H9/04, F16H9/16
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT CONTINUOUS VARIABLE TRANSMISSION FOR ELECTRIC VEHICLE The present disclosure provides a belt-type continuous variable transmission (CVT) system (100) comprising: an input drum (102) to receive rotational motion; an output drum (104); and a flexible belt (106) simultaneously looped around both the input drum (102) and the output drum (104), wherein the flexible belt (104) transfers rotational motion from the input drum (102) to the output drum (104) and wherein the input drum (102) and/or the output drum (104) is deformable to respectively change a diameter associated with the input drum (102) and/or a diameter associated with the output drum (104). FIG. 1

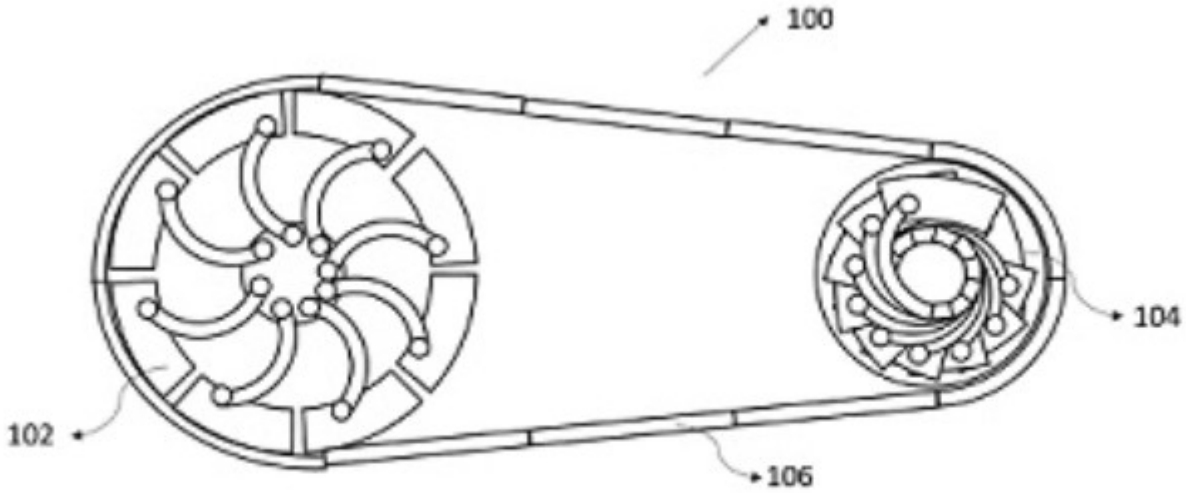

Fig. 1

No. of Pages : 26 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2023

(21) Application No.202321020835 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD AND SYSTEM FOR AUTOMATED OPERATION OF BLINKERS

(51) International classification :G01C0021360000, B60T0007060000, G01C0021340000, G06Q0020320000, G05D0001000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT METHOD AND SYSTEM FOR AUTOMATED OPERATION OF BLINKERS The present disclosure describes a system (100) for operation of at least one blinker (108) of a vehicle, wherein the system (100) comprises a processing unit (102) configured to identify a turn to be taken based on a route selected on a navigation map and a location of the vehicle; activate the at least one blinker (108) corresponding to the turn to be taken, at a pre-defined distance from the turn to be taken; validate the turn taken by the vehicle based on the navigation map and the location of the vehicle on the navigation map; and de-activate the activated at least one blinker (108). Figure 1

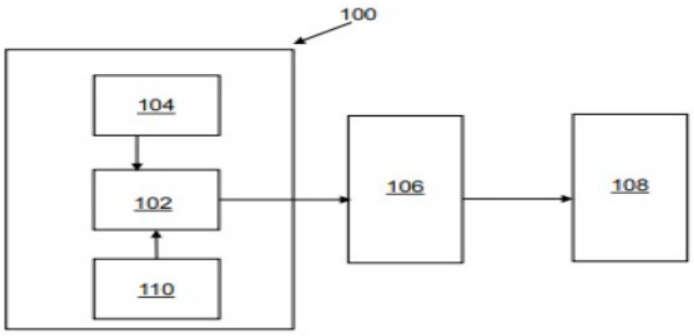

Figure 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2023

(21) Application No.202321020836 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : BUSBAR FOR CELL ARRAY OF BATTERY PACK

(51) International classification :H01M50/50, H01M50/503, H01M50/505, H01M50/583
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT BUSBAR FOR CELL ARRAY OF BATTERY PACK The present disclosure describes a busbar unit (100) for a cell array of a battery pack, wherein the busbar unit (100) comprises at least one elongated conductive strip (102) comprising a plurality of cell sections (104), wherein each of the plurality of cell sections (104) comprises a positive terminal connector (106) and a negative terminal connector (108) connected to the elongated conductive strip (102) via at least one fuse strip (110). Figure 1

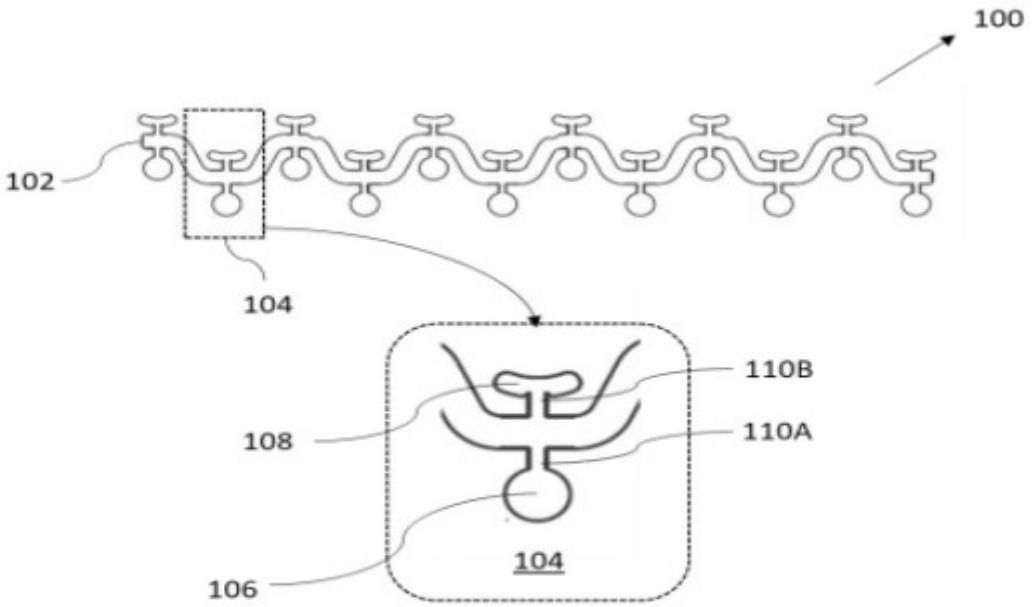

Fig. 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2023

(21) Application No.202321020837 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTROLLER FOR POWER TRAIN OF ELECTRIC VEHICLE

(51) International classification	:B60L15/02, B60L15/20, H02P21/00, H02P21/22
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
The present disclosure describes a control system (100) for controlling a powertrain of an electric vehicle. The control system (100) comprises a control 5 unit (102) configured to: execute a control loop; and execute an error loop, along with the control loop to maintain control of a motor (104) in field weakening region of operation, when a control error is greater than a threshold. Figure 1

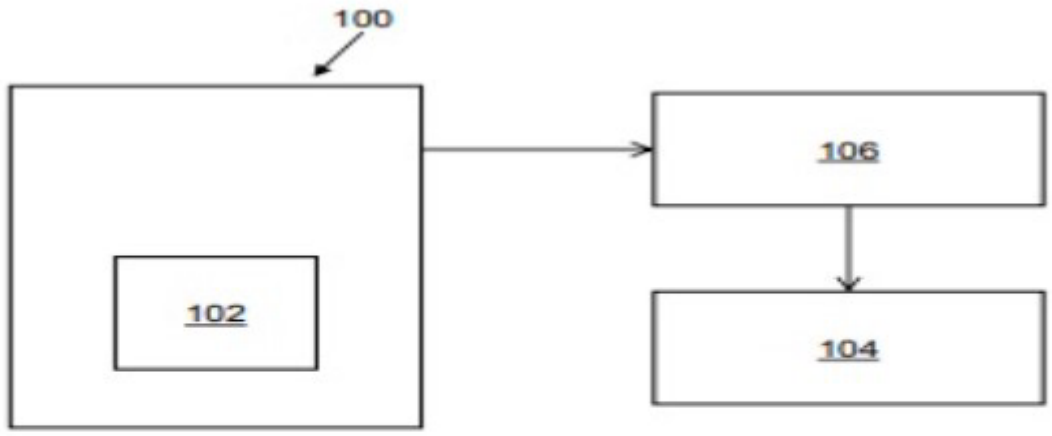

Figure 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2023

(21) Application No.202321020838 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENERGY EFFICIENT ROUTE DETERMINATION FOR ELECTRIC VEHICLE(S)

(51) International classification :G01C0021340000, G01C0021360000, G01C0021000000, G01C0021200000, G08G0001096700
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ENERGY EFFICIENT ROUTE DETERMINATION FOR ELECTRIC VEHICLE(S) The present disclosure describes a navigation system (100) for an electric vehicle. The navigation system (100) comprises a data processing unit (102) configured to receive at least one input from a user of the electric vehicle; determine at least one route available between the start location and the destination location; receive a plurality of real time navigation parameters associated with the at least one route; determine an amount of energy required to travel each of the route available between the start location and the destination location; determine an energy efficient route between the start location and the destination location from the at least one available route; and communicate the determined energy efficient route to the user. Figure 1

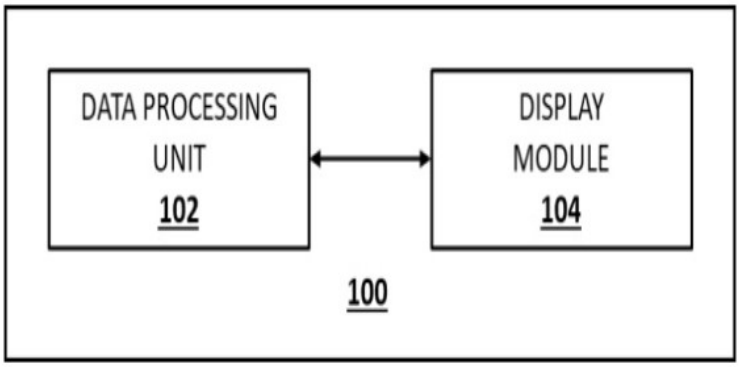

Fig. 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/02/2023
(21) Application No.202321006472 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ANTI-THEFT BATTERY SWAPPING SYSTEM FOR ELECTRIC VEHICLE

(51) International classification :B60L50/64, B60L53/80, B60S5/06, H01M50/20
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ANTI-THEFT BATTERY SWAPPING SYSTEM FOR ELECTRIC VEHICLE The present disclosure describes a battery swapping system (100) for an electric vehicle. The battery swapping system (100) comprises a vehicle control unit (102), a first terminal device (104), a second terminal device (106), and a server arrangement (108), communicably coupled with the vehicle control unit (102), the first terminal device (104), and the second terminal device (106), wherein the server arrangement (108) is configured to perform a first authentication process, via the first terminal device (104) to generate a first authentication information; perform a second authentication process, via the second terminal device (106) to generate a second authentication information; and instruct the vehicle control unit (102), based on the first authentication information and the second authentication information, to control a battery pack compartment (110) of the electric vehicle for swapping of at least one battery pack (110a) from the battery pack compartment (110). Figure 1

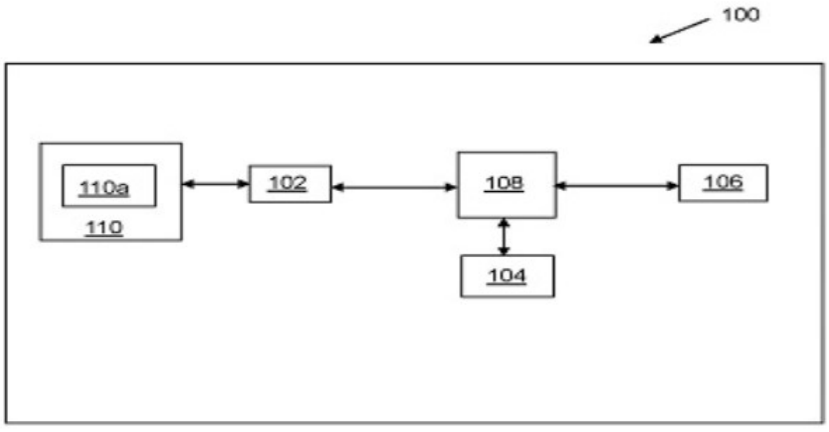

FIG. 1

No. of Pages : 28 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/02/2023
(21) Application No.202321010176 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PATIENT SAFETY SIMPLIFIED NON-CONTAMINANT AMPOULE

(51) International classification :A61J1/06, A61M5/24, A61M5/28, B65D1/09
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE:- PATIENT SAFETY SIMPLIFIED NON-CONTAMINANT AMPOULE ABSTRACT: The present invention relates to an ampoule in which medicine is withdrawn or sucked by piercing a needle of the syringe through a rubber seal which has been inserted inside the top mouth portion of the present ampoule up to the level of top mouth portion, or up to certain depth below the top mouth portion, by pressure or by vacuum method. In yet another arrangement of the present invention, the rubber seal is fixed on the top mouth portion of the ampoule under invention by non-toxic and non-leachable adhesive. Since medicine is withdrawn or sucked by piercing a needle of a syringe through the rubber seal without breaking the ampoule and without exposing the medicine inside to unsterile and contaminated outside atmospheric air, it ensures better safety to the patient. Additional benefit it offers is, because of the absence of the neck portion as described earlier, the size of the ampoule under invention is smaller than the size of the conventional ampoule which becomes a significant factor in cost reduction of the final product to the end user.

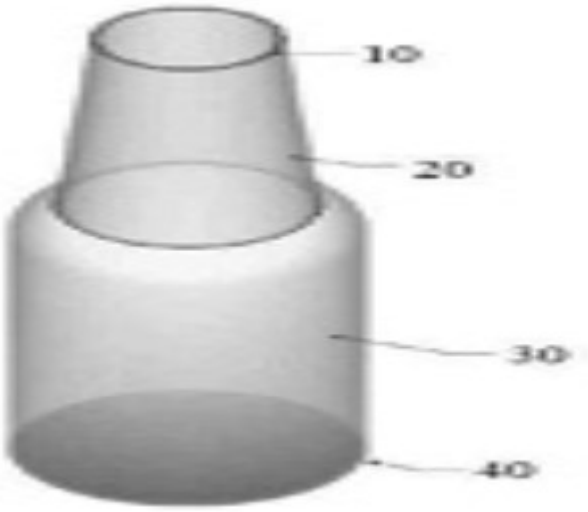

FIGURE 1

No. of Pages : 31 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2023
(21) Application No.202321023809 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MODULAR UNDER-SINK AUTOMATIC GARBAGE DISPOSAL BIN

(51) International classification :B65F1/00, B65F1/14, B65F1/16
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A MODULAR STORAGE APPARATUS The disclosure herein generally relates to storage containers and more particularly to a modular storage apparatus with self-openable lids for storing/ management of any one of trash, articles, products, or any other miscellaneous items. The modular storage apparatus (100) includes a stationary frame (102), a storage container carrier (104), telescopic assemblies (105, 106), a storage container assembly (108), a lid actuating bracket (110) and a fascia (112). The modular storage apparatus can be easily installed to workspace or under sink area or carcass/ cabinet. The modular storage apparatus is reliable and is easy to operate and is inexpensive. The modular under sink garbage storage apparatus can be retrofitted to any workspace. The modular storage apparatus provides better visibility, organization, accessibility, flexibility and proper space utilization. The modular storage apparatus has self-opening lids without the need for an external power source or active control mechanism, thereby enhancing its reliability. Fig. 1

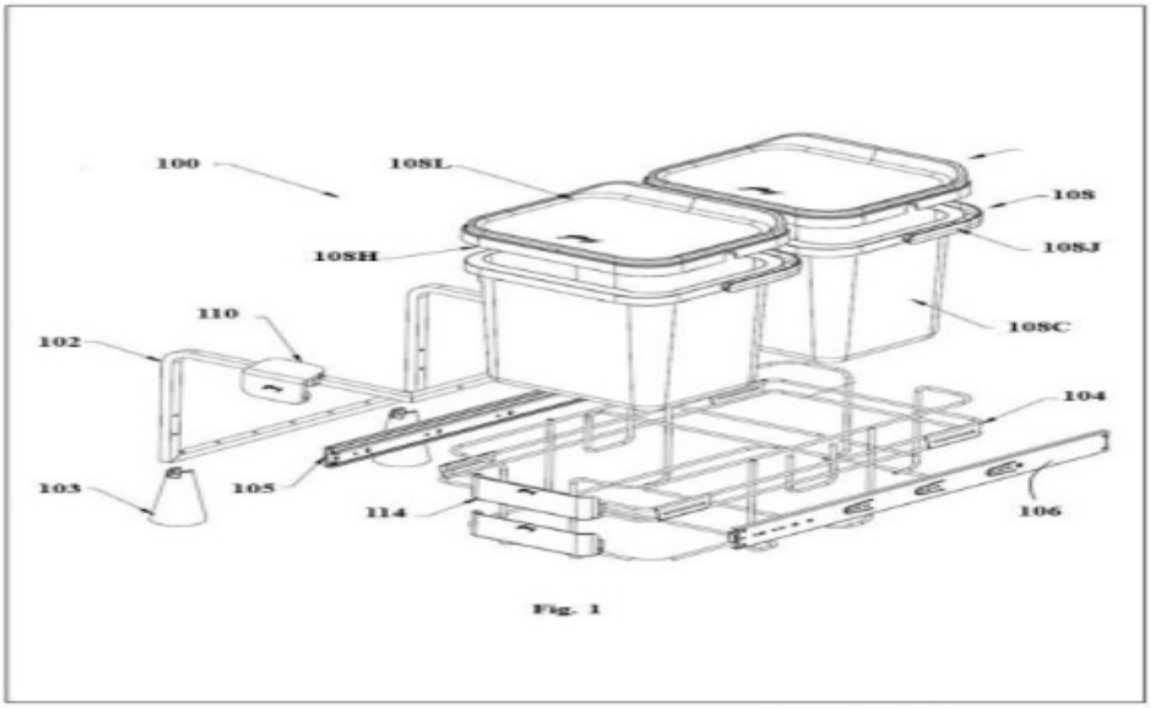

Fig. 1

No. of Pages : 49 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/03/2023

(21) Application No.202321018453 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : "PREFORMED ELASTIC TEMPOROMANDIBULAR JOINT BAND"

(51) International classification :A61F13/00, A61F5/00, A63B21/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number:NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed is a temporomandibular joint band comprising an U shaped mandibular band made from elastic stretchable cloth material; an U shaped head band made from elastic stretchable cloth material; wherein there is a bifurcation provided configured to allow space for ear lobes; and wherein the top open ends of the said U shaped mandibular and head bands can be tied against each other forming a loop; and wherein the said U shaped bands are configured to contact the temporomandibular joint, the chin and the parietal area of a subject, conforming to the contour of the subject facial region extending between the temple and jaw in order to provide compression to the temporomandibular joint and have an extension around the angle of the jaw and the temporomandibular joint. Fig. 1

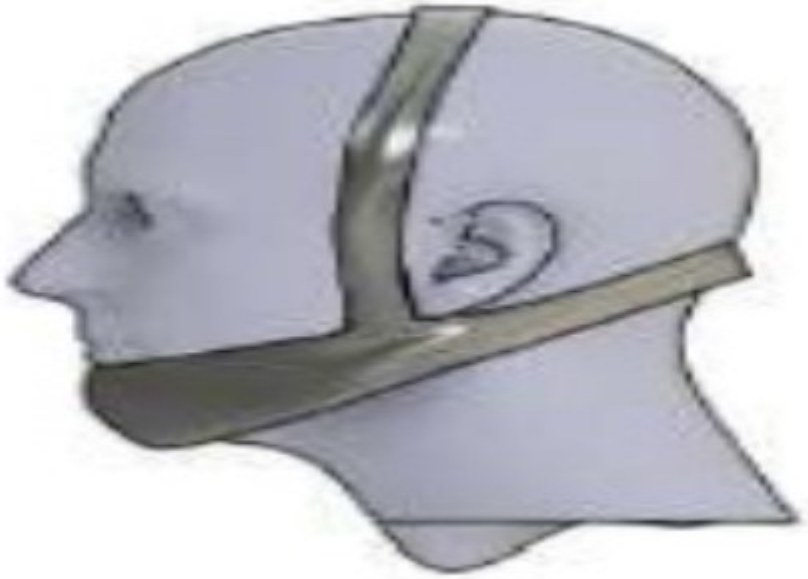

Fig. 1

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2023
(21) Application No.202321023318 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : REAR FENDER ASSEMBLY FOR MOTORCYCLE

(51) International classification :B62J15/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
REAR FENDER ASSEMBLY FOR MOTORCYCLE The present disclosure describes a rear fender assembly (100) for a two-wheel vehicle. The rear fender assembly (100) comprises: a central member (102); a pair of hugger members (104), wherein the central member (102) is mounted at one end of the hugger members (104); and a pair of wing members (106) integrated to the at least one hugger member (104), wherein the pair of wing members (106) form a saree guard. Figure 1

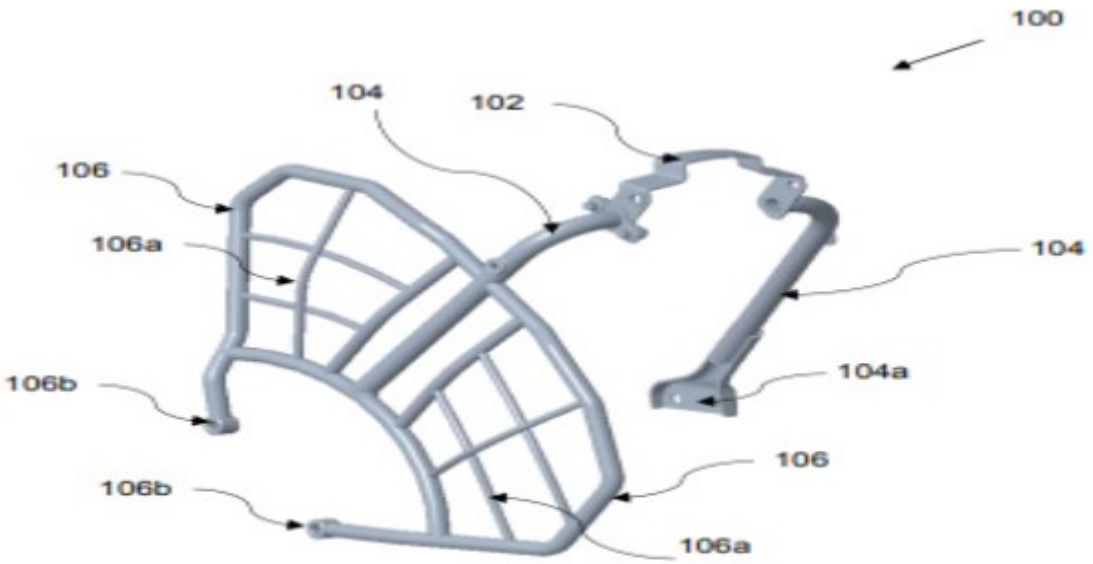

Figure 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2023
(21) Application No.202321023319 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : POWER TRAIN FOR ELECTRIC VEHICLE WITH SWAPPABLE POWER PACK

(51) International classification :B60L0/80, B60L50/50, B60L50/51, B60L53/80, H02K1/2796, H02K16/04, H02M3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
POWER TRAIN FOR ELECTRIC VEHICLE WITH SWAPPABLE POWER PACK The present disclosure describes a power train unit (100) for an electric vehicle. The power train unit (100) comprises an axial motor (102), comprising a plurality of stators and a rotor, and a plurality of swappable power packs (104), wherein each of the swappable power pack comprises an integrated bi-directional power converter (106). Each of the plurality of stator is powered independently by corresponding swappable power pack of the plurality of swappable power packs (104). Figure 1

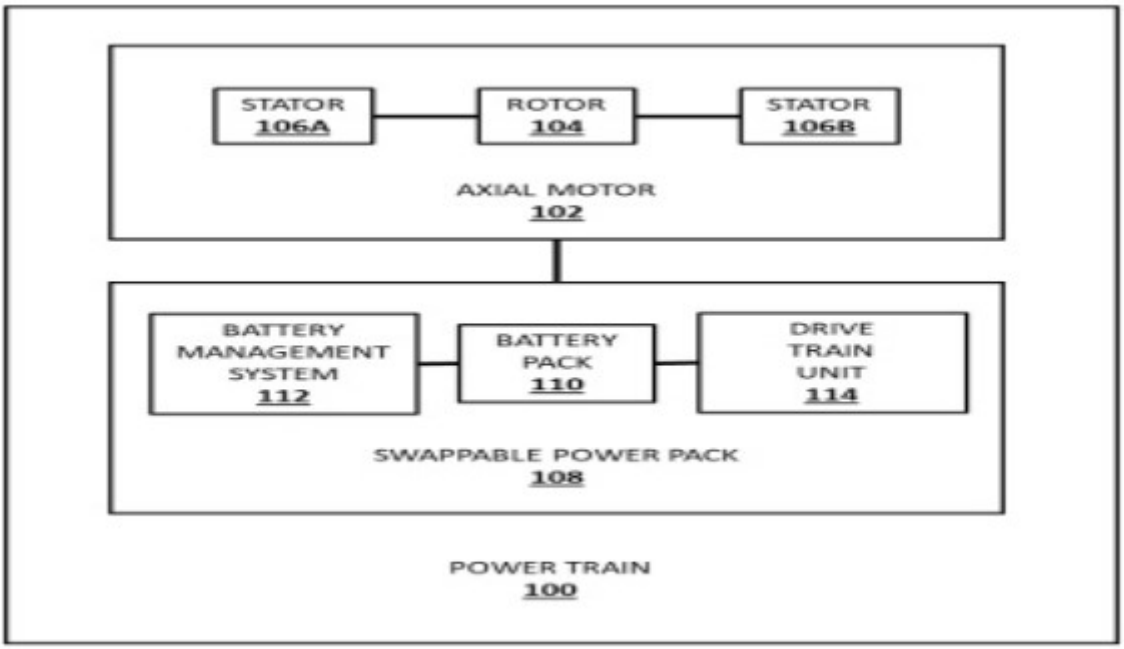

Fig. 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2023
(21) Application No.202321023320 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CHARGING PORT OPENING MECHANISM

(51) International classification :B60L53/16, B60L53/30, E05B65/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
CHARGING PORT OPENING MECHANISM The present disclosure describes a charging port assembly (100) for an electric vehicle. The charging port assembly (100) comprises a charging port (102) and at least one port covering member (104). The charging port (102) comprises a plurality of charging connectors (102a). The at least one port covering member (104) act as a charging gun securing member when a charging gun (106) is connected in the charging port (102). Figure 1

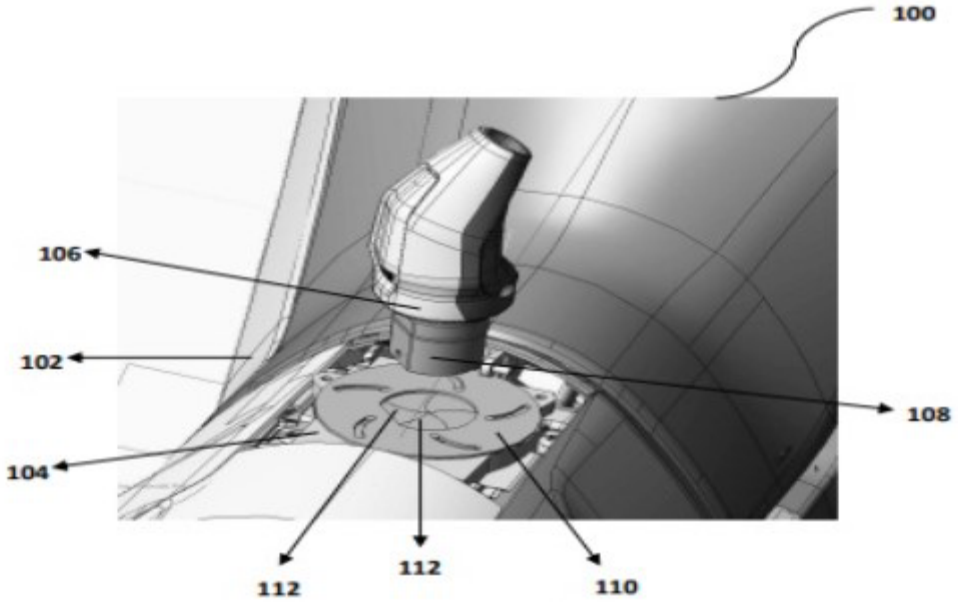

Fig. 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/03/2023
(21) Application No.202321023321 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : REAR FENDER ASSEMBLY FOR MOTORCYCLES

(51) International classification :B62J11/19, B62J15/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
REAR FENDER ASSEMBLY FOR MOTORCYCLES The present disclosure describes a rear fender assembly (100) for a two-wheel vehicle. The rear fender assembly (100) comprises an elongated fender member (102) comprising a front end (102a) and a tail end (102b); and at least one wiring harness sleeve (104) for accommodating at least one wiring harness of at least one low-voltage component, wherein the at least one wiring harness sleeve (104) is configured along an inner surface of the elongated fender member (102) between the front end (102a) and the tail end (102b). Figure 1

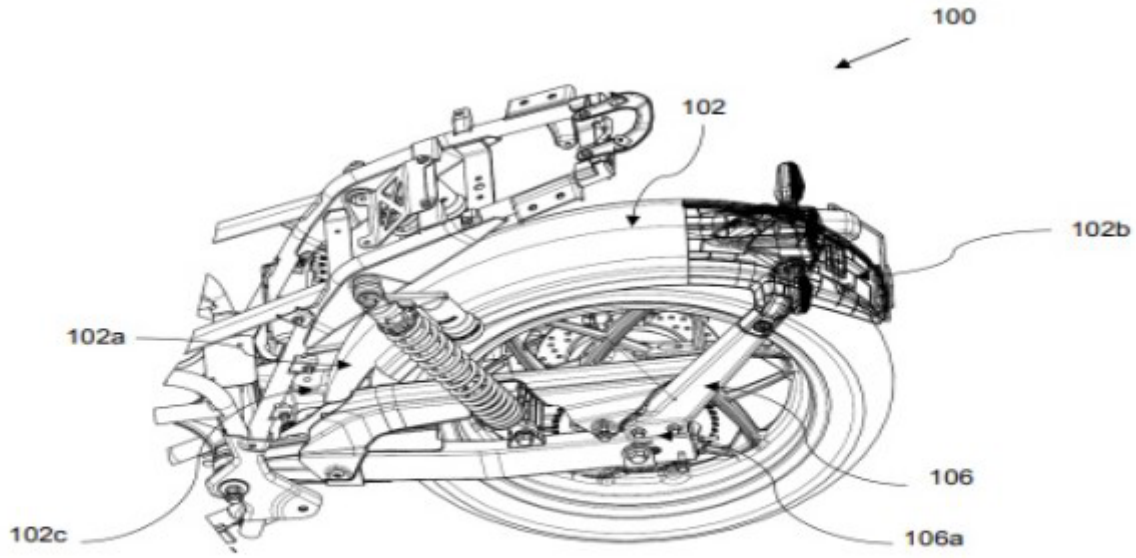

Figure 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2023
(21) Application No.202321020839 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : COMPACT POWER PACK ASSEMBLY

(51) International classification	:H01M 50/50, H01M50/20, H01M50/507
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
ABSTRACT COMPACT POWER PACK ASSEMBLY The present disclosure describes a power pack assembly (100). The power pack (100) assembly comprises: a plurality of cell arrays (102) comprising a plurality of battery cells (102a); at least one busbar (104) configured to electrically connect a plurality of terminals of the plurality of battery cells (102a); at least one cooling member (106) configured between the plurality of cell arrays (102); at least one insulation material (108) surrounding the plurality of battery cells (102a); and a housing (110) configured to accommodate the plurality of cell arrays (102), the at least one busbar (104), the at least one cooling member (106) and the at least one insulation material (108). Figure 1

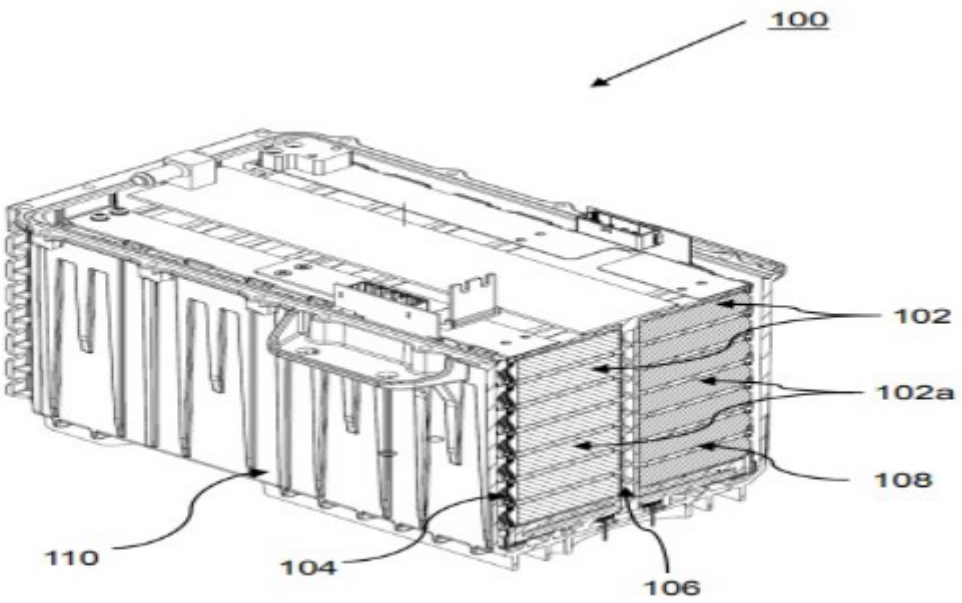

FIGURE 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024806 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR DETECTION OF A HEART FAILURE RISK

(51) International classification :G06N20/00, G06N3/08, G06T7/00, G06V10/25, G06V10/70, G16H30/20, G16H50/20, G16H50/30
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SYSTEM AND METHOD FOR DETECTION OF A HEART FAILURE RISK A system and a method for detection of a heart failure risk is disclosed. The system may comprise a processor and a memory. The system (101) may receive one or more target chest X-ray image of a user. The system (101) may analyze one or more target chest X-ray image to identify and enhance one or more visual parameters of one or more RoI's. The system (101) may perform an anatomical segmentation on the one or more ROI's to detect one or more medical abnormalities from a set of medical abnormalities using the trained artificial intelligence model. The system (101) may calculate a confidence score of the heart failure risk in real time using a set of parameters corresponding to the detected one or more medical abnormalities from the set of medical abnormalities and further detect the heart failure risk for the user based on the confidence score.

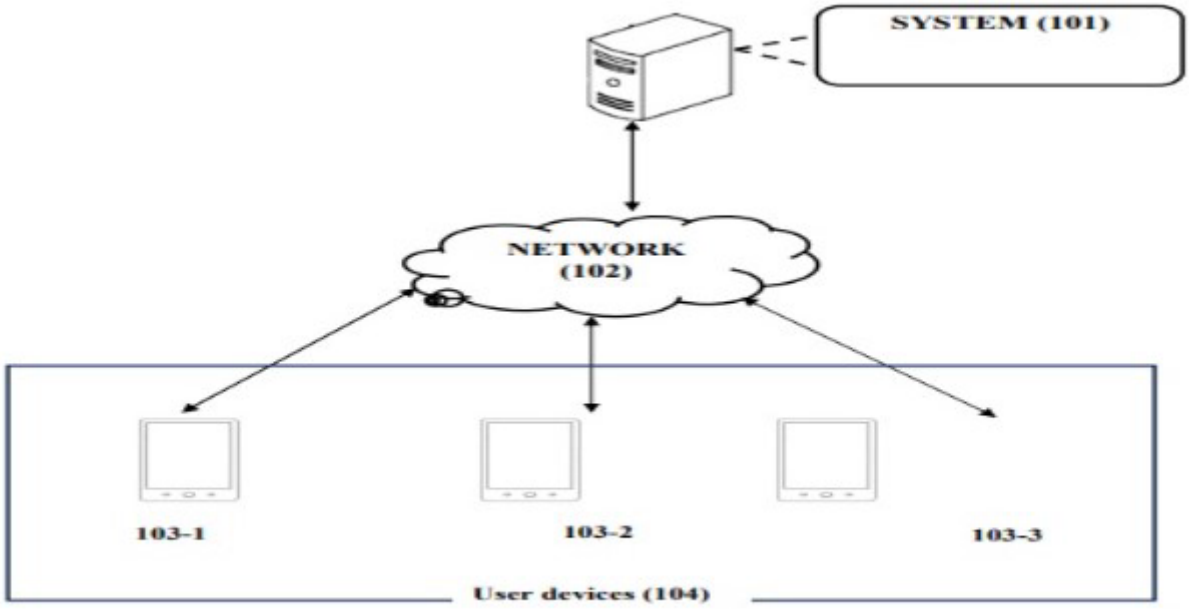

FIGURE 1

No. of Pages : 37 No. of Claims : 22

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023

(21) Application No.202321024835 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT BASED SYSTEM FOR LEAF DISEASE DETECTION AND PLANT HEALTH MONITORING

(51) International classification :G06N20/00, G06N3/0464, G06N3/096, G06Q50/02, G06T7/00, G06V20/52, G06V20/68, G06V20/70
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention related to an IoT based system for leaf disease detection and plant health monitoring. Farming is a vital industry that not only provides food but also raw materials for numerous industries while contributing significantly to the economy. Plant diseases and infestations can severely impact crop production, leading to economic losses for farmers and food shortages for consumers. Early detection of these diseases and infestations is crucial to preventing their spread and protecting the quality of the produce. In this context, machine learning and deep learning approaches have shown promising results in detecting plant diseases. This comprehensive study provides a detailed analysis of prior research. It compares the state-of-the-art deep learning models' performance on the plant leaf image dataset. This study also explores various data preprocessing and augmentation techniques with the goal of improving data quality and enabling optimal training of the models.

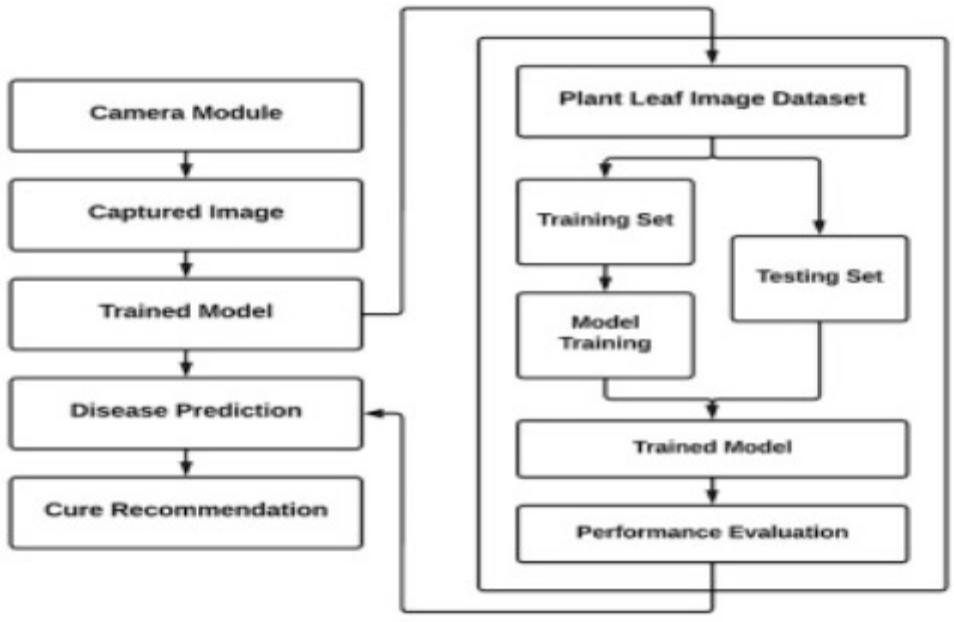

Figure 2

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024836 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A CLUTCH PLATE

(51) International classification :F16D13/64, F16D13/71
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a clutch plate. A clutch plate design utilizing e-glass and Kevlar materials, targeted at revolutionizing automotive transmission systems. The clutch plate assembly, rivets (101) securing the clutch facing (102), pivotal for generating friction during clutch operation, along with a cushioning spring (103) and a torsional spring (104) likely contributing to vibration dampening and ensuring smooth clutch engagement. The primary objective involves a comprehensive comparative analysis using ANSYS software to assess fatigue properties of e-glass and Kevlar, encompassing life expectancy, damage evaluation, and safety factor determination. The innovation aims to enhance clutch performance by mitigating wear and tear, enabling higher torque capabilities, and prolonging operational life compared to conventional materials. Ultimately, this pursuit aims to identify the superior material for constructing clutch plates, promising heightened durability and extended lifespan, thus potentially transforming automotive transmission efficiency and longevity.

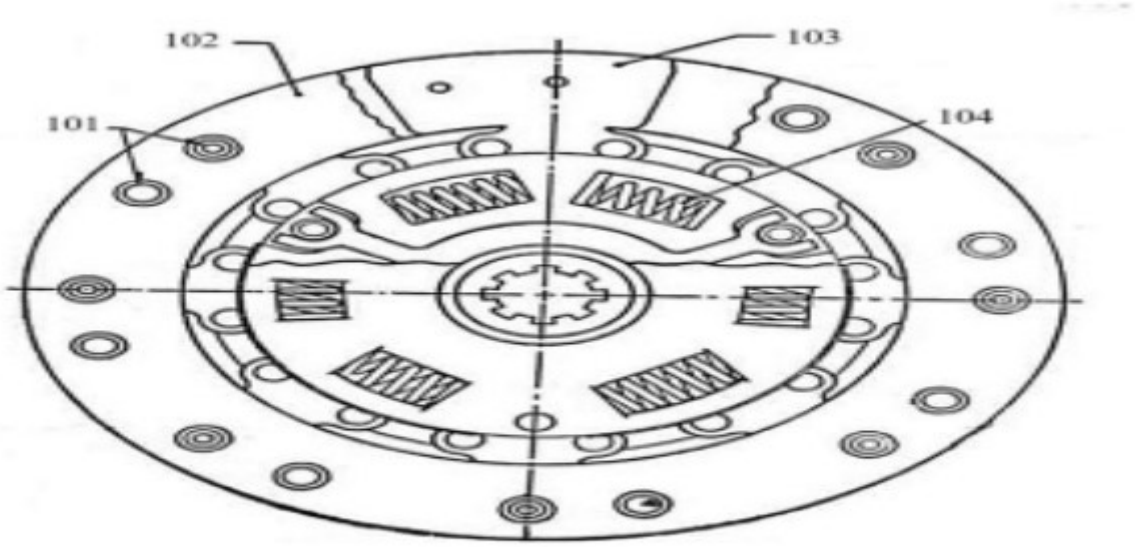

Figure 1

No. of Pages : 10 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023

(21) Application No.202321024838 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ONLINE MAINTENANCE SYSTEM

(51) International classification :G06Q0030020000, G06Q0050100000, A63F0013980000, A63F0013213000, A63F0013211000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an online maintenance system. According to the invention, the global pandemic and its associated quarantine have provided an opportunity for dedicated ones and computer gamers to spend more time with new games in store, boosting the number of users and pushing more revenue into the gaming industry. Nowadays, it is very difficult for the gamers to fix the problem in the video games so this will be the best solution for all the gamers and the gaming industry, which will be providing video game maintainer services to the people. These services are mostly provided at the residence, office, etc. Customer can also choose the venue as per the choice where they want the particular service. All the requirements are processed according to the personal choices.

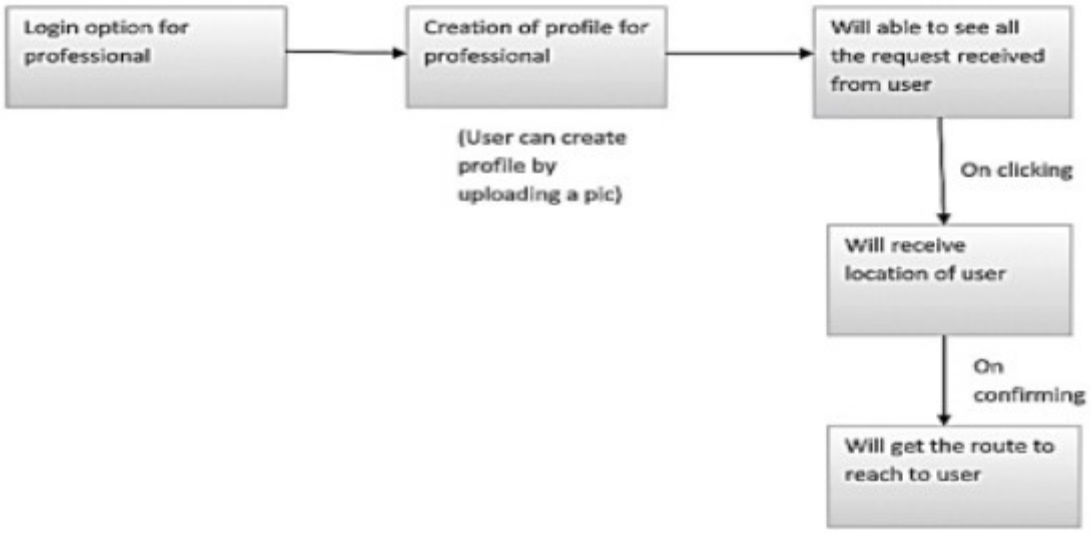

Figure 2

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024839 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A VEHICLE SPEED DETECTION SYSTEM BASED ON VIDEO PROCESSING

(51) International classification :G08G0001052000, H04N0007180000, G06T0007246000, G08G0001054000, G06T0007254000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a vehicle speed detection system based on video processing. According to the invention, detecting the over speed for vehicles on the highway road by mainly presenting an algorithm for estimating vehicle speed based on target detection in video surveillance. an input video (101), undergoes frame conversion (102), and proceeds to vehicle detection (103). Initial (104), final (105), and Zth images (106) are processed, involving background subtraction (107) and vehicle segmentation (108). Centroid computation (109) precedes speed detection and calculation (110). This invention describes how to find a vehicle, track its speed using video processing, and mathematical technology for detecting, tracking, and calculating vehicle speed. approach towards this problem is mainly done through a video input to make the system work to analyze the vehicle traveling speed using computer visioning to exploit and manipulate data from videos to extract and estimate useful data.

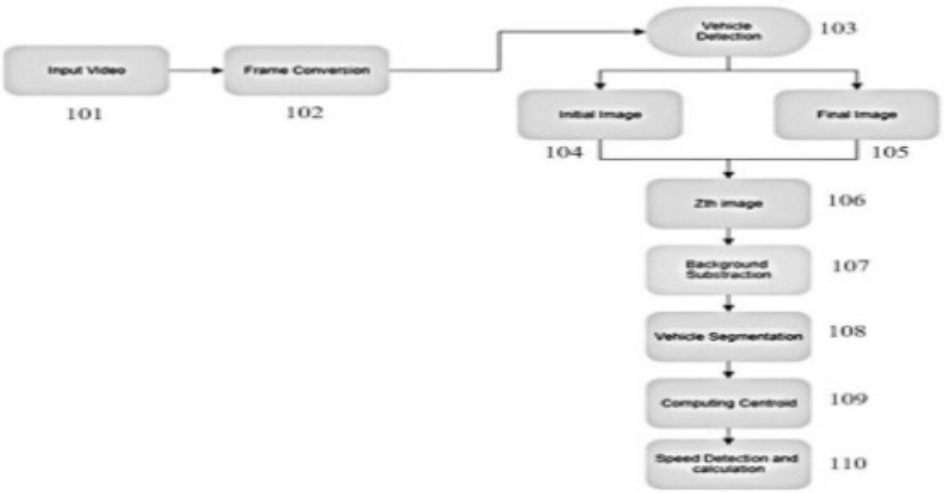

Figure 1

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024840 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A CONTRACT BASED LAND REGISTRATION SYSTEM

(51) International classification :H04L0009320000, H04L0009060000, H04L0009080000, G06Q0020380000, G06Q0020400000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a contract based land registration system designed to revolutionize the land and property registration process. Leveraging a decentralized public block chain, particularly an Ethereum-based network, and integrating sophisticated smart contract technology, this system ensures transparent, secure, and immutable transactions. A web-based user interface facilitates seamless interaction, allowing users to register, buy, and sell land and property with unparalleled efficiency. The system eliminates intermediaries by directly connecting buyers and sellers, enhancing transparency and security. Through various transactions, including user registration, property verification, buying requests, and final transaction verification, the system streamlines the entire land registration process. Additionally, the system's adaptability allows for modifications while maintaining the core innovation, promising continual advancements in land registration technology.

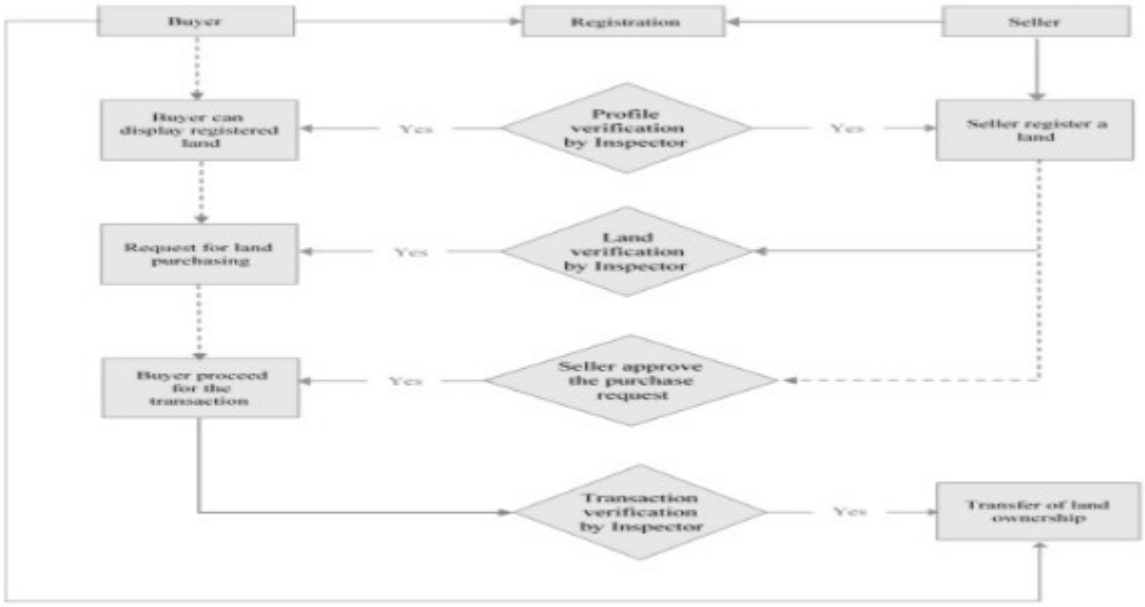

Figure 1

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024841 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A TILT MECHANISM FOR UNPLASTICIZED POLYVINYL CHLORIDE WINDOW LOUVER

(51) International classification :E06B7/08, E06B7/086
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a tilt mechanism for unplasticized polyvinyl chloride window louver. The mechanism comprises a specialized frame tailored to accommodate UPVC louvers, interconnected with blades constructed from UPVC material. These blades, pivotally attached to the frame through integrated blade pivots, enable precise control over light and airflow. Facilitating effortless and synchronized movement, a tilt rod mechanism intricately linked to the blade pivots allows for efficient adjustment of multiple louvers. The design's meticulous engineering not only ensures smooth operation but also enhances durability and weather resistance, requiring minimal maintenance. This innovative mechanism aims to elevate the operational efficiency of UPVC window systems, optimizing ventilation, natural light, and user convenience while harnessing the inherent benefits of UPVC materials.

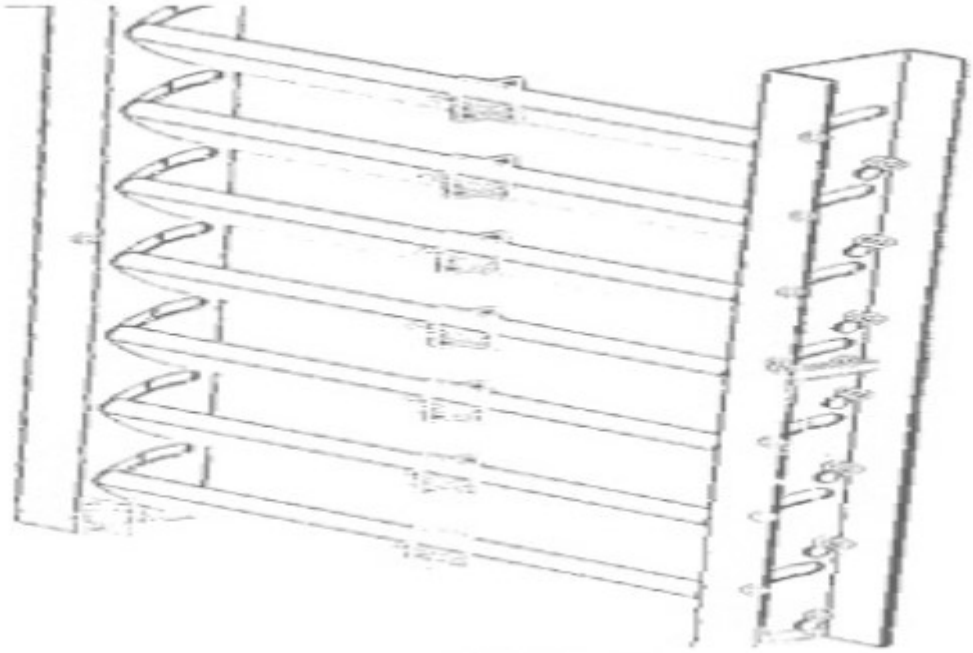

Figure 1

No. of Pages : 10 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023

(21) Application No.202321024842 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ARTIFICIAL INTELLIGENCE POWERED GYMNASIUM SYSTEM

(51) International classification	:G16H0020300000, A61B0005000000, A63B0071060000, A63B0021062000, G09B0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to an artificial intelligence powered gymnasium system designed to revolutionize fitness and wellness guidance. This comprehensive system integrates subsets of artificial intelligence, including computer vision, natural language processing, machine learning, and deep learning. Utilizing interconnected sensors such as cameras, heart rate monitors, and wearable fitness devices, the system collects real-time user data. An IOT processing unit, communicating seamlessly with these sensors, enables immediate data analysis, personalized coaching, and activity recognition. Coupled with a mobile application operating in synergy with the IOT unit and a central server, this system offers users tailored workout plans, progress tracking, and social interaction tools. The central server, housing a robust database and machine learning models, facilitates personalized recommendations and insights.

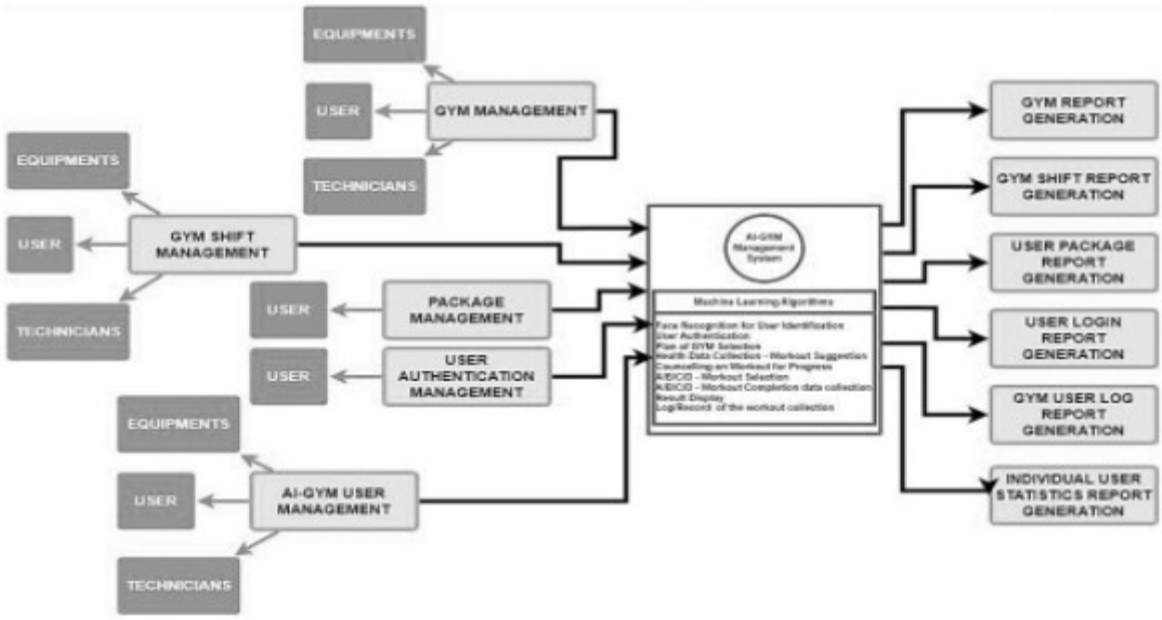

Figure 1

No. of Pages : 14 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024843 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT BASED AUTOMATED HYDROPONIC FARMING SYSTEM

(51) International classification :A01G0031020000, A01G0031060000, A01G0031000000, G01N0027060000, G06F0009500000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an IOT based automated hydroponic farming system. According to the invention, hydroponic farming is one of the solution to the problems of land. In hydroponic farming there is very less requirement of the soil. Almost 90% of the requirement of the soil get reduced if we go for hydroponic farming. Maintaining the hydroponic system is also not an easy task as it required many parameters to monitored and keep as per the required ratios. Many parameters need to be monitored like temperature, acidity or basicity (pH), the value of total dissolved solids (TDS), electrical conductivity (EC) and water level. In this research we propose a system to measure temperature, pH, TDS, EC and water level of the hydroponic system using various sensors.

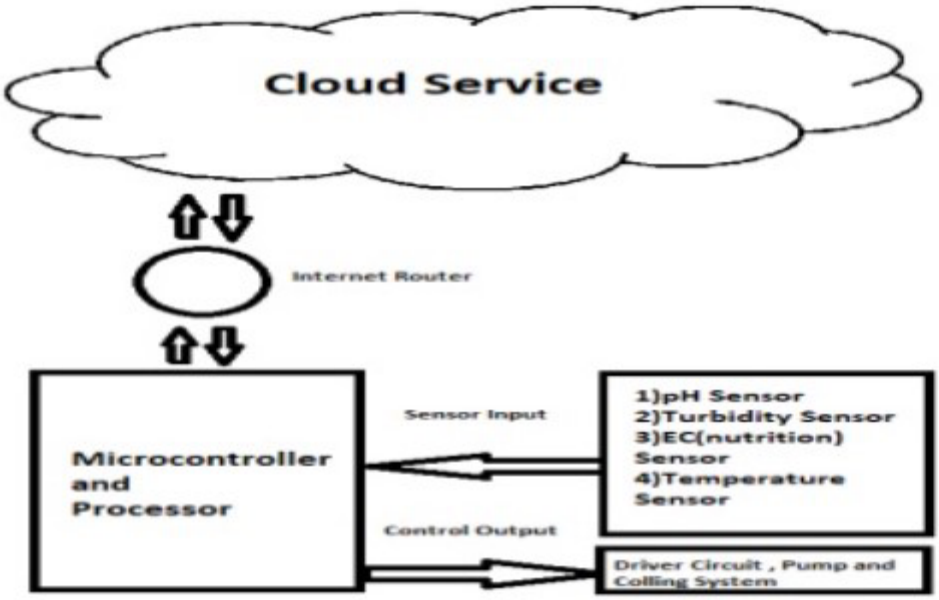

Figure 1

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023
(21) Application No.202321024844 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ARTIFICIAL INTELLIGENCE BASED ATTENDANCE MANAGEMENT SYSTEM

(51) International classification :G06N3/0464, G06Q10/1091, G06Q50/20, G06V40/16, G07C1/10, G16Y40/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention is related to an artificial intelligence based attendance management system. According to the invention, the conventional work environment is modified with the digital work environment with this proposed G-AAIAMS. Not only with digitalization, but the work environment also becomes monitored and controlled with the artificial intelligence agent. Thinking like a human and acting like a human is the Artificial Intelligence Agent concept. The work environment's production also improved with conceptualization. This proposed system will make the audit as easy as possible. The reliability and accountability of the employees' work hours and the students' learning hours are also made efficient, and the expected work done can be ensured. The complete solution to the efficient management of the organization without artificial errors is possible with the certainty of principles bound with the organization's goals and aims.

No. of Pages : 17 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/03/2023

(21) Application No.202321024845 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM BASED ON UNMANNED AERIAL VEHICLES FOR POST DISASTER STRUCTURAL DAMAGE ASSESSMENT

(51) International classification	:B64C0039020000, G01N0021880000, G06Q0040080000, G01N0029040000, G01N0029440000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related to a system based on unmanned aerial vehicles for post disaster structural damage assessment. According to the invention, the urban structural damage is crucial in the management of disasters like earthquakes or any structural damages, such as complete collapse, collapsed roofs, rubble piles, and sloping facets. In order to gather data for this assignment, we installed a high-resolution camera on an unmanned aerial vehicle (UAV). We then utilized Deep Convolutional Generative Adversarial Network (DCGAN) to detect and quantify any structural alterations or damage. In comparison to conventional visual inspection methods, UAVs and Deep Convolutional Generative Adversarial Network (DCGAN) is combined to identify and classify structural damage with greater accuracy and efficiency. This method can also be used to track structural changes over time and determine which maintenance and repair tasks should be prioritized.

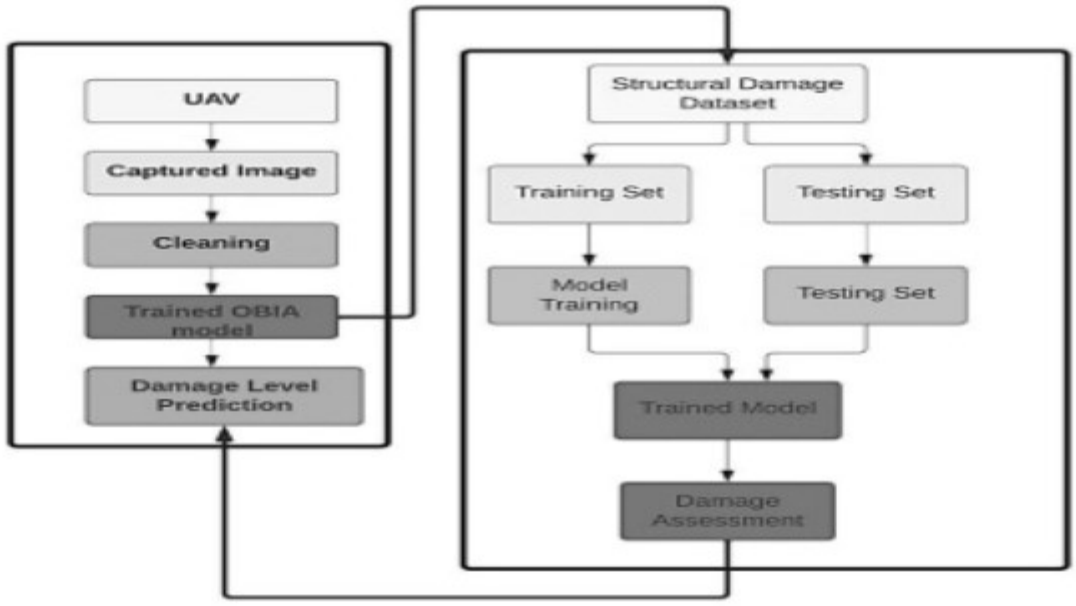

Figure 1

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2023
(21) Application No.202321023810 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEMS FOR PRE-CLEANING CLOTHES IN A WASHING MACHINE

(51) International classification :D06F29/00, D06F39/00, D06F39/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The disclosure herein generally relate to washing machines and more particularly to systems for pre-cleaning clothes prior to washing the clothes in the washing machine. The systems (100, 200) reduce the time consumed for applying the detergent on the stains and cleaning the stains from the clothes. The system (100, 200) mainly includes a tank (102, 202), a pump (104, 204), a stain treating agent applicator (106, 206) and a stain rubbing member (108, 208). The system reduces fatigue to user while cleaning the multiple stains from the multiple clothes. The system reduces the washing cycles of the washing machine thereby reducing the power consumption of the washing machine by pre-cleaning the stains from clothes prior to washing the clothes in the washing machine. The system reduces manual labor, soak time and wash time required for cleaning the clothes.

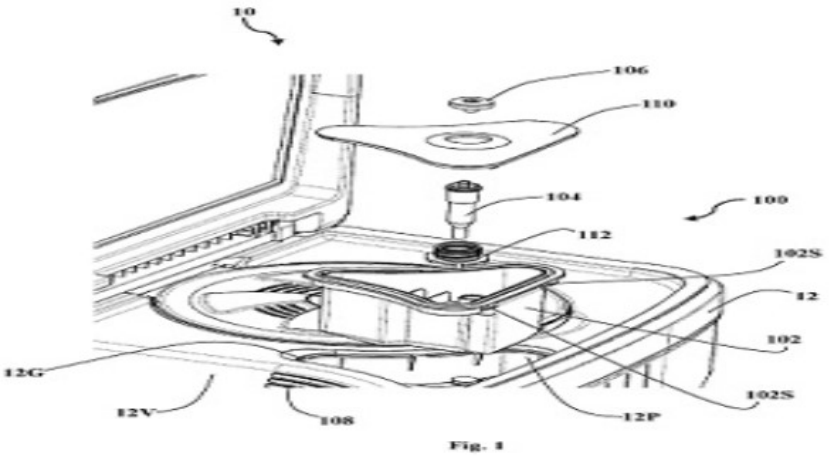

Fig. 1

No. of Pages : 33 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2023
(21) Application No.202321023811 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR FILTERING MICROFIBERS IN A WASHING MACHINE

(51) International classification :D06F39/08, D06F39/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A SYSTEM AND A METHOD FOR FILTERING MICROFIBERS IN A WASHING MACHINE The disclosure relates to a system (100) and a method (300) for filtering microfibers in a front load washing machine (10). The system (100) includes at least one water delivering member (102) connected with a rear part (12R) of a drum (12) of the washing machine (10), a central chamber (120) coupled with the water delivering member, and a filter assembly (200) connected with the central chamber. The water delivering member supplies water from the drum to the central chamber, the central chamber directs the water to the filter assembly, and the filter assembly filters the microfiber, wherein filtered water is recirculated into the drum. The system and method prevent mixing of microfibers with drained water, provide ease in maintenance, and prevent wastage of water by recirculating filtered water. Fig. 3

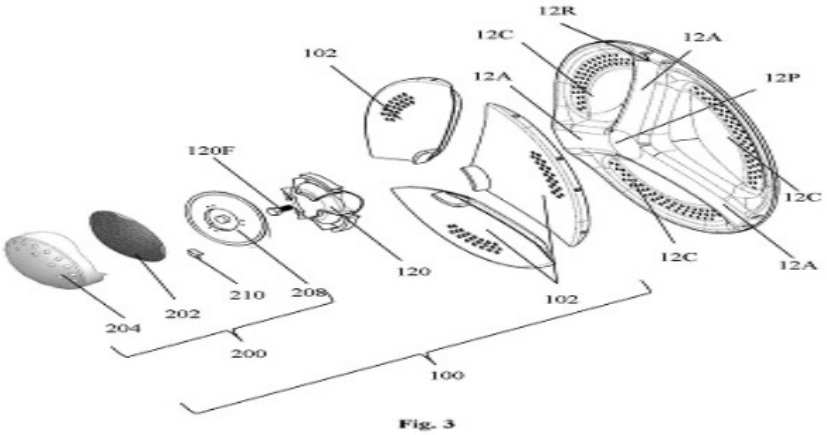

Fig. 3

No. of Pages : 42 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/07/2023
(21) Application No.202321050706 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LIQUID FORMULATION OF SALT, ALKALI AND THERMO-TOLERANT PLANT GROWTH PROMOTING BACTERIA FOR CROPS

(51) International classification :C12N0001200000, A01N0063000000, A01N0063220000, C12R0001010000, C05F0011080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to plant growth-promoting bacteria such as Streptomyces sp. KhEc 44, Bacillus paralicheniformis KhEc 68, and Priestia filamentosa KhEc 69 isolated from the rhizosphere field of plant Euphorbia caducifolia L. The isolated actinobacteria could produce heat-resistant spores and withstand desiccation. The isolated salt and alkali-tolerant actinobacteria/bacteria displayed plant growth-promoting activities such as ammonia production, IAA production, siderophore production, and phosphate solubilization. The isolated strains produced amylase in the presence of salt stress. The consortium of these strains was prepared and a process for stimulating plant growth by a consortium of rhizobacterial cultures is disclosed. As well as preparation of the liquid formulation of the consortium is disclosed. The formulation of the consortium increased the growth parameters of mung bean crops under abiotic stress conditions.

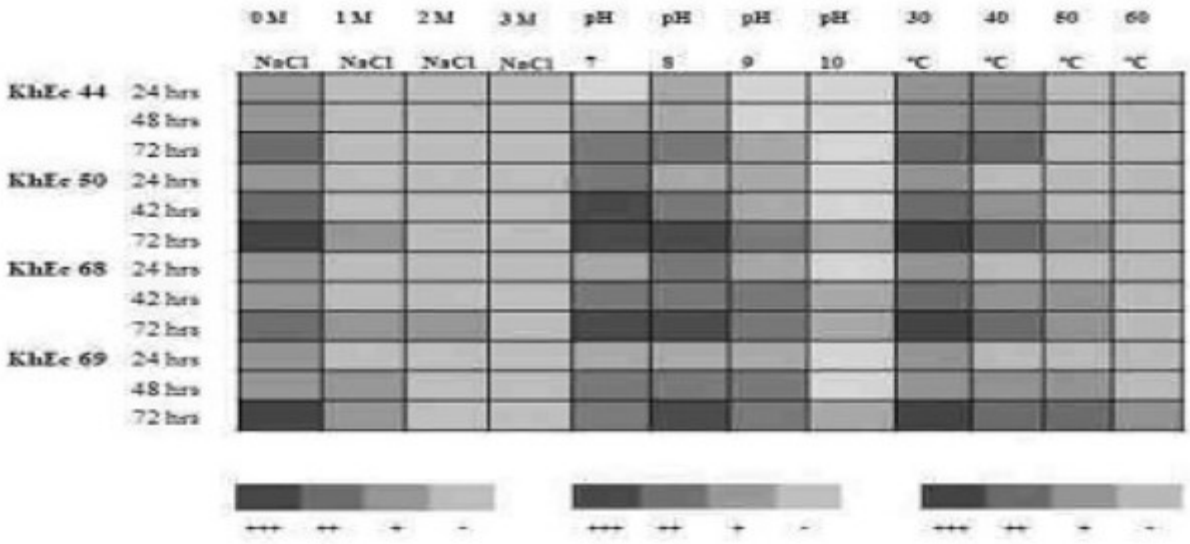

Figure: 2 Heat map plots of physiological characterization including salinity (0-3 M NaCl), pH (7-10), and temperature (30-60 °C) of strains KhEc 44, KhEc 50, KhEc 68, and KhEc 69.

No. of Pages : 48 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/07/2023

(21) Application No.202321050743 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MODULAR FRAME FOR E-BIKE AND BICYCLE

(51) International classification :B62K19/18, B62K19/22
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT MODULAR FRAME FOR E-BIKE AND BICYCLE 5 The present invention introduces a modular frame for e-bikes and bicycle, offering a versatile and customizable solution for cyclists. The frame comprises plurality of members, including a head tube, top tube module, down tube module, seat tube module, seat stay modules (right and left), chain stay modules (right and left), seat stay connector, and chain stay connector. Each frame member is joined solely by fastening using basic hand tools, promoting 10 ease of assembly and disassembly by end-users. Comprising Aluminum alloy components manufactured using casting, forging, and extrusion techniques, each frame member ensures robustness and durability. Permanently joined components of a frame member, whether through adhesive bonding or welding processes, ensure structural integrity and safety. Pre assembly options enhance versatility, allowing for the creation of new frame variants by 15 replacing specific frame members in an existing frame. Additionally, the modular frame's design enhances serviceability, providing a cost-effective solution for replacing damaged parts and minimizing the need for complete frame replacements. The modular frame design facilitates cost-effective manufacturing processes, reduces carbon footprint over the complete lifecycle of e-Bike and bicycle, and promotes environmental sustainability. 20 [Refer Fig.1]

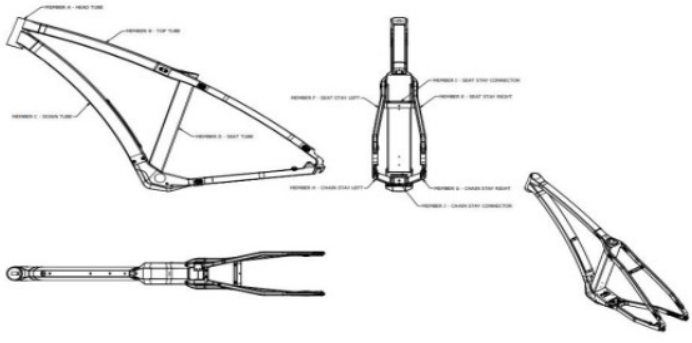

Fig.1

No. of Pages : 48 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/02/2023
(21) Application No.202321012247 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CONTINUOUS VARIABLE TRANSMISSION FOR ELECTRIC VEHICLES

(51) International classification	:F16H 15/38, F16H 57/04, F16H 61/664
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT CONTINUOUS VARIABLE TRANSMISSION FOR ELECTRIC VEHICLES Disclosed is a continuous variable transmission (CVT) system (100) for an electric vehicle, comprising a first cone (102) rotatably disposed on a first rotary shaft (104), wherein the first cone (102) receives rotational motion; a second cone (106) rotatably disposed on a second rotary shaft (108), wherein the second cone (106) receives rotational motion from the first cone (102); and a drive mechanism (110) configured to simultaneously engage the first cone (102) and the second cone (106). The cone angle associated with at least one of the first cone (102) and the second cone (106) is changed with respect to the drive mechanism (110) to modify the rotational motion transmitted to the second cone (106) from the first cone (102) via the drive mechanism (110).

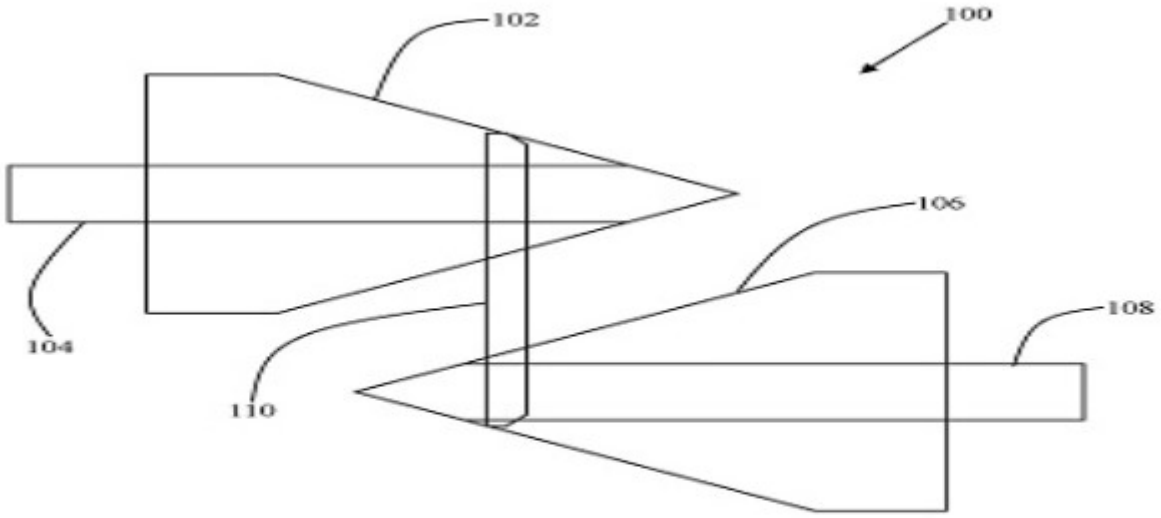

FIG. 1

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/05/2023

(21) Application No.202321033583 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR IDENTIFICATION OF BIOMARKERS FROM UV-B TOLERANT PLANTS AND DEVELOPMENT OF A METABOLITE FORMULATION

(51) International classification :C12N0015820000, G01N0030020000, G16B0005000000, A61Q0017040000, A01N0037400000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is a method to develop a suitable formulation (F1) from identified potential metabolites that can be termed as biomarkers isolated from specific UV-B tolerant plant varieties and to provide the invention as a suitable UV-resistant technology to varies companies and pharma industries. The formulation can be a precise plant supplement formulation that can act as bio-stimulant and help to relieve high light stress and perform better against UV-B stress. The isolation of potential biomarkers involves screening of metabolites from susceptible and tolerant plant genotypes using metabolomics approach. Comprehensive metabolomics of heat map analysis and GC-MS spectra used to show the effectiveness of the formulation (F1) in modulating secondary metabolites and relative accumulation of Gamma-amino butyric acid (GABA) under UV-B radiations. The formulations acts as the precursor in central metabolic network and play a crucial role in the glutathione metabolism of plants.

No. of Pages : 29 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/08/2023

(21) Application No.202321052404 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR PREPARATION OF FROZEN PRODUCT WITH INCREASED SHELF LIFE AND A COMBINATION THEREOF

(51) International classification :A23G9/04, A23G9/32, A23G9/40, A23L27/30, A23L27/40, A23L33/19
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A METHOD FOR PREPARATION OF FROZEN PRODUCT WITH INCREASED SHELF LIFE AND A COMBINATION THEREOF A method (100) of preparation of a frozen product with increased shelf life comprising steps of preparing (102) a premix of a frozen product by mixing cream and whole milk with a sweetener, enhancing (104) flavour of the premix by adding salt, pasteurizing (106) the premix at a predetermined temperature to obtain a mixture, adding (108) nanoparticles as a preservative to the mixture, and stabilizing (110) the mixture for a predetermined time to obtain the frozen product. A frozen product composition with increased shelf life comprising milk and cream, salt, and lignin nanoparticles as preservative.

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/08/2023

(21) Application No.202321057500 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : "A GRADIENT REVERSE PHASE HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC METHOD FOR IN-PROCESS FORMULATION OF PHENYL PORPHYRINS OR SUBSTITUTED PHENYL PORPHYRINSITS METALLO-PHENYL PORHURINS AND SUBSTITUTED METALLO-PHENYL PORPHYRINS.

(51) International classification	:G01N30/02, G01N30/04, G01N30/16, G01N30/22, G01N30/28, G01N30/36
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT "A Gradient reverse phase high Performance liquid chromatographic method for in-process formation of phenyl porphyrins or substituted phenyl porphyrins and their metallo-phenyl porphyrins and substituted metallo-phenyl porphyrins"

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/05/2023

(21) Application No.202321036855 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PREDICTION MODEL FOR EARLY ONSET OF PREECLAMPSIA

(51) International classification :C12Q 1/68, G01N 33/48, G01N 33/68, G16H 50/20, G16H 50/30
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a prediction model for the early onset of preeclampsia and the diagnostic cut-off value of sEng/PlGF ratio as a biomarker for the early onset of preeclampsia. The present invention discloses the levels of sEng, PlGF and sEng/PlGF ratio during early pregnancy in women who developed preeclampsia and women without preeclampsia. The predictive model developed for risk for early onset of preeclampsia wherein, the ROC curve analysis, shows the addition of maternal sEng/PlGF ratio to known diagnostic measures like MAP and BMI significantly improved the AUC (0.884), sensitivity (86.7%) and specificity (84.9%) for the prediction of early onset of preeclampsia. The present invention suggests that an imbalance in the levels of angiogenic factors exists before the clinical diagnosis of preeclampsia and examining these angiogenic factors at the correct window of gestation may provide a useful tool for the identification of women at risk of developing preeclampsia.

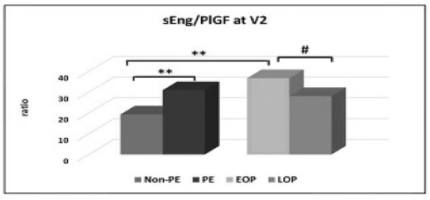

Fig 1

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/06/2023

(21) Application No.202321039592 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WHEEL ASSEMBLY FOR A FOLDABLE LEG

(51) International classification	:B60B33/00, B60B33/04
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
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(72)**Name of Inventor :**
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Address of Applicant :Symphony house, FP-12, TP-50, Off S. G. Highway, Bodakdev, Ahmedabad, Gujarat, 380059, India Ahmedabad ---------- ----------

(57) Abstract :
Disclosed is a wheel assembly (100). The wheel assembly (100) includes a wheel (106) having a plurality of protrusions (116a-116n). The plurality of protrusions (116a-116n) extends along an axial direction (X-X') of the core portion (110) such that each protrusion of the plurality of protrusions (116a-116n) is adapted to impart strength to the core portion (110).

No. of Pages : 21 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/10/2023

(21) Application No.202321071293 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ENCAPSULATED ENZYME IN SURFACTANT SYSTEM FOR HOME CARE APPLICATIONS

(51) International classification :H04N0021435000, C11D0001830000, C11D0017000000, C11D0003386000, A01N0025300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)GHADIGAONKAR, Sneha
Address of Applicant :C-49/2, TTC Industrial Area, Pawne, Navi Mumbai 400 703, Maharashtra, India Navi Mumbai ---------- ----------

(57) Abstract :
Provided herein are enzyme granules where the enzyme is encapsulated within a surfactant system. The enzyme granules contain 80-90% of active and functional ingredients and less than 15% fillers. The enzyme granules are easy to prepare, safe to handle and have a long shelf life. These granules can be used in detergent compositions which have various home care applications.

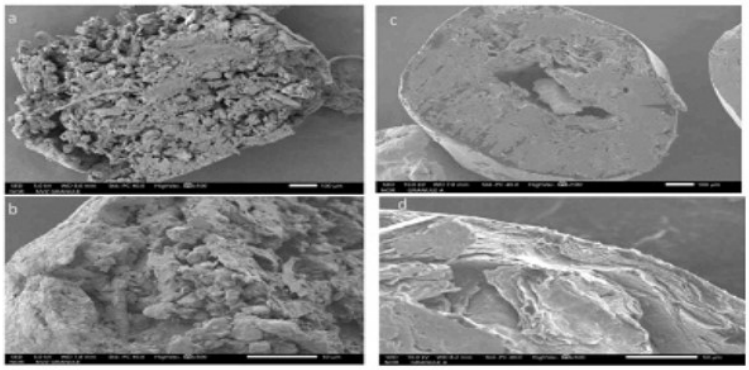

Figure 1

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/10/2023
(21) Application No.202321072724 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN OBSTACLE AVOIDER AND LINE FOLLOWER ROBOT

(51) International classification :G05D0001020000, B25J0009160000, G06F0003010000, B25J0019020000, G01S0015931000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an obstacle avoider and line follower robot. This robot is equipped with a combination of infrared (IR) sensors for precise line tracking and ultrasonic sensors for obstacle detection. The system is controlled by an Arduino-based platform, ensuring fully autonomous operation. The robot's chassis houses the essential components, including DC motors, motor driver modules, power sources (typically batteries), and the sensors. It excels in following predefined paths, detecting obstacles in real-time, and making necessary adjustments to its movement. The ultrasonic sensors allow the robot to pause or change direction when obstructions are encountered, ensuring safety and efficiency in dynamic environments. With low power consumption and cost-effective automation, this invention offers a promising solution to reduce human effort and increase productivity in diverse fields. It has the potential to revolutionize industrial processes and provide a practical tool for healthcare management, ultimately streamlining operations and reducing overall costs.

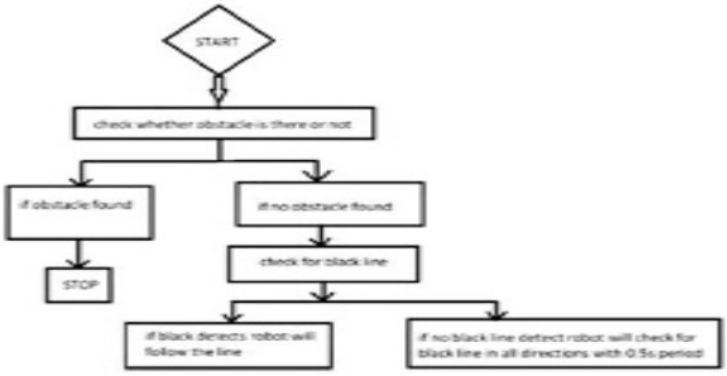

Figure 1

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/03/2023

(21) Application No.202321023712 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : DEVELOPING READY-TO-USE, PLANT-BASED FOOD FORMULATIONS WITH HIGH IRON BIOAVAILABILITY

(51) International classification :A21D13/066, A23L11/00, A23L25/00, A23L27/10, A23L27/30, A23L33/105, A23L33/14, A23L7/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention provides a plant based iron rich formulation which comprises of oil seeds, lentils, millets, green leafy vegetables and other vegetables. The formulation is naturally rich in iron coupled with better iron bio-availability which increases its chances of absorption after consumption. The formulation is easy to consume, ready to eat product with food synergies envisaged for enhancing micronutrient bioavailability. It additionally is gluten free, high in protein, fiber content and has good antioxidant capacity.

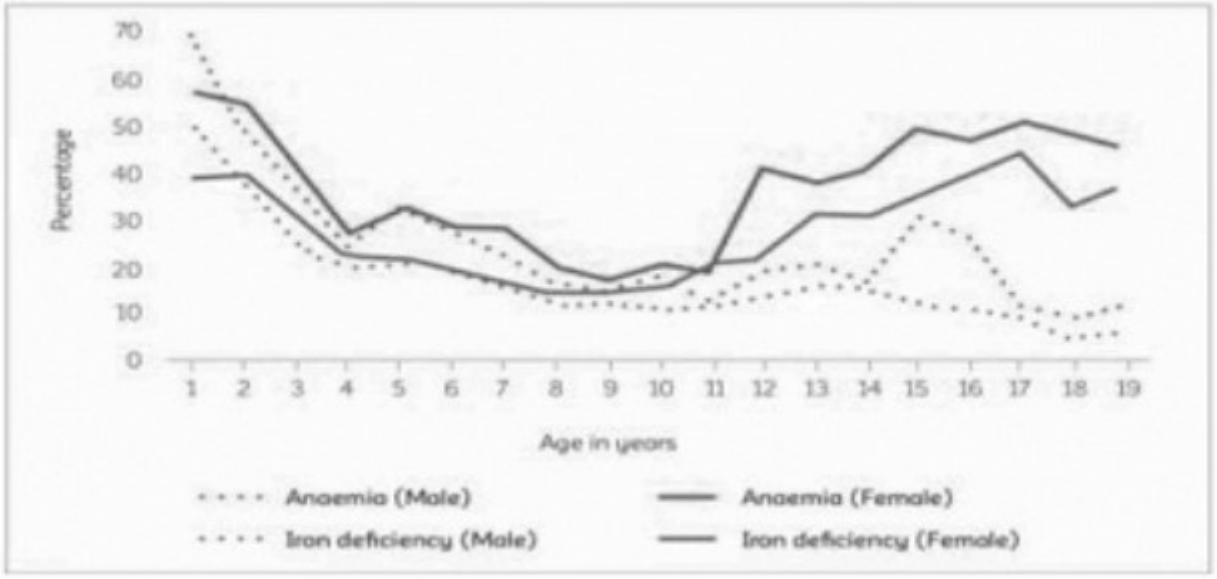

Figure 1

No. of Pages : 44 No. of Claims : 18

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/09/2023

(21) Application No.202321064354 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A LIQUID FORMULATION OF IAA-PRODUCING PRIESTIA FILAMENTOSA KHEC 69 AND PROCESS FOR THE PREPARATION THEREOF

(51) International classification :A61K0036716000, C12N0001200000, A61K0009000000, A61P0019080000, A01N0063000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a liquid formulation of halo alkali tolerant IAA-producing plant growth-promoting rhizobacterial strain Priestia filamentosa KhEc 69 which improves the growth parameters of crops. The strain withstands abiotic stresses and produces IAA and hydrolytic enzymes including amylase and protease. Further, the present invention discloses a process for the preparation of a liquid formulation of the strain Priestia filamentosa KhEc 69, which comprises an LB medium containing tryptophan, KNO3, mannitol, glycerol, and the bacterial strain Priestia filamentosa KhEc 69. The liquid formulation of this strain was prepared and a process for enhancing plant growth was disclosed. [Shall publish with FIG. 1]

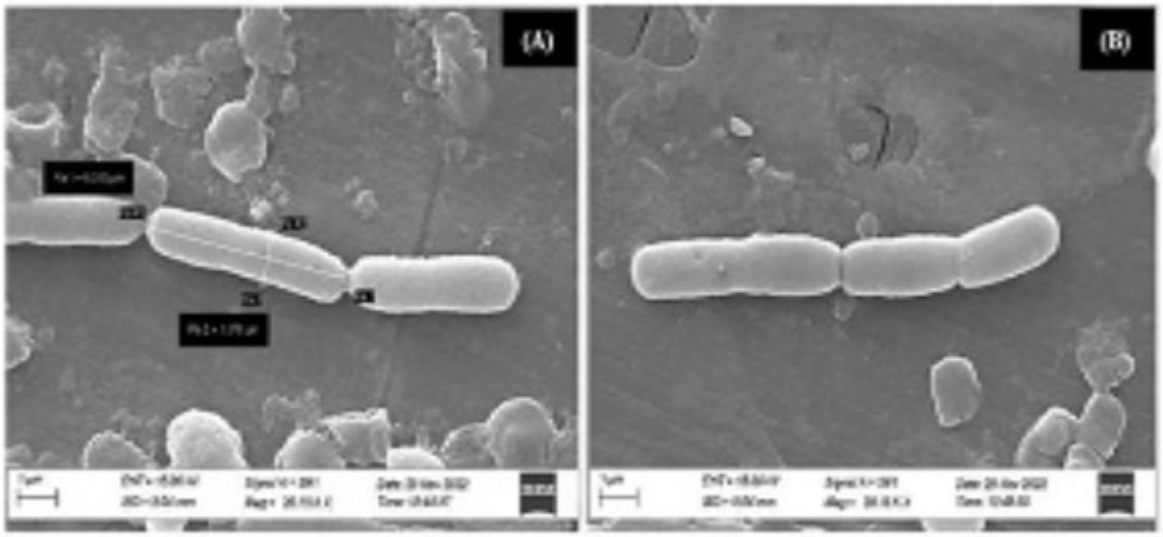

Figure-1

No. of Pages : 35 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073487 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A REAL TIME ENERGY MONITORING SYSTEM

(51) International classification :G06Q0050060000, E21B0047060000, H02J0015000000, G06Q0020120000, H04L0067104000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a real-time energy monitoring system. The proposed system consists of a peer-to-peer energy trading platform, real-time decentralized energy monitoring, data recording, predictive analysis, and data logging. The system continuously monitors the energy use of domestic electrical loads using a variety of sensors, a screen to display data, an SD card for data logging, and cloud connectivity. Additionally, the system may regulate the flow of electricity based on how much power users consume in various rooms and predictions of various activities. The platform automates the process of purchasing and selling energy through the use of smart contracts, which has significantly improved energy efficiency, sustainability, and cost savings. Peer-to-peer trading is incorporated into the system to allow customers to sell any excess electricity produced by renewable energy sources to other customers nearby, ensuring a fair and open transaction.

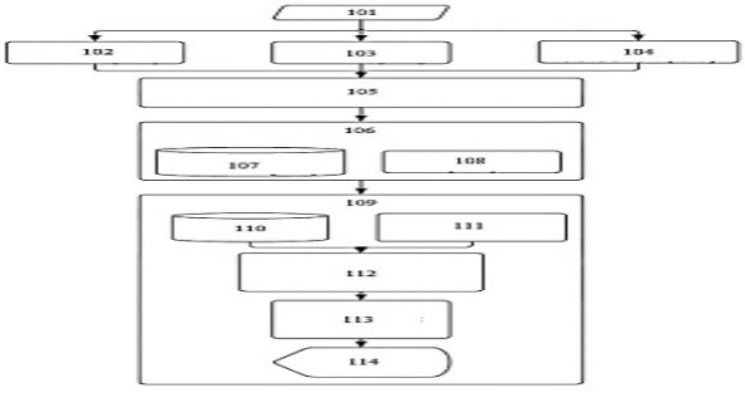

Figure 1

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023

(21) Application No.202321073488 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SOLAR PANEL CLEANING ROBOT WITH ARDUINO CONTROL

(51) International classification :H02S0040100000, F24S0040200000, B08B0001000000, B08B0001040000, B08B0003020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Vishwakarma Institute of Technology, Pune, Maharashtra, India ---------- ----------

(57) Abstract :
The present invention is related a solar panel cleaning robot with Arduino control. the automated solar panel cleaning system integrates cutting-edge photovoltaic technology with Arduino automation to revolutionize solar panel maintenance. Manual cleaning methods risk damaging the anti-reflective coating and are labor-intensive. In response, this system leverages RUDRA ESP32, DC motors, an ultrasonic sensor, and specialized cleaning components, all orchestrated through Arduino IDE. Rigorous testing confirmed precise wheel rotation and effective object detection. Most notably, the system demonstrated its ability to achieve a spotless clean, enhancing energy output. Future enhancements include telescopic adaptability for panels of various sizes and lightweight materials for portability. This innovation not only ensures peak solar panel efficiency but also paves the way for a sustainable future powered by renewable energy.

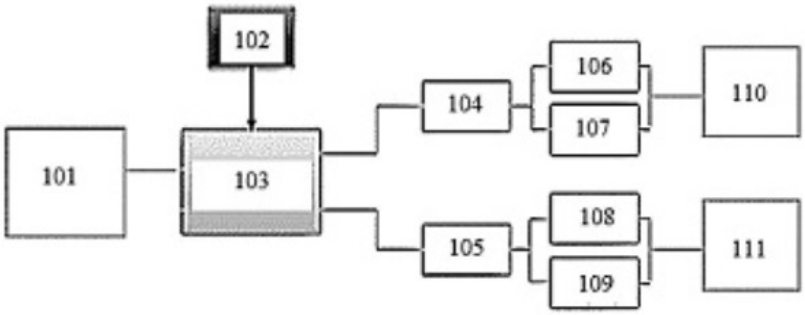

Figure 1

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023

(21) Application No.202321073489 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A ROBOTIC VACUUM CLEANER

(51) International classification :B25J0009160000, G05D0001020000, G01S0015931000, B25J0011000000, G01S0015870000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related a robotic vacuum cleaner. The invention aims to enable efficient cleaning while averting collisions. Utilizing ultrasonic sensors, the robot adeptly maneuvers through spaces, dynamically detecting and sidestepping obstacles. the Arduino system orchestrates its motion, ensuring seamless operation. the algorithm prioritizes user convenience and safety, optimizing cleaning performance while minimizing collisions. the integrated fan system bolsters the robot's functionality, enhancing its cleaning efficacy. Technical specifications of the ultrasonic sensor module are detailed, showcasing its precision and operational parameters. This invention signifies a significant leap in automated cleaning technology, promising a convenient, reliable, and efficient solution for household.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073490 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT BASED WASTE MANAGEMENT AND SEGREGATION SYSTEM

(51) International classification :H04L0067120000, B65F0001140000, B65F0001000000, A01G0025160000, G06Q0010000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an IOT based waste management and segregation system. This system combines sensors, microcontrollers, and mechanical components to automatically and efficiently segregate waste into three main categories dry waste, wet waste, and metallic waste. The Automated Waste Segregator (AWS) utilizes inductive proximity sensors for detecting metallic objects, soil moisture sensors to identify wet waste, and ultrasonic sensors for distance measurement and waste level monitoring. An Arduino UNO board serves as the central processing unit, making decisions based on sensor data and controlling servo motors for physical waste separation and container management. An LCD display provides real-time monitoring and user alerts, while IOT integration enables remote monitoring and notifications. The AWS aims to reduce environmental impact by improving waste management, promoting recycling, and reducing the volume of waste destined for landfills. Its user-friendly design makes it suitable for a wide range of settings, from urban households to commercial establishments.

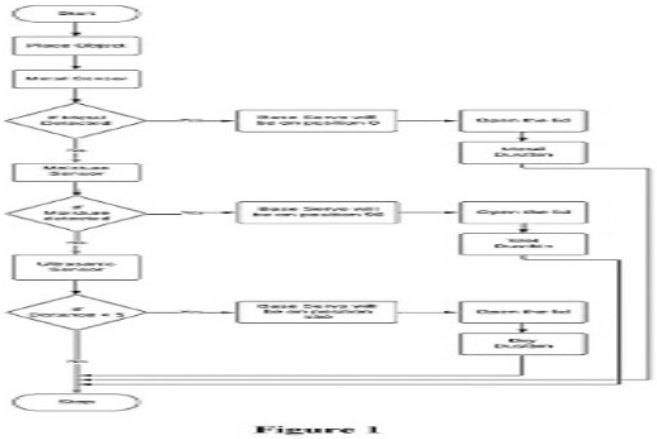

Figure 1

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073491 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT BASED HOME AUTOMATION AND SECURITY SYSTEM

(51) International classification :H04L0012280000, H04N0021438000, G08B0013196000, G06F0021320000, H04L0067120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to an IOT based home automation and security system. This innovative system offers a user-friendly Android application that grants users remote control over home appliances and delivers real-time monitoring of diverse sensors, including DHT11, MQ2, fire, ultrasonic, and PIR sensors. The integration of google firebase's cloud services ensures efficient data management, allowing for immediate alert notifications in response to critical events. The system leverages the NodeMCU IOT platform to seamlessly transfer data to the cloud, facilitating remote access and control. A built-in fingerprint sensor ensures data security and user verification. With two operational modes light and dark the system optimizes user experience and conserves battery life. Future scalability offers adaptability to emerging technologies, while energy efficiency and convenience remain at the forefront, enhancing the quality of life for homeowners. This cost-effective solution redefines the standards of home automation and security, making it accessible to a diverse range of households.

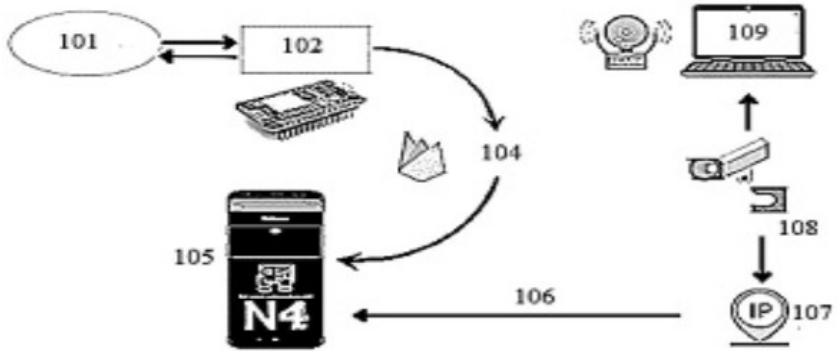

Figure 1

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073492 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A DUSTBIN FOR EFFICIENT AND HYGIENIC WASTE MANAGEMENT

(51) International classification :B65F0001140000, B65F0001160000, G06Q0050260000, G06F0009500000, H04W0004380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a dustbin system for efficient and hygienic waste management. It combines the power of ultrasonic sensors, Arduino microcontroller technology, and touchless automation to create a hygienic, cost-efficient, and environmentally sustainable approach to trash disposal. By continuously monitoring the fill level of the dustbin, the system activates a servo motor to open the lid when waste reaches a predefined threshold. This not only prevents overflowing bins but also minimizes contact with waste, reducing the risk of disease transmission. The collected data is used for real-time analysis, enabling smarter resource allocation and planning. As a touchless and user-friendly initiative the dustbin aligns with the concept of smart cities and offers a step toward cleaner, healthier, and more efficient urban living.

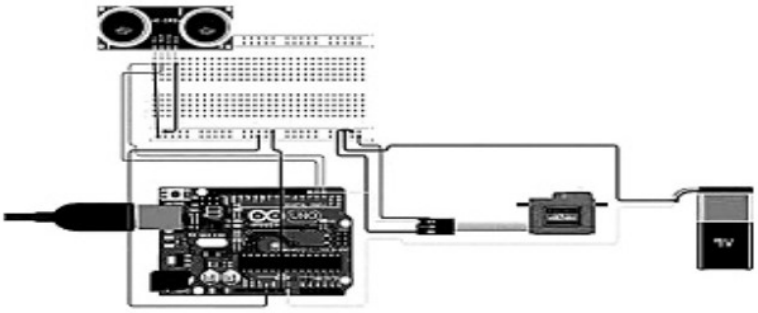

Figure 1

No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023

(21) Application No.202321073493 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A HAND GESTURE CONTROLLED MULTI FUNCTIONAL MOBILE ROBOT

(51) International classification :G06F0003010000, G05D0001020000, B25J0009160000, G08C0017020000, B25J0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related a hand gesture controlled multifunctional mobile robot. the Hand gesture controlled multifunctional mobile robot revolutionizes human-robot interaction. Utilizing advanced technologies like Arduino UNO, Bluetooth, IR, MPU6050, RF, and ultrasonic sensors, it interprets intricate hand movements through a wearable MPU6050 sensor. This allows users to intuitively guide the robot's movements, making it a versatile tool. In addition to hand gesture control, it features obstacle avoidance, line tracing, and Bluetooth-controlled locomotion. An ultrasonic sensor enables autonomous obstacle navigation, while infrared sensors facilitate precise line tracking. The Bluetooth module enables remote control via a mobile device, providing commands for forward, backward, left, right, and stop. This invention addresses diverse applications, from assisting physically challenged individuals to military surveillance, gaming, and remote monitoring systems.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023

(21) Application No.202321073562 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SIGHT FOR VISUALLY IMPAIRED PEOPLE

(51) International classification :A61H0003060000, A61B0008000000, A61F0009080000, G08B0021020000, G09B0021000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a sight for visually impaired people. This invention presents a low-cost 3D ultrasound probe incorporated into a smart cane, redefining mobility and safety. The system comprises three ultrasonic sensors (101) strategically mounted on the cane, a microcontroller (106) for data processing, and alert mechanisms in the form of a buzzer (107) and a vibration motor (108). When obstacles are detected, the cane provides immediate feedback, guiding the user to navigate surroundings with confidence. Furthermore, the inclusion of a GPS module (102) allows for location tracking, empowering users and their caregivers. In times of urgency, a panic button (105) triggers the GPS, sending precise location data to designated contacts via SMS. This invention not only enhances mobility and safety for the visually impaired but also opens doors to future improvements, promising a brighter future for those it serves.

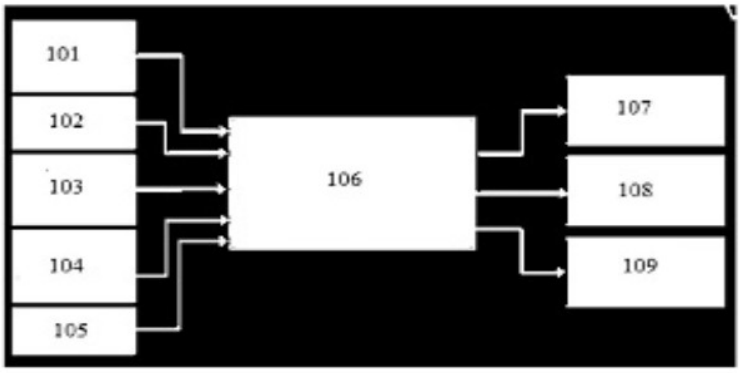

Figure 1

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073563 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR PREPARATION OF GRAPHENE NANOSHEETS THROUGH ELECTROCHEMICAL EXFOLIATION

(51) International classification :B82Y30/00, B82Y40/00, C01B32/19, C25B1/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a method for producing graphene Nano sheets through electrochemical exfoliation. This invention presents an optimized method for the cost-effective and scalable production of high-quality graphene Nano sheets through electrochemical exfoliation. The process involves the selection of suitable electrolytes, including mineral acids such as H2SO4, HCl, and HNO3, as well as an inorganic salt, Ferrous ammonium sulphate (FAS). By applying a constant voltage potential within the range of +2V to +10V DC, a 99% pure graphite rod as the anode, and an exfoliation time of 10-15 minutes, this method maximizes the yield of graphene Nano sheets. The use of 1N H2SO4 as the optimal electrolyte results in the highest yield of graphene Nano sheets, minimizing defects and surface impurities. The process operates at ambient temperature and pressure conditions, making it environmentally friendly. The resulting graphene Nano sheets exhibit a high C/O ratio, indicating minimal oxidation and impurities.

Figure 1

No. of Pages : 17 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2023
(21) Application No.202321054184 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ANTIMICROBIAL SOLUTION FOR POULTRY EGG CLEANING USING PROBIOTIC BACTERIA DERIVED EXTRACTS

(51) International classification	:C12N0001200000, A61P0031040000, A23K0050750000, C12R0001225000, A23L0003347200
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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-

(57) Abstract :
The present invention is related to an antimicrobial solution for poultry egg cleaning using probiotic bacteria-derived extracts. The method involves cultivating two strains, Lactobacillus delbrueckii DC3 and Bacillus subtilis DC11, in specialized media, followed by harvesting their cell-free extracts. These extracts, abundant in organic acids, hydrogen peroxide, bacteriocins, and antimicrobial peptides, were evaluated for their efficacy against pathogenic microorganisms on eggshell surfaces. Using an agar-well diffusion assay, the extracts exhibited significant antimicrobial activity against Salmonella typhimurium, Escherichia coli, Staphylococcus aureus, and Pseudomonas aeruginosa. The combination of DC3 and DC11 extracts (in a 3:1 ratio) demonstrates superior disinfectant properties against both Gram-positive and Gram-negative bacteria on eggshell surfaces. resulting in over 50% reduction of pathogenic microbes; This innovative approach presents a natural and efficient means of improving egg cleaning, poultry egg safety, contributing to enhanced food hygiene and health standards.

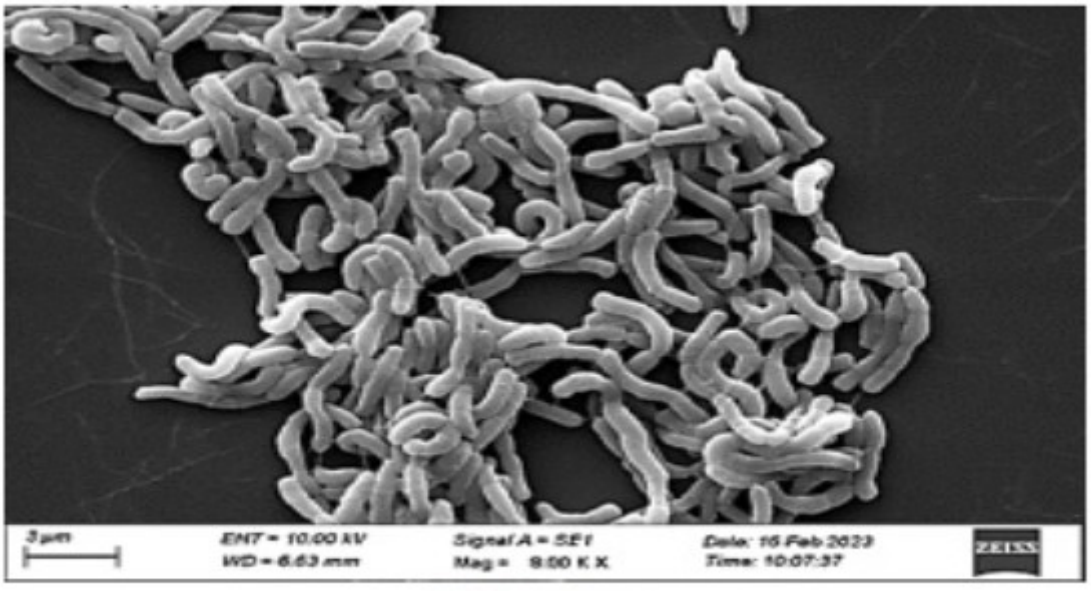

Figure 1

No. of Pages : 13 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073565 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A MOTORCYCLE HELMET

(51) International classification :A42B3/04, A42B3/28, A42B3/30, B60K28/06, B60W40/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a motorcycle helmet. According to the invention, the motorcycle helmet (A) consists of a cooling system (2) that is powered by two flexible fabric thermoelectric semiconductors. The cold air produced by the cooling sides of the TEGs (21) is dispersed into the helmet through a grid of copper pipes (221). The hot air produced is exhausted out of the helmet through the ventilation system, which consists of various aerodynamic air passages and an exhaust fan (123). The GPS module (605) tracks the location of the accident, and the GSM module (605) sends a text message to the ambulance and the family of the victim. Then the decoded signal is given to the Arduino Nano (52), which excites the Bosch-style SPDT relay to switch and complete the connection with the engine of the vehicle. Once the relay switches on, the engine starts, and the vehicle can be driven.

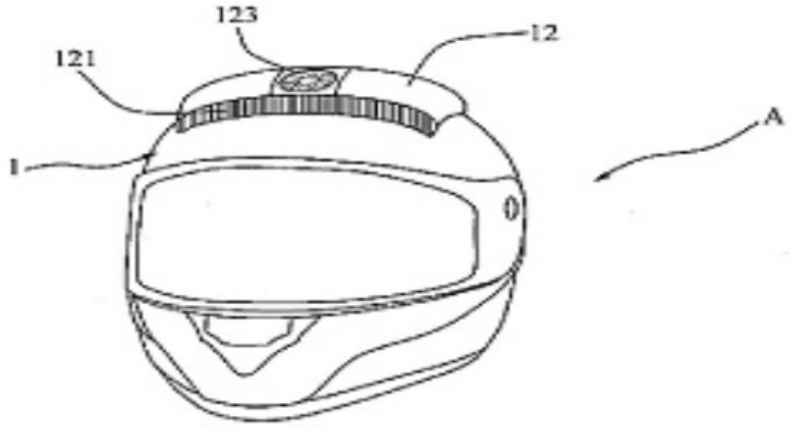

Figure 1

No. of Pages : 27 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073566 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SILENCER MOUNTED THERMOELECTRIC GENERATOR FOR MOTORCYCLE

(51) International classification :F01N13/08, F01N3/02, F01N5/02, F02G5/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a silencer mounted thermoelectric generator for motorcycle. According to the invention, a silencer-mounted thermoelectric generator for motorcycles is a device that utilizes the waste heat from dissipation into the atmosphere and converts it into electrical energy. Thermoelectric generators directly convert thermal energy into electrical energy. This device is responsible for energy conversion and uses the electrical energy generated to charge the battery or run the electrical accessories of the motorcycle. When the heat dissipates from the motorcycle exhaust, to reuse the waste heat from the exhaust pipe, we will use a TEG module. The main purpose is to reuse the waste heat dissipated from the exhaust pipe of two-wheelers by using a thermoelectric generator module, and the collected energy should be sent back to the battery of the two-wheelers.

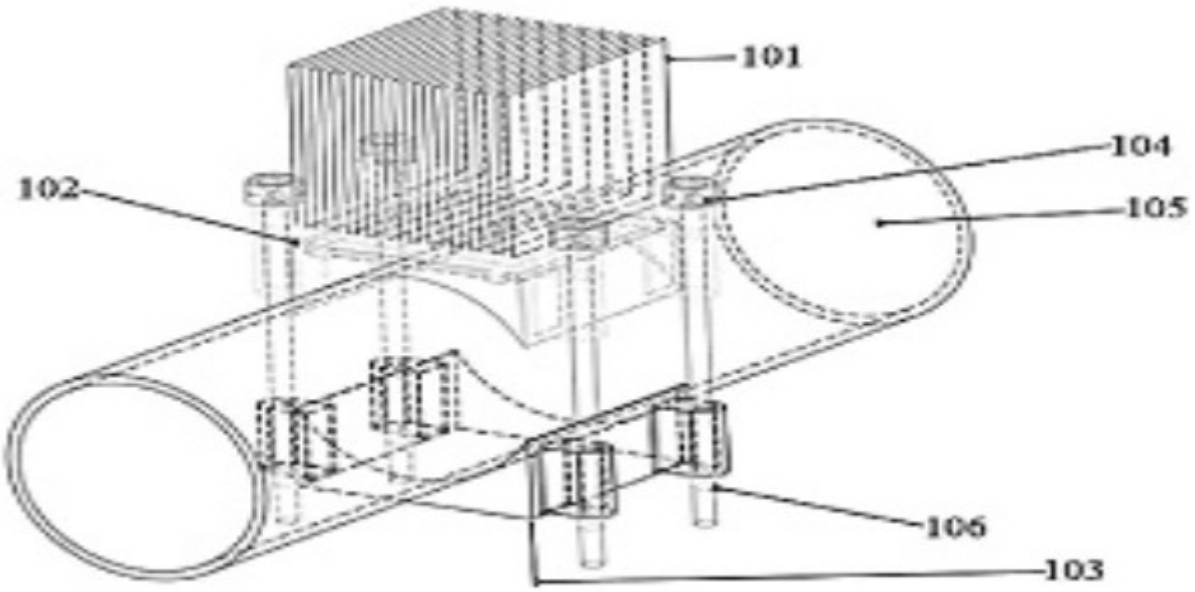

Figure 1

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023
(21) Application No.202321073567 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PEDESTRIAN SAFETY DEVICE FOR ZEBRA CROSSING

(51) International classification :G08G0001005000, G08G0001095000, G08G0001160000, B60R0021380000, B60R0013100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related a pedestrian safety device for zebra crossing. The present invention prevents these accidents by introducing a modern & user-friendly zebra crossing smart device for pedestrian safety. The design is based on Arduino Uno, esp32 CAM with Arduino programming & sensors, danger indicating led strip with solar power & yellow blinking light. If pedestrian tries to cross the crossing in green or yellow signal sensors used would alert them. This device will be definitely more effective than existing zebra crossing devices in all over India. This device will be helpful for visually impaired people too by directing them with sound. In addition, if ignorant driver crosses the Zebra Cross Lane in red signal, device will capture the photos of their vehicle, can further punish by taking fine through license plate.

Figure 1

No. of Pages : 20 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/11/2023
(21) Application No.202321076401 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PROCESS FOR REPLACING A HEATING ELEMENT OF A MELTING FURNACE

(51) International classification :F27B14/14, F27B5/14, F27B9/36, F27D99/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
PROCESS FOR REPLACING A HEATING ELEMENT OF A MELTING FURNACE The process for replacing a heating element (10) requires fewer steps, allows saving of heat and energy by elimination of the cooling step and elimination of removal of crucible and avoiding the technician moving in an melting furnace (100) as disclosed in prior-arts. Process includes dismantling door (11), lid (12) and terminal box (13) of melting furnace (100). Next step is identifying fused heating element (10) by testing each heating element (10) by a technician standing outside and in vicinity of the melting furnace (100). Dismantling fused heating element (10) by technician standing outside and in vicinity of melting furnace (100). Replacing a heating element (10), capable the heat, by the technician standing outside and in vicinity of the melting furnace (100). Last steps are assembling terminal box (13), lid (12) and door (11) with the melting furnace (100). (To be published with Figure 18)

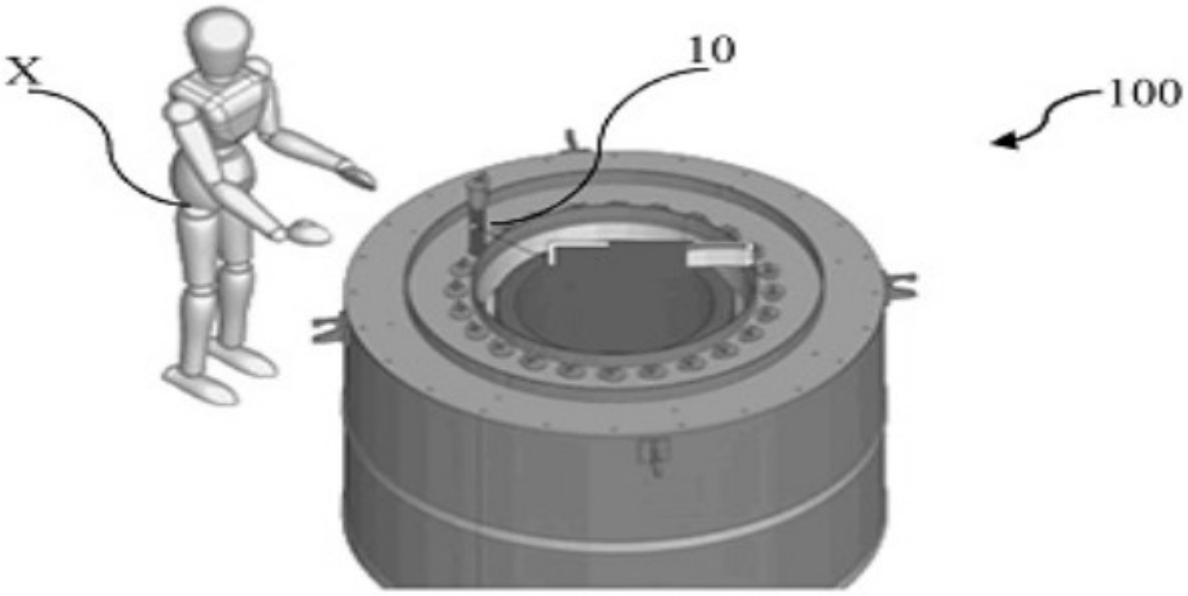

FIGURE 18

No. of Pages : 22 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/12/2023
(21) Application No.202321082336 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR ZINC-ALUMINIUM-LAYERED DOUBLE HYDROXIDE NANOSHEET FILMS AND THEIR APPLICATION IN GAS SENSOR

(51) International classification :B82Y30/00, B82Y40/00, C01F7/00, C01F7/784, C01G9/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present work describes a method for chemically converting thin films of ZnO nanosheets into highly orientated thin films of zinc-aluminum layered double hydroxide (Zn-Al-LDH). The structural analysis of chemically converted thin films of zinc oxide nanosheets clearly demonstrated the formation of hexagonal Zn-Al-LDH. The surface morphology of chemically converted thin films reveals the presence of Zn-Al-LDH nanosheets. The Zn-Al-LDH showed remarkable selectivity for NO2 detection, with a maximum NO2 response of 66 %, and a fast response time of 3 seconds at room temperature (27 °C).

No. of Pages : 16 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/12/2023
(21) Application No.202321085333 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PROCESS OF SYNTHESIS OF ORGANOTELLURIUM COMPOUNDS

(51) International classification :B01J31/16, B01J31/22, C07D345/00, C07D421/00, C07F11/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an efficient atom economical process for the synthesis and catalytic applications of Organo Tellurium compound, 2-benzamide tellurenyl iodide. The present invention discloses a process involving a two-step synthesis of organo tellurium compounds specially aryl tellurenyl iodides using the precursors thionyl chloride and 2-halo substituted benzoic acid. The developed methodology in the present invention does not incorporate any kind of base, which led to the selective formation of the 2-benzamide tellurenyl iodides in very high yields. Figure 1

No. of Pages : 23 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/10/2023

(21) Application No.202321072725 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR UNIQUE DOG IDENTIFICATION UTILIZING A CONVOLUTIONAL NEURAL NETWORK

(51) International classification	:G06N0003080000, G06N0003040000, G06K0009620000, G10L0015160000, G10L0015020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related a system and method for unique dog identification utilizing a convolutional neural network. a CNN model is developed using deep learning that proved successful in predicting the distinctive face of a pet dog.The idea of transfer learning is used wherein features discovered from high-resolution photos of enormous datasets can be applied to train a model of a relatively small dataset without losing the ability to generalize. This classification was made feasible with the aid of the State-of-the-Art VGG16 model,which accurately distinguished between our one-of-a-kind object and other objects, two dense neural network layers were added. It also incorporated the Augmentation feature in the training phase that randomly used to shift the orientation of random training data in order to address the issue of randomization of location in the stance of any object. This model was able to achieve an accuracy of 96.88%.

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/12/2023

(21) Application No.202321083251 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A REAL TIME LANE DETECTION SYSTEM FOR SEMI-AUTONOMOUS VEHICLES

(51) International classification :G06N3/0464, G06T10/44, G06V20/58
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)JOSHI, Pranjali
5)MORAYYA, Nipun
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(57) Abstract :
The present invention is related to a real-time lane detection system for semi-autonomous vehicles. A cutting-edge integration of advanced driver assistance systems (ADAS) with a state-of-the-art deep learning-based model. leveraging a network of high-resolution cameras and an advanced convolutional neural network (CNN), the system continuously captures, processes, and analyzes real-time road imagery. Through meticulous image preprocessing and deep learning-based analysis, it identifies lane markings, boundaries, and precise vehicle positioning within lanes. This innovation provides immediate driver assistance, issuing lane departure warnings and facilitating automated lane centering to ensure vehicles remain safely within their designated lanes. Seamlessly integrated with ADAS, this system aims to significantly enhance road safety by minimizing accidents resulting from lane deviation

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/01/2024
(21) Application No.202421002210 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYNERGISTIC PESTICIDE COMPOSITIONS

(51) International classification :A01N25/02, A01N25/04, A01N25/06, A01N65/22, A01N65/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure provides pesticide compositions and formulations for controlling indoor and outdoor pests comprising Pimenta dioica, Pogostemon cablin, Citral, Cinnamaldehyde, and excipient(s). Also, provided are methods for controlling indoor and outdoor pests. The ingredients of the compositions and formulations of the present disclosure exhibit functional reciprocity therebetween, and aid in effective repelling, killing, preventing, and/or reducing the population of indoor as well as outdoor pests.

No. of Pages : 31 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/02/2024
(21) Application No.202421006719 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A DEVICE FOR PRODUCING NON-CENTRIFUGAL SUGAR POWDER/GRANULES AND PRODUCTION METHOD THEREOF

(51) International classification	:C13B25/00, C13B25/04, C13B30/00, C13B40/00
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
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(57) Abstract :
The present invention relates to Agitated Thin Film Drying (ATFD) process for the production of a composition of Non-Centrifugal Sugars (NCS) product in a compact and cost-effective process. The NCS granules and powder produced have a rare combination of low crystallinity and low moisture content, which is difficult to achieve with any of the existing technologies. The ATFD system combines crystallization and drying into a single step, resulting in NCS powder with low moisture content (< 3% w/w) and a semi-crystalline form (30-50% crystalline). The critical process parameters, such as juice feed concentration and feed flow rates, are optimized to obtain NCS powder with varying crystallinity. This technology has potential applications in the food and beverage industry, and further research can be conducted to optimize the process parameters and explore additional uses of ATFD-produced NCS powder. FIG. 13

No. of Pages : 41 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/10/2023

(21) Application No.202321073564 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN IOT BASED ANTI-THEFT DETECTION SYSTEM

(51) International classification	:H04W0004029000, B60R0025330000, G08B0013140000, G08B0015000000, G08B0025100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is related an IOT based anti-theft detection system. the system, built on the Bolt-IOT platform, offers real-time tracking and security features. It promptly notifies the owner's mobile device with live GPS coordinates via a Telegram link every 10 seconds, facilitating swift response to any security breach. Additionally, a loud alert is triggered to deter potential theft. The invention draws upon relevant studies and utilizes key components including Arduino UNO, Bolt Wi-Fi module, and NEO-6M GPS tracker. The present invention not only provides a vital security enhancement but also lays the groundwork for potential integration into modern vehicle designs, contributing to a safer automotive landscape.

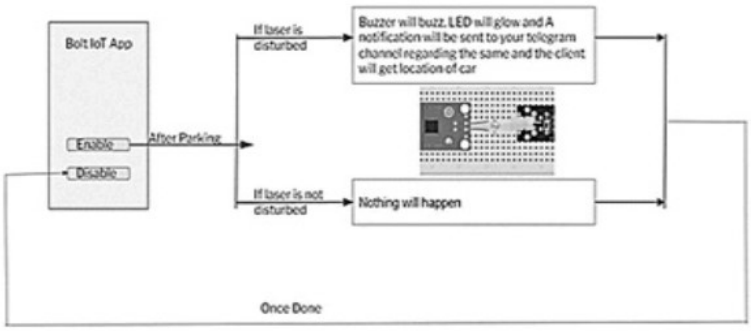

Figure 1

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/12/2023
(21) Application No.202321087494 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A MULTIFUNCTIONAL ELECTRONIC MOSQUITO DEACTIVATING DEVICE

(51) International classification :A01M1/22, H03K3/02, H05C1/04, H05C3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed is a multifunctional electronic mosquito deactivating device that provides a portable, easy-to-operate, and non-hazardous solution using radio frequency waves. The device comprises a top unit and a bottom unit enclosing an electrical unit containing a radio frequency (RF) generator, a timer, a cooling 10 arrangement, and a rechargeable power supply coupled to a regulatory module. The rechargeable power supply is configured to provide power to any externally connected electronic gadget via a port when the RF generator is in the OFF state. The RF generator generates radio waves of frequency in the range of 18-30 kHz. Upon coming in contact with these waves, insects/mosquitoes become dormant 15 and inactive. Ref. Fig. 1

Figure 1

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/01/2024

(21) Application No.202421003577 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTERACTIVE SIMULATION BASED LEARNING SYSTEM AND METHOD THEREOF

(51) International classification :G09B0009000000, G06F0030200000, G09B0007040000, G09B0007020000, G09B0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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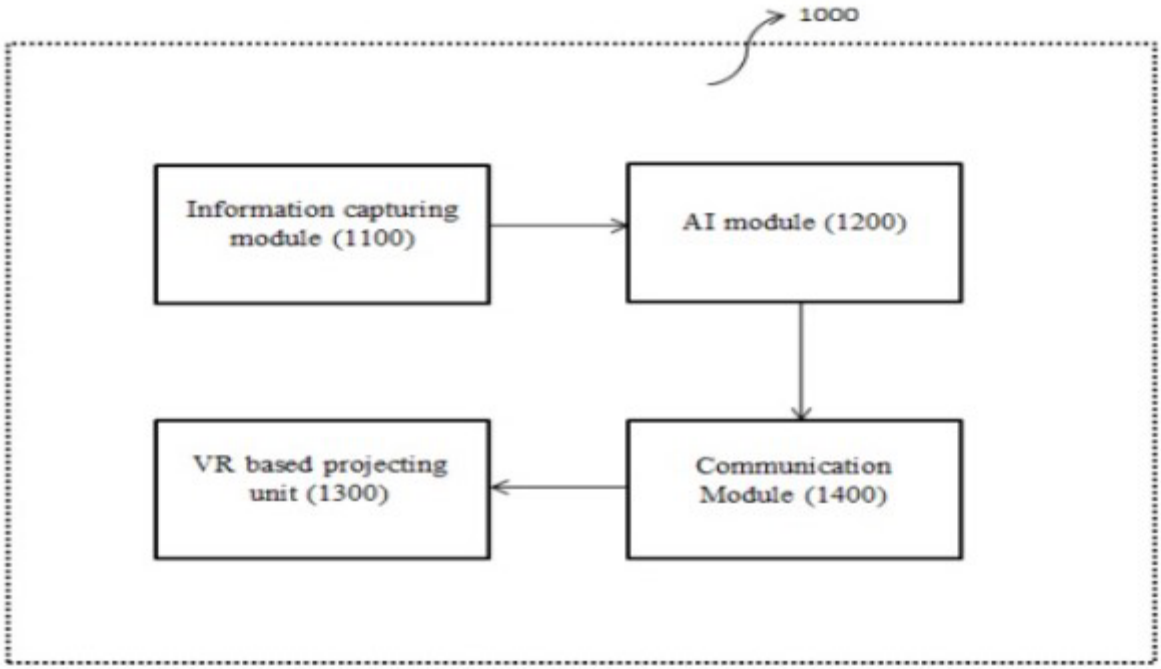
(57) Abstract :
The presented invention introduces a stimulation-based interactive learning system that integrates virtual reality (VR), artificial intelligence (AI), and data capture technologies to revolutionize the learning experience. This system comprises information capturing module 1100, AI module 1200, and virtual reality projecting unit 1300, communication module 1400, speakers, and a battery. The information capturing module 1100 gathers data from user activities, which is analysed by the AI module 1200 to provide personalized learning guidance. The VR projecting unit 1300 creates immersive learning environments based on user inputs and AI analysis, while speakers provide real-time feedback. The communication module 1400 facilitates seamless connectivity, and a battery ensures uninterrupted operation. By offering dynamic, immersive, and personalized learning experiences, this innovation addresses the limitations of traditional teaching methods, enhancing engagement, retention, and effectiveness in skill development and knowledge acquisition.



No. of Pages : 33 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/02/2024
(21) Application No.202421008036 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SINGLE AND MULTI-LAYER THERMOPLASTIC POLYESTER ELASTOMER CO-POLYMER FILMS WITH MOISTURE-ACTIVATED GAS GENERATING SOLIDS

(51) International classification	:A61L0002200000, A23L0003341800, C08J0005180000, A61K0045060000, A23B0007144000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention is the development and application of a single and multi-layer films fabricated from thermoplastic copolyester elastomers copolymer infused with moisture-activated gas generating solids. These films serve as a novel approach to inhibit, slow down, manage, postpone, or eliminate microbiological contamination in a range of perishable items, encompassing foods, agricultural crops, and botanicals. The films exhibit permeability to water vapour while effectively releasing sulphur dioxide gas upon moisture exposure, thereby creating a hostile environment for microbial proliferation. Research demonstrates the efficacy of these films in extending the shelf life and preserving the quality of perishable goods, thereby mitigating economic losses and enhancing food safety standards across diverse industries. This innovation represents a promising advancement in the realm of microbiological contamination control with broad implications for agricultural and food preservation practices.

No. of Pages : 19 No. of Claims : 22

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/09/2023
(21) Application No.202321059761 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : GRADUAL AND SMOOTH POLE-FLUX CHANGING SYSTEM AND METHOD FOR ELECTRONIC POLE CHANGING INDUCTION MOTOR DRIVE

(51) International classification :H02P21/22, H02P21/30, H02P23/07, H02P23/30, H02P25/20, H02P25/22, H02P27/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present subject matter discloses a gradual and smooth pole-flux changing system and method for electronic pole changing induction motor drive (IMD) by operating the pole changeover in IMD by a progressive decrease flux of one mode and subsequently linear increase with flux of next mode by controlling the input voltage and current. A PWM provides a smooth online pole changeover with a reduced circulating currents and flux distortions/transients helping the motor to have an ease pole-phase changeover in EPC IMD for both conventional and open-end winding IMD configurations and easily integrated to both open-loop and closed loop controls.

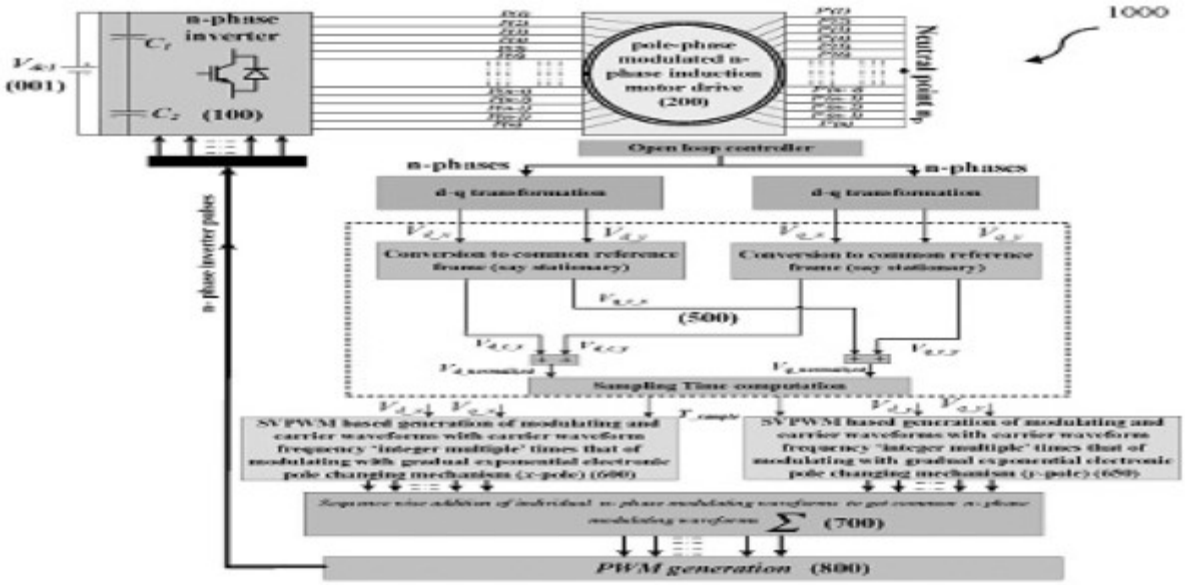

Figure 1

No. of Pages : 36 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/11/2023
(21) Application No.202321081085 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM FOR PLANT DISEASE DETECTION AND METHOD THEREOF

(51) International classification :G06F18/24, G06V10/80, G06V10/82
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a method for detecting diseases in a plant using a plant disease detection system comprising receiving multi-modal data, converting the real-time environmental data into a normalized environmental numeric data, generating smart tokens by breaking the preprocessed image into smaller fixed-sized image patches, linearly projecting smaller fixed-sized image patches into an embedding space to create a sequence smart tokens, integrating the predefined normalized environmental numeric data with the smaller fixed-sized image patches to form an enriched smart token, processing the enriched token with a custom attention mechanism to identify one or more image patches for crop disease diagnosis, assigning higher weights to more important patches and classifying plant disease. Fig. 1

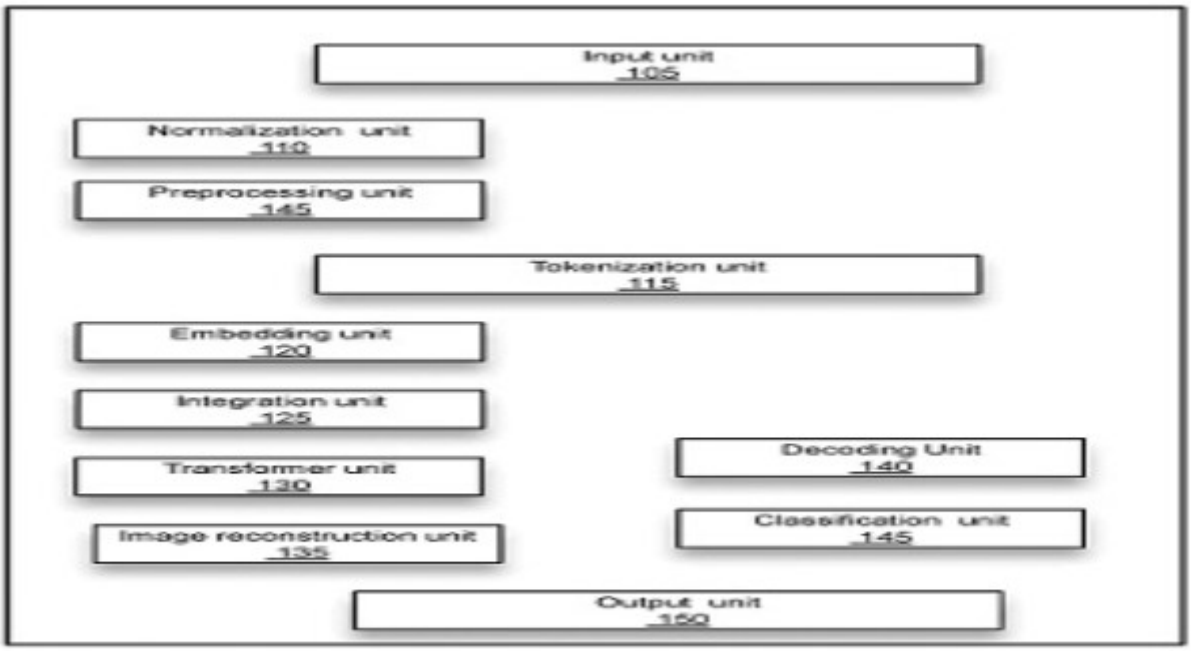

Fig. 1

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/02/2024
(21) Application No.202421007046 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : MULTIPLE REACTION MONITORING AND COMPUTATIONAL DRUG REPURPOSING BASED PROCESS FOR IDENTIFYING MULTI-PRONGED DRUG CANDIDATES

(51) International classification :G01N33/50, G01N33/68, G16B15/30, G16B40/00, G16B50/00, G16C20/40, G16C20/50, G16C20/64
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A process for identifying potential drug candidates comprising the steps of: i) performing Multiple Reaction Monitoring (MRM) to ascertain candidate protein biomarkers; ii) constructing a drug library for molecular docking; iii) performing in-silico molecular docking-based drug repurposing to identify potential drugs against said protein biomarkers; iv) performing post docking analysis to identify multi-target drug candidates; v) identifying said potential drug candidates through drug-likeness and in-Silico ADMET analysis.

No. of Pages : 58 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/02/2024
(21) Application No.202421007065 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A HERBICIDE COMPOSITION FOR CONTROLLING PARASITIC WEED BROOMRAPE

(51) International classification	:A61K0036640000, A01N0043500000, D01F0001100000, A01N0025260000, A01N0047360000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A HERBICIDE COMPOSITION FOR CONTROLLING PARASITIC WEED BROOMRAPE The present invention is relates to herbicide composition comprising combination of Lauryl alcohol and Carrier agent. Particularly, the invention relates to herbicide composition for controlling parasitic broomrape or Orobanche weed in the crop areas.

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/02/2024
(21) Application No.202421007382 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : DESIGN, DEVELOPMENT AND OPTIMIZATION OF 5-FLUOROURACIL NANOHYDROGEL FOR IMPROVED ANTICANCER THERAPY

(51) International classification :A61K31/505, A61K31/7105, A61K33/16, A61K9/51, A61K9/70, A61P35/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract The present invention relates to development of a Nanohydrogel formulation of 5-Fluorouracil (5-FU) for treating skin cancer that could reduce the dosing frequency and dose-related toxicity and improve its bioavailability at the site of action. Chitosan (CS) complexed 5-FU nanoparticles (5-FCNPs) were prepared using the ionic gelation technique, which offers advantages such as simplicity, absence of organic solvents, and non-toxicity. The optimization was done using a 32-factorial design approach. The concentrations of CS and stirring speed were considered independent variables while effect on various dependent parameters such as particle size, zeta potential, and % entrapment efficiency was investigated for the development of 5-FCNPs.In contrast, the concentration of carbopol and triethanolamine are considered independent variables while viscosity, % drug release, and skin permeation were investigated as dependent parameters for the optimization of nanohydrogel formulation.

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/02/2024
(21) Application No.202421008765 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : HIGH LINEAR, LOW-POWER BALUN LNA USING A NINE-PORT TRANSFORMER

(51) International classification :H03F1/02, H03F1/26, H03F1/32
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a novel low-noise amplifier (LNA), said low-noise amplifier (LNA) comprising a plurality of transistors M1, M2, M3, and M4, a 9-port transformer with a plurality of ports denoted as P1, P2, P3, P4, P5, P6, P7, P8 and P9, wherein the terminals of said port P3, P4, P5, and P6 are electrically connected to respective transistors M1, M2, M3, and M4, the signal at nodes P1 and P2 is out of phase due to AC ground at port P9, as shown in Figure 4.

No. of Pages : 33 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/02/2024
(21) Application No.202421008781 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : METHOD OF PRODUCING SN-BI ALLOY ANODES WITH UNIFORM BISMUTH PRECIPITATE DISTRIBUTION FOR HIGH-PERFORMANCE NA-ION BATTERIES

(51) International classification :B22F3/10, C22C13/02, H01M4/04, H01M4/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Present invention relates to using customized heat treatment, that facilitates solid solution formation and precipitation of second phase, to optimize the microstructure of ball-milled Sn-Bi alloys, towards developing high-performance anode material for sodium-ion batteries. A composition of Sn:Bi 70:30 (by mass) exhibits good performance, but with reduced electrochemical Na-storage performances, including Na-storage capacity (compared to theoretical values) and rate-capability, when developed via just ball-milling approach. This is due to non-uniform mixing of Sn and Bi, concomitant poor phase distribution and coarse microstructural length scales. To address this, we developed specially designed heat treatments leveraging the Sn-Bi phase diagram to achieve Bi solid solution in Sn and subsequent precipitation. The optimized microstructure with uniformly dispersed and finer Bi precipitates significantly enhanced Na-storage capacity and rate capability compared to the as-milled counterpart. The strategic heat treatments demonstrate the importance of tailored thermal processing to unlock the full potential of Sn-Bi alloys by generating targeted phase distribution, which is not achievable via ball milling or any other synthesis alone. This combinatorial approach of phase-optimized heat treatments can be combined to any other combination or synthesis route which can enable the development of high-performance and durable anode materials for alkali metal-ion batteries.
FIG. 1

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/02/2024
(21) Application No.202421010794 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A CLOUD BASED HEALTH RECORD MONITORING SYSTEM

(51) International classification :G06F21/30, G06F21/62, G16H10/60
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a cloud-based health record monitoring system. the cloud-based health record monitoring system is a robust and secure platform that empowers individuals (101) and medical practitioners (102) to effectively manage and monitor their personal health records while prioritizing privacy, confidentiality, and secure access. By leveraging cloud technology (106), this system provides users with convenient and on-demand access to their health information anytime, anywhere. The system incorporates robust security measures, including OTP-based authentication and mobile number registration, to ensure authorized access and protect sensitive data. It facilitates seamless collaboration between healthcare providers, government departments (103), and non-government organizations (104), enabling efficient data exchange, analytics, improved healthcare outcomes, helps emergency situation and customized treatment as per patient health condition

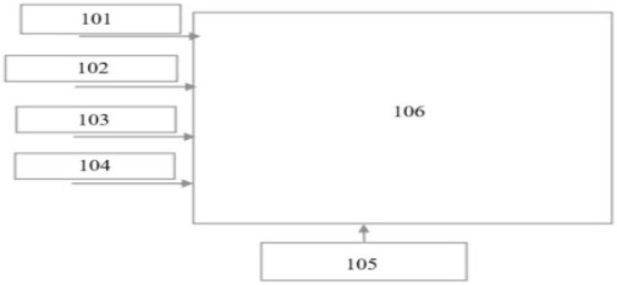

Figure 1

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/02/2024
(21) Application No.202421009396 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SELF-WATERING TREE GUARD

(51) International classification : A01G13/00, A01G27/02, A01G27/00, A01G27/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a self-watering tree guard. The water tree guard is designed to efficiently water trees while promoting optimal root growth and water conservation. Constructed from a blend of clay soil, wheat straw, ash, and goat farm waste material, the guard features a cylindrical body seamlessly integrated with a round base and top cover portion. Coconut coir fibers installed at the outlet point facilitate controlled water percolation, while inlet and outlet points maintain a percolation rate of 600-1000ml per 24 hours. A thin sieve mesh covers the inlet to prevent insect intrusion. The guard's unique construction and connectivity ensure uniform water distribution, with a capacity of 7 liters. By allowing water to pass through the guard walls initially, followed by controlled percolation through the coir fibers, trees receive consistent hydration. This sustainable watering method minimizes water wastage and fosters healthy tree growth.

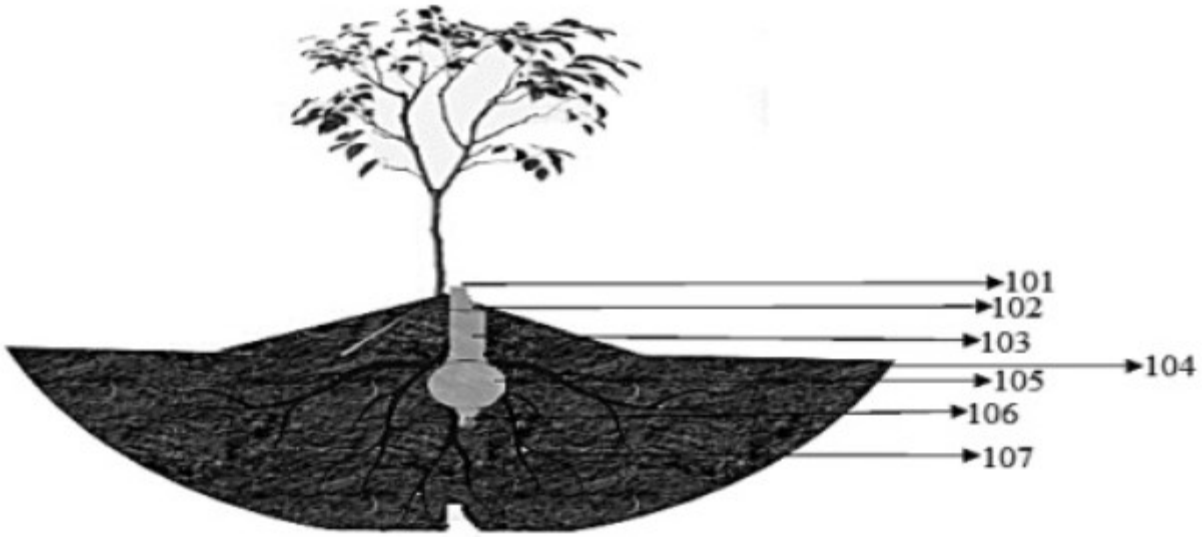

Figure 1

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/02/2024
(21) Application No.202421011179 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ADAPTIVE TELEMATICS-BASED RANGE PREDICTION SYSTEM FOR ELECTRIC VEHICLES.

(51) International classification	:B60L0058120000, G01R0031383500, B60L0053620000, G01R0031367000, G01R0031384200
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Our invention titled "Adaptive Telematics-Based Range Prediction System for Electric Vehicles," offers an advanced solution for real-time predictive battery management in electric vehicles (EVs). It employs a multi-parameter sensor to measure battery parameters like voltage, current, temperature, and impedance. A controller with a high-speed microprocessor uses algorithms to calculate the State of Charge (SoC) in real-time. A telematics device serves as a bridge to a cloud-based Geographic Information System (GIS), facilitating real-time data exchange related to terrain and traffic conditions. EEPROM storage allows machine learning for predictive analytics. Multiple embodiments cater to various use-cases, including urban commuting, long-distance travel, and heavy-duty vehicles, offering solutions that are adaptable, efficient, and user-friendly.

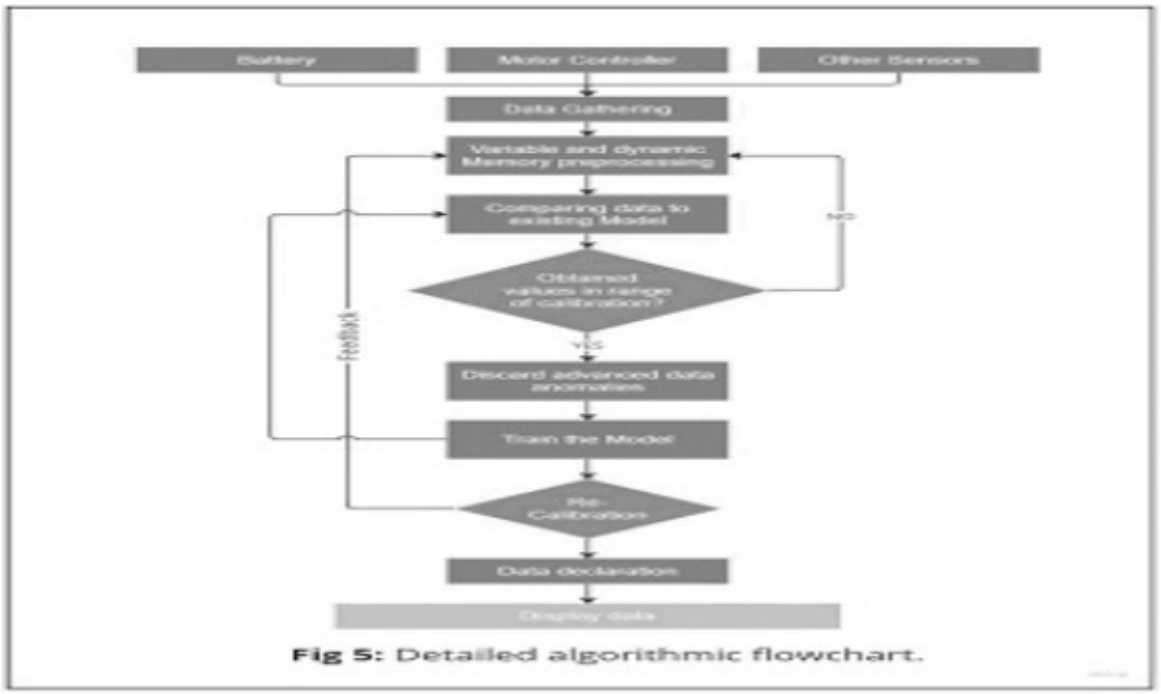

Fig 5: Detailed algorithmic flowchart.

No. of Pages : 27 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/02/2024

(21) Application No.202421011211 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : WIRELESS DIGITAL STETHOSCOPE WITH AN INTEGRATED BLUETOOTH

(51) International classification :H04R0001100000, H04W0004800000, A61B0007020000, A61B0007040000, H04R0001460000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A wireless digital stethoscope (10) with an integrated Bluetooth (14) is disclosed. An electromagnetic diaphragm (11) monitors sound of a heart of a user. The microphone (9) is enclosed inside the stethoscope (10) and is connected to the layer of the electromagnetic diaphragm (11) to record the monitored sound of the heart converts sound waves from the sound of the heart to an alternating current (AC) electrical audio signal. The processor (10) predicts an abnormal activity associated with the heart based on the monitored sound of the heart to generate a notification based on the prediction. The Bluetooth (14), integrated in the wireless digital stethoscope, configured to connect wirelessly with one or more electronic devices in nearby proximity and transmit the monitored sound and the associated AC electrical audio signal. FIG. 1 shall be the reference figure.

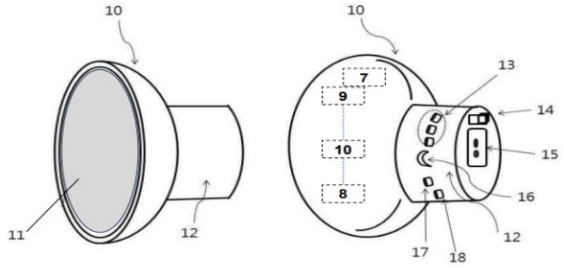

FIG. 1

No. of Pages : 34 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/02/2024
(21) Application No.202421011310 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SIMULATED APP TO EDIFY PROSPECTIVE INVESTORS TO TRADE ON METAVERSE BASED STOCK MARKETS

(51) International classification	:G06Q0040040000, G06Q0040060000, G06N0003000000, G06Q0040000000, G09B0019180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SIMULATED APP TO EDIFY PROSPECTIVE INVESTORS TO TRADE ON METAVERSE BASED STOCK MARKETS This invention is a means to provide a metaverse based equity stock exchange for the prospective investors to edify themselves with a simulated online stocks market trading experience. The invention uses a technique called as ESTiM, which accentuates on the trader's behaviour in identifying and selecting the stocks based on the economic conditions, industry scenario and company specific fundamentals and their income. Based on this the trader player construct their equity portfolio consisting risk return aspects. This virtual experience facilitates the prospective traders to actually trade on the stock exchanges. Stock broking companies, trading agents would be the beneficiaries of receiving the trader players data w.r.t their behaviour sentiments, trading decisions and actions etc. Accordingly, strategies can be developed to attract prospective investors to offer advisory services on the basis of grading earned by the trader player. [To be published with Fig.1]

Fig 1

No. of Pages : 39 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/02/2024

(21) Application No.202421007524 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ISOLATION AND IDENTIFICATION OF NEMATODE AFFECTING TOMATOES

(51) International classification :C12Q1/6888 C12Q1/689, G06N3/02, G06N3/0464, G16B10/00, G16B40/00, G16B50/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)Dr Suniti Kumar Kuriyal
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7)Dr. Gandhi
8)Dr. Amit chauhan
9)Vishal Ramchandra Warghat
10)Dr. Anant Sanjayrao Deshpande
11)Dr. Priyanka Ashokrao Masatkar
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(57) Abstract :
Isolation and identification of nematode affecting tomatoes is the proposed invention. The proposed invention focuses on understanding the functions of isolation of nematode. The invention focuses on analyzing the identification of nematode affecting tomatoes.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/02/2024

(21) Application No.202421007771 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MONITORING QUALITY OF CROPS IN AN AGRICULTURAL FIELD

(51) International classification :A01G7/00, B25J9/16, G05D1/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a system (100) for monitoring the quality of crops in an agricultural field, the system includes a computing device (106) having a processor operatively coupled to the one or more robots, the processor configured to receive the unique ID assigned to each of the robots. Receive, from the set of sensors, the set of images to generate a 3D representation of the agricultural field. Autonomously govern each of the robots through a collective control protocol (CCP) based on the generated 3D representation. Employ each of the robots an advanced field optimization strategy, to ensure comprehensive coverage of the entire agricultural field. Dynamically adjust the paths of each of the robots, thereby preventing collisions between one or more robots and determining the quality of crops in the agricultural field based on RGB color range of the captured set of images.

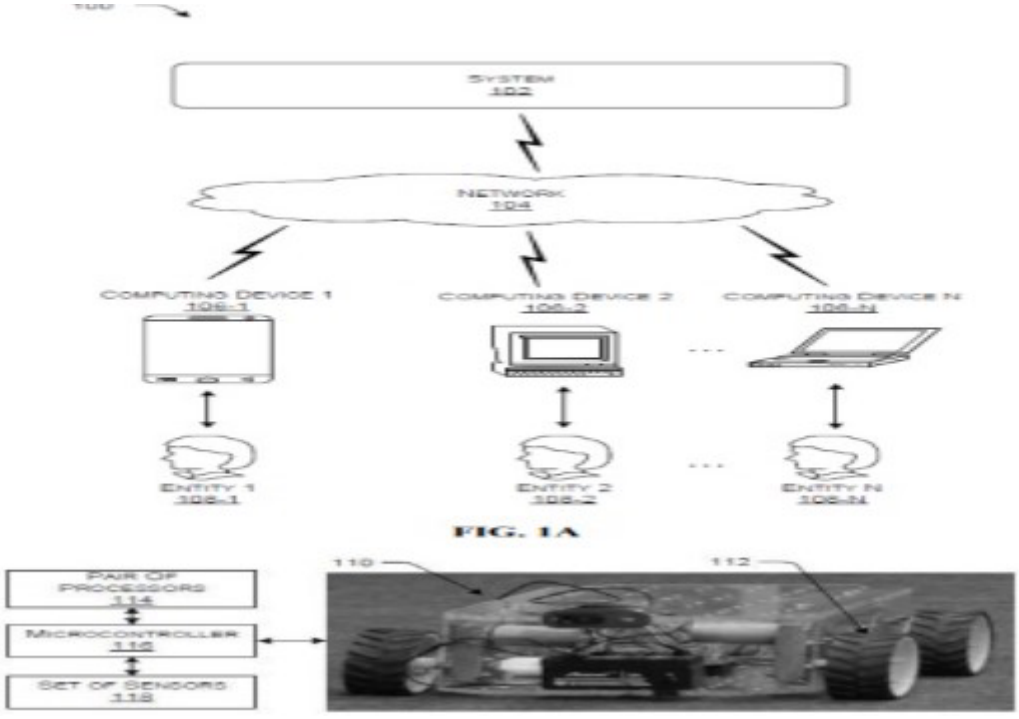

FIG. 1A

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/02/2024
(21) Application No.202421007863 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A THREE DIMENSIONAL HYBRID SEISMIC ISOLATION SYSTEM”

(51) International classification :E04B1/36, E04B1/62, E04B1/98, E04H9/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “A THREE DIMENSIONAL HYBRID SEISMIC ISOLATION SYSTEM” The disclosure herein generally relates to seismic isolation systems and more particularly, to a passive seismic isolation system (1000) for isolating a structure 5 from both vertical seismic excitations and horizontal seismic excitations. The system (1000) includes at least one first seismic isolation unit (1100) and a second seismic isolation unit (1200). The first seismic isolation unit (1100) filters elastic waves caused by vertical seismic excitations and transfers horizontal seismic excitation to the second seismic isolation unit (1200). The system (1000) is simple, 10 efficient, and is inexpensive. The system (1000) is easy to install at sites and maintain thereby reducing operational errors and maintenance costs. The system (1000) is passive and operational without the need for an external power source or active control mechanism, thereby enhancing its reliability. The system (1000) allows independent functioning seismic isolation units (1100, 1200).

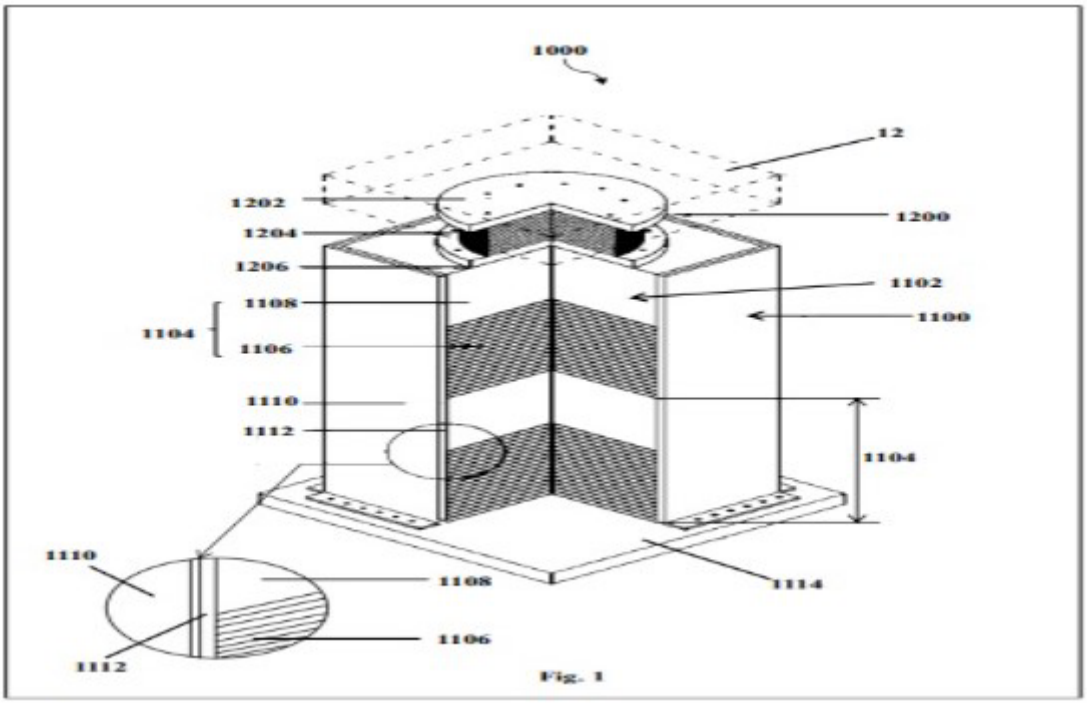

Fig. 1

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/02/2024
(21) Application No.202421010403 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF IMPURITY G CONTAINED IN ANTIFUNGAL DRUG MICONAZOLE

(51) International classification :A61K31/4164, C07D233/02, C07D233/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed is a process of preparation of impurity G contained in antifungal drug miconazole. The process comprises carrying out ether linkage formation of compound of formula I using sodium hydride with 2,5-dichlorobenzyl bromide at 65-70 oC for 5 hours using DMF as a solvent to form compound of formula II, wherein the compound of formula II is impurity G of the antifungal drug miconazole

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/02/2024

(21) Application No.202421011939 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PORTABLE TEA CUP WASHING MACHINE

(51) International classification : A47L15/23, A47L15/00, A47L15/42
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)Shubham Balasaheb Dhulugade
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(57) Abstract :
A PORTABLE TEA CUP WASHING MACHINE A portable tea cup washing machine (100) is disclosed. The machine (100) includes a receiving platform (104) to receive one or more cups (106) for cleaning, and a cup identification device (108-1) to identify a type of each of the one or more cups (106), presence and location of stains and particles and a type of the stains and the particles on each of the one or more cups. The machine (100) further includes a water spraying device (110-1) to clean the stains and particles on each of the one or more cups by spraying water from a storage tank (112) with varying speed. FIG. 1C shall be the reference figure.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/02/2024
(21) Application No.202421010877 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTEGRATED MAGNETIC DESIGN METHODOLOGY FOR ACHIEVING LOAD-CURRENT DEPENDENT VARIABLE LEAKAGE INDUCTANCE IN A MEDIUM/HIGH-FREQUENCY TRANSFORMER

(51) International classification	:G06F30/20, H01F27/24, H01F27/34, H01F41/02
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
Disclosed herein an arrangement having an integrated magnetic design for incorporating load current dependentvariable leakage inductance integrated in the design of a medium/high-frequency (MF/HF) transformer. The present invention provided distributed flexible magnetic leakage layer composed of ribbon/tape wound magnetic material, which is interposed in the interlayer and/or interwinding regions of the windings of a MF/HF transformer, provides additional benefits of improving the thermal performance of a MF/HF transformer as well as offering additional insulation support between the turns/layers in a winding and/or between winding sections. The present invention achieves high leakage inductance per unit volume [uH/dm3] without compromising the power density of a MF/HF transformer. Therefore, additional series inductors, otherwise needed in a converter while using conventional transformer design approaches, can be omitted, thereby reducing the component count and improving the power density of a converter. The present invention is useful for improving the performance of isolated dc-dc converters over wide load range, for example, by improving the zero voltage switching range at low load in dual/multi-active bridge dc-dc converter, or by controlling the quality factor in a series/series-parallel resonance converter, etc. Figure 8

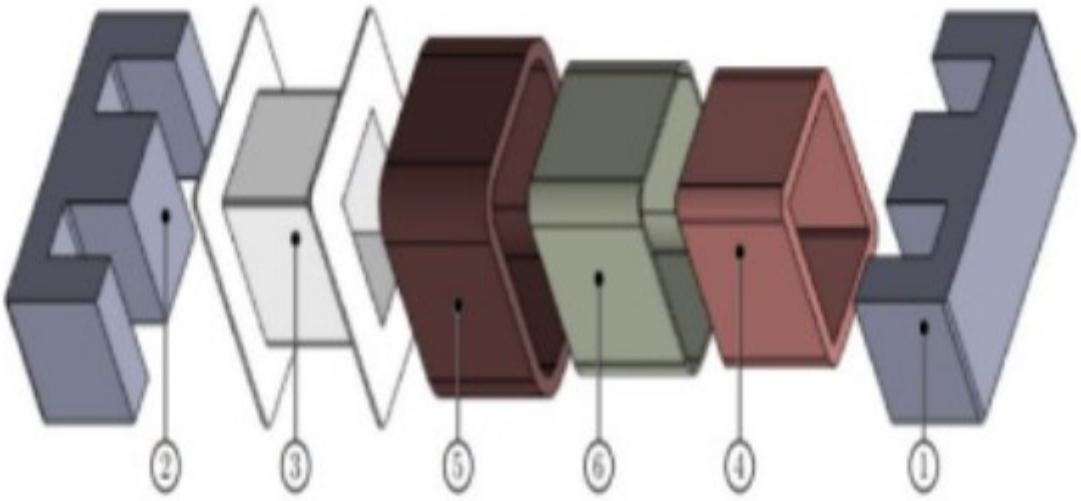

Figure 8

No. of Pages : 42 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/02/2024
(21) Application No.202421010925 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : LATTICE ALL-PASS FILTER BASED PRECODER ADAPTER FOR MIMO WIRELESS CHANNELS

(51) International classification :H04B7/04, H04B7/0456, H04B7/06, H04L27/26
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention relates a method and system for precoding in a wideband multiple input multiple output (MIMO), orthogonal frequency domain multiplexing (OFDM) system, The method comprises the steps of computation of filter coefficients for a matrix all-pass filter at specified subcarriers within the wideband MIMO OFDM system. The matrix all-pass filter is employed for precoding, and the method further includes adapting and quantizing the computed filter coefficients to generate a lattice structure implementation in the time-domain. With advantages such as reduced receiver burden, high performance, and simplified transceiver design, the invention has significant potential applications in current and future wireless communication systems. FIG. 1 and FIG. 2

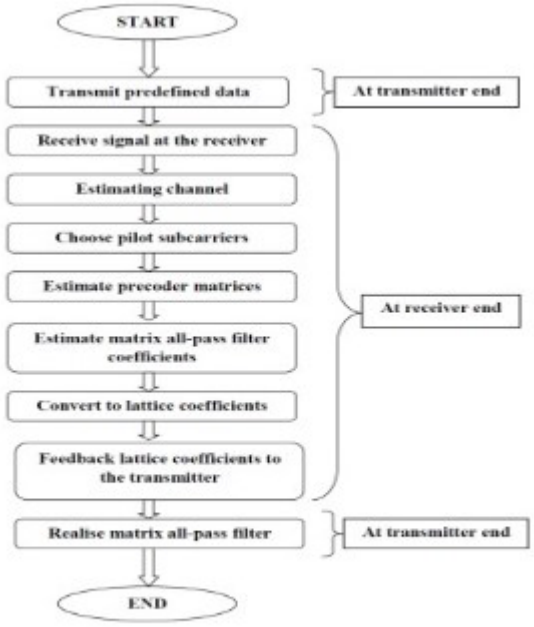

Figure 1

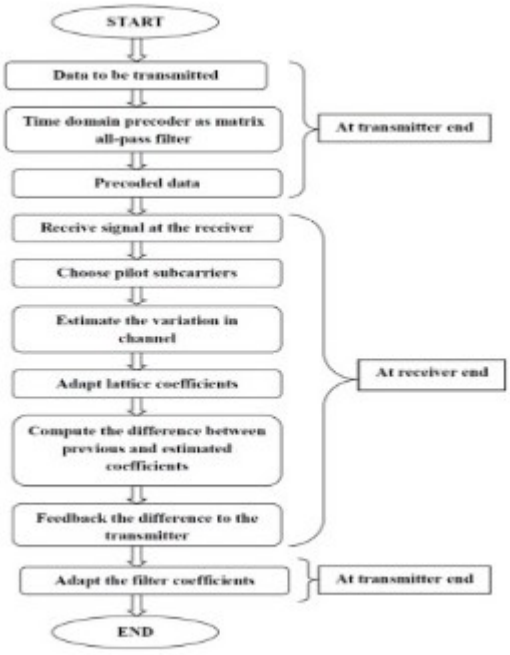

Figure 2

No. of Pages : 20 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/02/2024

(21) Application No.202421014717 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A NETWORK ARCHITECTURE FOR UNIFIED HANDLING OF SERVICES”

(51) International classification :H04L12/24, H04W24/02, H04W72/04, H04W74/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “A NETWORK ARCHITECTURE FOR UNIFIED HANDLING OF SERVICES” Embodiments herein disclose a modular, scalable, and flexible network architecture which can handle all services in a unified manner, wherein the architecture can handle built-in services in NGNs in a manner similar to application-based services by decoupling the “built-in” service handling from “network control plane” of the networks. Embodiments herein disclose the modular, scalable, and flexible network architecture, wherein the network treats all types of signaling messages as payload or data or service, and the architecture thereof. Embodiments herein disclose the modular, scalable, and flexible network architecture, wherein built-in services (such as, but not limited to, session establishment, registration (network attachment), mobility, authentication, and so on) are moved out of the control plane and as a part of the service/application plane. FIG. 1B

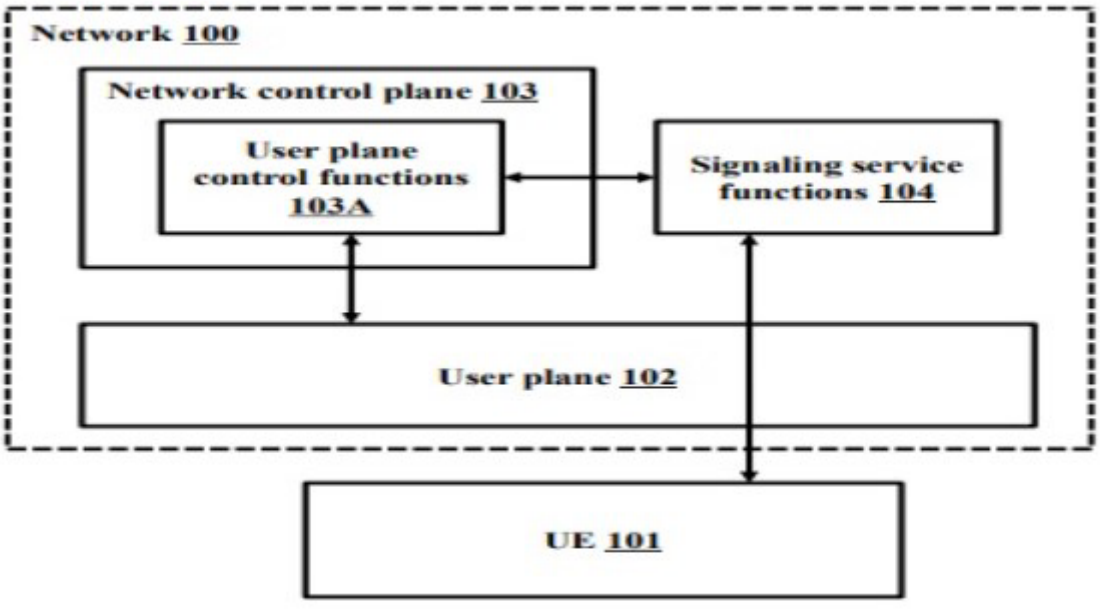

FIG. 1B

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/02/2024
(21) Application No.202421009516 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A COMPREHENSIVE SYSTEM FOR PRODUCING CROP GROWTH OPTIMIZER WITH ORGANIC AND INORGANIC WASTAGE UTILIZATION.

(51) International classification :A01G18/00, A01G18/20, A01G18/30, B09B3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: A Comprehensive System for producing crop growth optimizer with organic and inorganic wastage utilization. This invention describes an agricultural and waste management system integrating a Homogenizer, Sterilizer, and Growth Optimizer. The Homogenizer efficiently blends organic and inorganic waste into a substrate, while the Sterilizer ensures its sterility using a 316-grade stainless steel chamber and safety features. The Growth Optimizer, featuring advanced temperature control, air circulation, and electromagnetic radiation, creates optimal conditions for diverse crop growth. The system's user-friendly interface, safety mechanisms, and adaptability make it a comprehensive solution for sustainable agriculture. The versatility is exemplified by its ability to cultivate various crops, including edible mushrooms, medicinal fungi, and saffron, and support vermicomposting. This integrated system not only addresses waste management challenges but also promotes environmental sustainability and economic growth in agricultural practices.

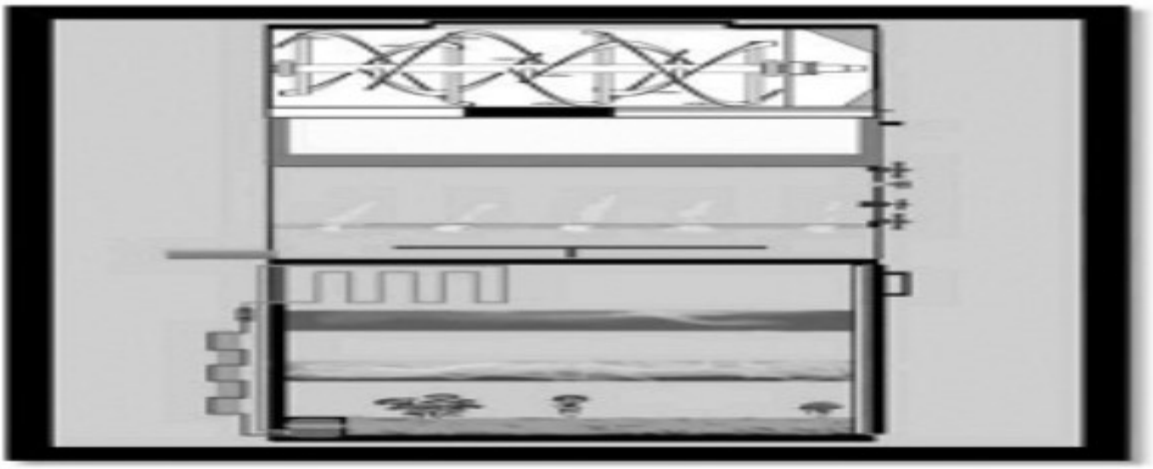

FIGURE - 1

No. of Pages : 25 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/02/2024
(21) Application No.202421009543 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR HARNESSING SOLAR HEAT AND INDUSTRIAL WASTE FOR ENERGY PRODUCTION

(51) International classification :F03G6/00, F24S10/30, F24S20/20, F24S20/30, F24S60/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a system (100) and method (200) for harnessing solar heat and industrial waste for energy production. The system (100) comprises components such as a solar collector (102), a thermal energy storage system (104), industrial waste heat recovery units (106), heat exchangers (108), a fluid circulation system (110), a power generation unit (112), a control and monitoring system (114), an integration system (116), a backup power source (118), and automation and robotics (120). Each component is configured to perform specific functions, from capturing and converting solar heat to efficiently transferring thermal energy and ensuring continuous energy supply. The method (200) details a step-by-step process, including capturing solar heat (202), storing energy (204), recovering waste heat (206), exchanging heat (208), circulating fluid (210), controlling temperature (212), utilizing combined heat (214), generating power (216), monitoring continuously (218), automating and maintaining (220), and activating backup power (222).

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/02/2024

(21) Application No.202421013903 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : “A NANOEMULSION FORMULATION COMPRISING PALIPERIDONE AND PREPARATION METHOD THEREOF”

(51) International classification :A61K31/423, A61K31/525, A61K31/722, A61K47/36, A61K8/06, A61K9/107, A61K9/113, B82Y5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “A NANO-EMULSION FORMULATION COMPRISING PALIPERIDONE AND PREPARATION METHOD THEREOF” The present invention relates to a nano-emulsion formulation comprising Paliperidone for antipsychotic activity. This particular invention also comprises of oil, charge inducer, surfactant, cosurfactant and solvent and further coated with chitosan. The invention further provides preparation method for coated nano-emulsion formulation.

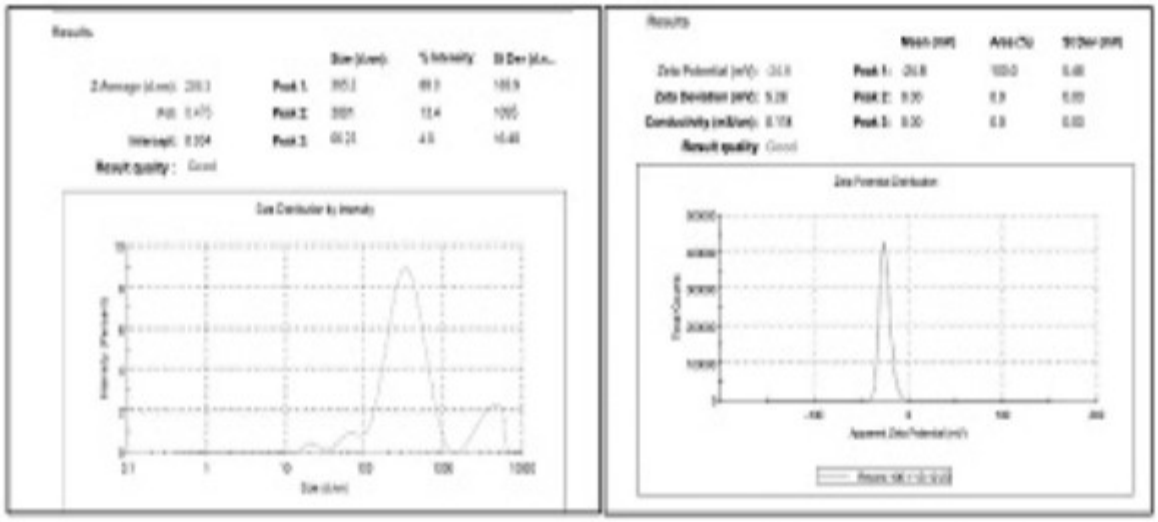

Figure 1: Particle size and Zeta potential of Paliperidone nanoemulsions before ultrasonication

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/02/2024
(21) Application No.202421014110 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A METHOD FOR MAKING POLYMER CONTAINERS WITH INNER PATTERNS AND DESIGNS

(51) International classification :B29C49/06, B29C49/08, B29C49/64, B29K67/00, B29L22/00, B65D1/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A method for making a PET container 400 including steps for melting a polymer resin 202 and flowing it through one or more conduits 206; applying stress over the molten resin in controlled manner before feeding it into forming chambers 208; allowing punch and a die of forming chamber for opening and closing and the punch to form one or more designs into inner surface of preform; passing stress-treated molten polymer into forming chamber 208 to form the preform 210; transferring the preform 210 to blowing chamber 212 for injection stretch blow molding process; blowing compressed air for giving final shape and size to the container 400; and collecting the container 400. The punch is a specially designed with one or more designs (D1, D2, Dn) to provide impressions on inner surface 406 of the container 400 in the form of embossed, debossed design, or a combination of both.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/02/2024
(21) Application No.202421013419 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PRIMERS, SPACERS, IN VITRO METHOD FOR IDENTIFICATION OF GENOMIC FRAGMENTS OF TILAPIA LAKE VIRUS

(51) International classification	:C12Q1/68, C12Q1/6806, C12Q1/686, C12Q1/6876, C12Q1/70
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT PRIMERS, SPACERS, IN VITRO METHOD FOR IDENTIFICATION OF GENOMIC FRAGMENTS OF TILAPIA LAKE VIRUS A primer-set comprising forward and reverse primers, and a spacer RNA for in vitro detection of Tilapia Lake virus genomic fragments in a nucleic acid sample, through optimal processing of the genetic material of the virus. Then, the purified product was transferred to a CRISPR/Cas12a reaction containing Cas12a, FQ- fluorophore, and quencher. Cas12a first recognizes the target region via crRNA, then, commencing the on-target cleavage. Then, this was followed by collateral activity of Cas12a that performs non-specific, that is secondary cleavage of single-stranded DNA (FQ reporter). This secondary cleavage of FQ reporter generating fluorescence emission effectively can be detected by a multi-mode microplate reader.

No. of Pages : 44 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/02/2024
(21) Application No.202421013633 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : BIOMIMETIC DUAL-SIDED SUPERHYDROPHOBIC SURFACES FOR DESALINATION AND BRINE TREATMENT

(51) International classification :B01D69/12, B01D71/34, B82Y30/00, B82Y40/00, C01B32/182, C08K3/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a dual-sided superhydrophobic Laser-Induced Graphene surface for desalination and brine treatment. The dual sided surface comprises a top layer composed of polyvinylidene fluoride (PVDF), hydrophobic fumed silica on which Laser-Induced Graphene (LIG) is fabricated; and a bottom layer composed of polyether sulfone (PES) on which Laser-Induced Graphene (LIG) is fabricated. Also modified with PVDF-modified fumed silica fabrication on opposite side. The said surface possesses excellent salt-resistant properties and electrothermal and photothermal conversion ability. Fig 1a

No. of Pages : 44 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/03/2024
(21) Application No.202421015693 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A PRESSURE CONTROL APPARATUS TO SET PEAK INSPIRATION PRESSURE FOR RESUSCITATION.

(51) International classification :A61M16/00, A61M16/06, A61M16/20, A62B7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A pressure control apparatus to set peak inspiration pressure for resuscitation. ABSTRACT Pressure control apparatus (1) to set peak inspiration pressure for resuscitation has flow control manifold (2) in piped connection with water column (3). Flow control manifold (2) in piped connection with air inlet (4). The patient outlet (5) that has piped connection towards patient (7). The distal end of the patient outlet (5) has face mask (6) that is applied to patient (7). Throttle (8) which is operable by practitioner (9). Opening (10) to receive manometer. Opening (11) that connects to proximal end of pipe (12) and distal end connects to intake (13) on water column unit (3). Water column unit (3) has lid (14), container (15), water column (16), intake (13) and outlet opening (19). The intake (13) has adjustable pipe (17) distal end (18) in the water column (16). FIGURE 1

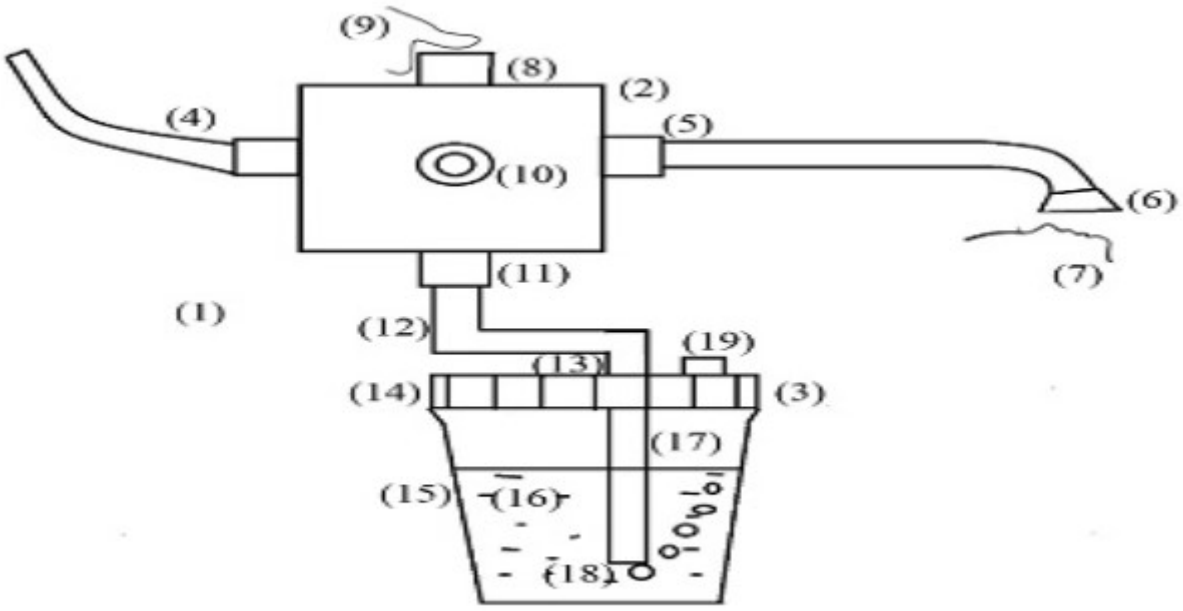

FIGURE 1

No. of Pages : 27 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/03/2024
(21) Application No.202421015994 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : TUNABLE PHANTOMS FOR MIMICKING FLOW DYNAMICS IN TURBID MEDIA

(51) International classification :G01D21/00, G01N29/24, G02B27/48, G06F17/13, G06F17/18, G09B23/28, G09B23/30, G16H50/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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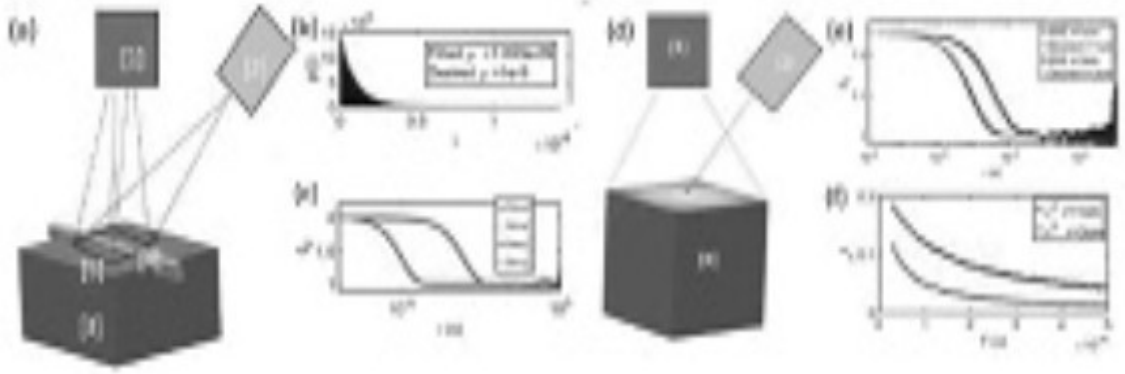
(57) Abstract :
Provided is a system and method for replicating flow within turbid media through vibrating phantoms. The system comprises a solid phantom designed to mimic the optical properties of turbid media, a vibrating platform connected to the phantom, and a signal generator configured to activate the vibrating platform based on statistical methods. This activation simulates a voltage signal with a predetermined statistical pattern selected from various statistical tools, that includes, stochastic differential equations, resulting in the vibrating platform producing vibrations in the phantoms tailored to match the chosen statistical pattern, thereby simulating flow within turbid media.

Figure 1



No. of Pages : 32 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/02/2024
(21) Application No.202421012245 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SOLVENT CASTING METHOD FOR MANUFACTURING HIGH STRENGTH HIGH DENSITY POLYETHYLENE

(51) International classification :C08J3/22, C08J5/18, C08J9/00, C08L23/04, C08L23/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Provided herein is a solvent casting method for fabricating high strength material using High Density Polyethylene (HDPE). The method involves preparing an HDPE solution suitable for composite manufacturing through a series of steps. Initially, HDPE pellets are processed into filaments using a twin extruder and subsequently chopped into small pieces of approximately 1mm size using a chopper machine. The HDPE powder is then combined with xylene in specific proportions and stirred at 900-1100rpm (110-140°C) for (1-3) hours to form a homogeneous solution. The resulting HDPE-xylene solution is poured into a petri dish and allowed to cool naturally at ambient temperature for 10-20 minutes, resulting in the formation of solvent-casted HDPE material.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/03/2024
(21) Application No.202421015487 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A NOVEL TECHNIQUE FOR DATA CLASSIFICATION IN CLOUD COMPUTING USING MACHINE LEARNING

(51) International classification	:H04L0009000000, G06F0021620000, G06N0003080000, G06N0020000000, G06N0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract This invention presents a pioneering system for automated data classification in cloud computing, seamlessly integrating advanced machine learning and homomorphic encryption. The system leverages a hybrid machine learning model, combining deep neural networks and decision trees, trained on a diverse dataset comprising both encrypted and non-encrypted data. A homomorphic encryption module ensures the confidentiality of sensitive information during classification processes. The dynamic learning mechanism allows the system to adapt to evolving data patterns, while a periodic re-encryption module maintains persistent security by updating encryption keys. The integration of a privacy-preserving feature selection mechanism further enhances the system's privacy capabilities. This innovative approach ensures accurate data classification while safeguarding the privacy of sensitive information, making it particularly valuable for applications dealing with confidential data in cloud-based environments.

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/03/2024
(21) Application No.202421017118 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR IMAGE COMPRESSION

(51) International classification	:H04N0019610000, H04N0019176000, H04N0019117000, G06T0003400000, H04N0019593000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
SYSTEM AND METHOD FOR IMAGE COMPRESSION Disclosed is a system (100) for image compression. The system (100) includes an input unit (102) and processing circuitry (104). The input unit (102) is configured to capture one or more images. The processing circuitry (104) is configured to apply first through third techniques on the one or more images. The first technique comprises a genetic technique, the second technique comprises a simulated annealing technique, and the third technique comprises a particle swarm optimization technique. The first through third techniques facilitates compression of one or more attributes of the one or more images. The processing circuitry (104) is further configured to generate toeplitz sensing matrices based on the first through third techniques such that the toeplitz sensing matrices minimizes mutual coherence function associated with the one or more images. FIG. 1 will be the reference figure.

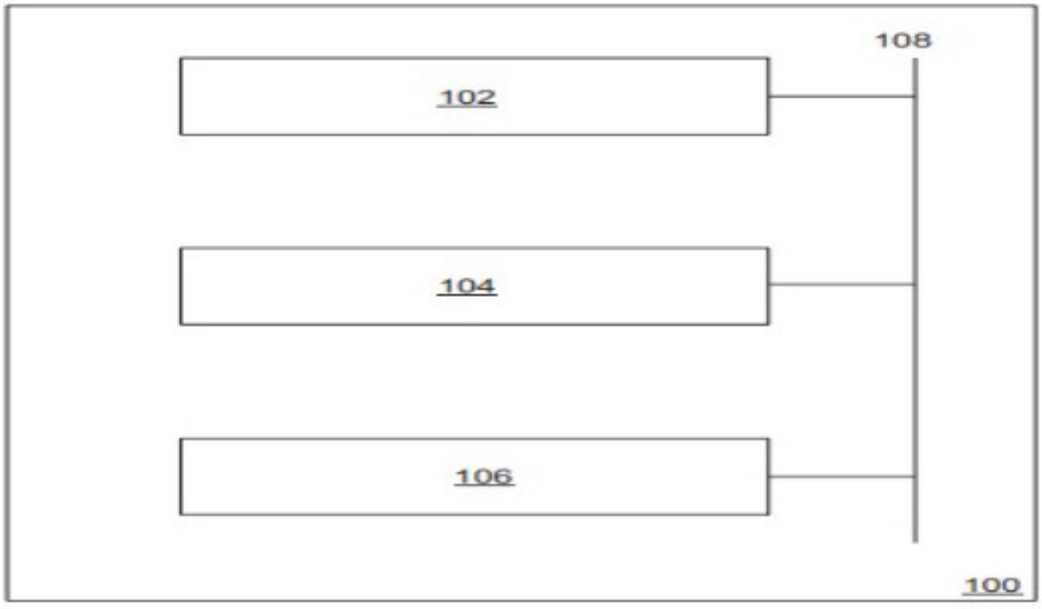

FIG. 1

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/03/2024

(21) Application No.202421017165 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : "HERBAL CHEWING GUM FOR TREATING MOUTH ULCERS"

(51) International classification	:A61K0009680000, A61Q0011000000, A61K0009080000, A23G0003360000, A61P0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the herbal chewing gum comprising of the mixture of orange oil, cottonseed oil and pumpkin seed oil incorporated into the chewing gum in the presence of pharmaceutically acceptable excipients for treating mouth ulcers and overcoming the vitamin deficiency associated with the mouth ulcer. The herbal chewing gum further enhances the pharmacological activity of antimicrobial drugs and has improved bioavailability with good patient compliance, has pleasant taste with systemic local effect

No. of Pages : 23 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/03/2024
(21) Application No.202421017391 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SOLVENT COMPOSITION AND A PROCESS FOR LITHIUM EXTRACTION FROM BATTERIES

(51) International classification :C22B3/26, C22B3/38, C22B3/40
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a solvent composition and a process for lithium extraction from batteries. A solvent composition for lithium extraction from batteries comprising organophosphorus compounds, fatty alcohol selected from 2-octanol and iso decanol; and at least one diluent. The organophosphorus compounds consisting of Di (2-ethylhexyl) phosphoric acid, and 2-ethylhexyl phosphonic acid mono-2-ethylhexyl ester; and tributyl phosphate (TBP), fatty alcohol selected from 2-octanol and iso-decanol and a diluent. The lithium is extracted in a sequence as lithium carbonate (Li2CO3) having a purity of 99.5%. The lithium is extracted from first feed after extracting aluminium, manganese, cobalt, and Nickel by the solvent extraction.

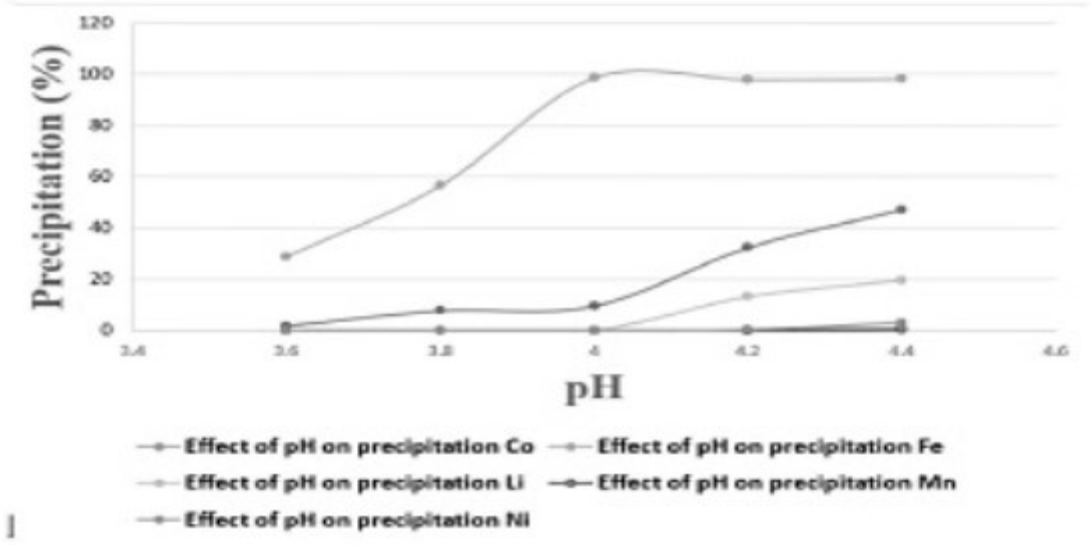

Figure 1

No. of Pages : 51 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/03/2024
(21) Application No.202421017733 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : ATMOSPHERIC PRESSURE PORTABLE CATALYTIC AIR PLASMA SYSTEM FOR SYNTHESIS OF AQUEOUS NO2 AND NO3 FERTILIZER

(51) International classification :B01D53/86, B01J19/08, B01J37/04, C05C5/00, H05H1/24, H05H1/48
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Atmospheric Pressure Portable Catalytic Air Plasma System for Synthesis of Aqueous NO2 and NO3 Fertilizer 5 The present invention relates to a revolutionary atmospheric pressure portable catalytic air plasma system designed for the rapid synthesis of aqueous NO2− and NO3− fertilizer directly from abundant natural resources such as air and water. The system comprises an air plasma torch featuring a hafnium electrode, operating within a power range of 15-25 kW, coupled with 10 a catalytic bed and mist generator enclosed within a plasma interaction chamber. Water distribution mechanisms facilitate mist generation surrounding the plasma torch exit, promoting efficient interaction with plasma constituents. The catalytic bed, housing a specially designed catalyst cartridge composed of transition metals, enables synthesis rates exceeding 15 1600 mg/min in a single-step process. The innovative design ensures atmospheric pressure operation, portability, and compatibility with intermittent renewable energy sources. Notably, the synthesized fertilizer is directly consumable, minimizing environmental pollution and eliminating greenhouse gas emissions. The system's decentralizable nature allows for on20 site installation close to agricultural fields, reducing transportation and distribution costs. Overall, this invention represents a significant advancement in fertilizer synthesis technology, offering unparalleled synthesis rate, sustainability, and environmental benefits.

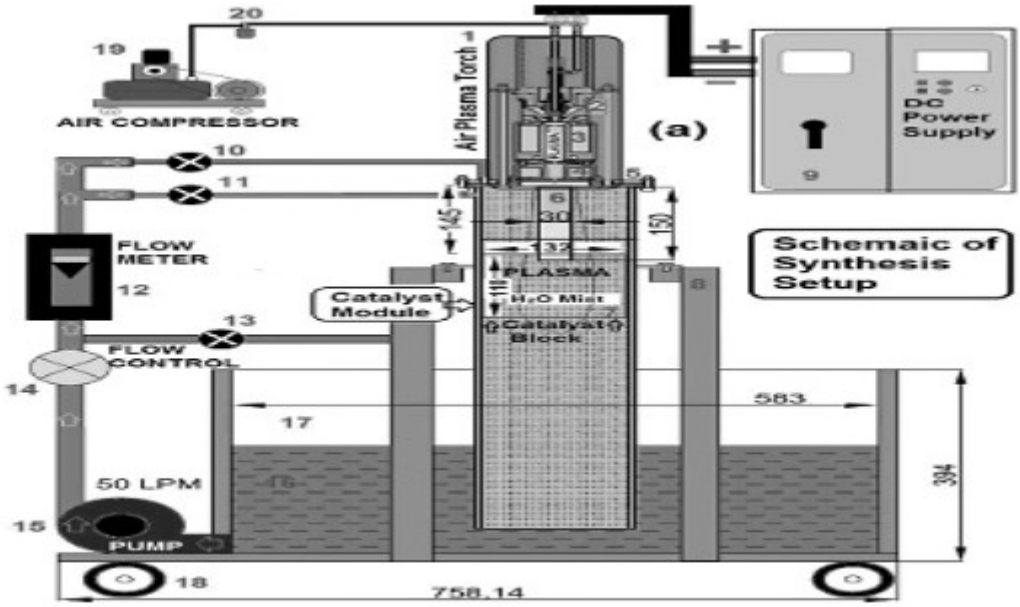

Figure-1(Part-I)

No. of Pages : 53 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/03/2024
(21) Application No.202421019897 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART PHONE CONTROLLED WHEEL CHAIR

(51) International classification :A61G5/00, A61G5/04, G05G9/047, G06F3/01
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)Mr. Ganesh D. Wagh
5)Mrs. Chetana N. Purkar
6)Mr. Maheshkumar S. Pimpale
7)Mr. Nilesh G. Dafade
8)Mr. Om Sachin Shewale
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Address of Applicant : NA
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(57) Abstract :
Title: Smart phone-controlled Wheelchair The Smart phone-controlled Wheelchair where comprises living magnet DC Motor, A driver of an automobile; a Control unit; Includes a Bluetooth interface module; Joystick; Detectors (Ultrasonic distance meter, IR range finder); A power source and Android Application. Before judging and directing wheelchair mobility, the CU received an analogue joystick, a mobile AP via Bluetooth, an ultrasonic sensor, an IR Sensor (front and escalator detector) and an H-bridge driver (fault scenarios). The CU scans the input via the joystick. If the joystick input is non-zero, the CU also analyses the input of obstacle detectors to learn about the obstacles surrounding them; If there are no obstacles, the joystick input is sent to the drivers of the H-bridge, which regulate the movement of the wheelchair

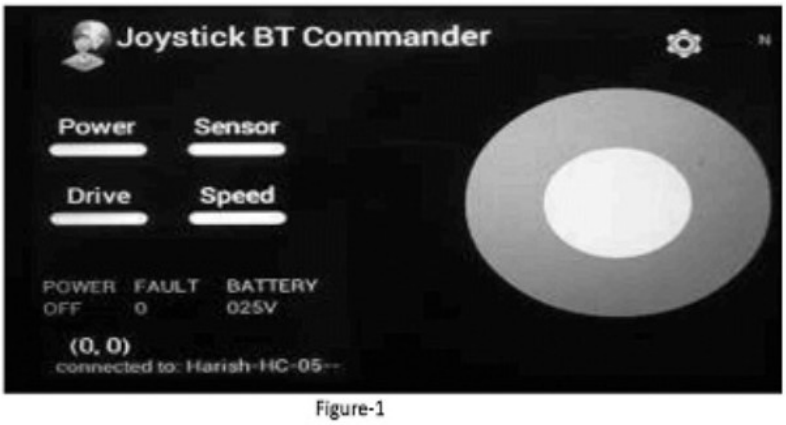

Figure-1

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/03/2024
(21) Application No.202421017986 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A COMPOSITION OF SUSTAINABLE ONE-PART ALKALI-ACTIVATED MORTAR AND BRICK MASONRY AND METHOD OF PREPARATION THEREOF

(51) International classification	:C04B14/04, C04B14/06, C04B18/14, C04B28/08, C04B33/138, C04B5/00
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
This invention presents related to a composition and method of preparation of sustainable one-part alkali-activated mortar and brick masonry. Herein to develop a sustainable building material through the utilization of industrial rejects. The process involves collecting raw materials (101), assessing their feasibility (102), conducting mix design trials for one-part alkali-activated mortar (OPAM) (103), and evaluating its performance (104). The optimum mix design is then selected to produce OPAM, which exhibits superior physical and mechanical properties compared to traditional materials like cement mortar and clay bricks. Additionally, one-part alkali-activated bricks (OPAB) are developed and evaluated for density, compressive strength, water absorption, and efflorescence (106).

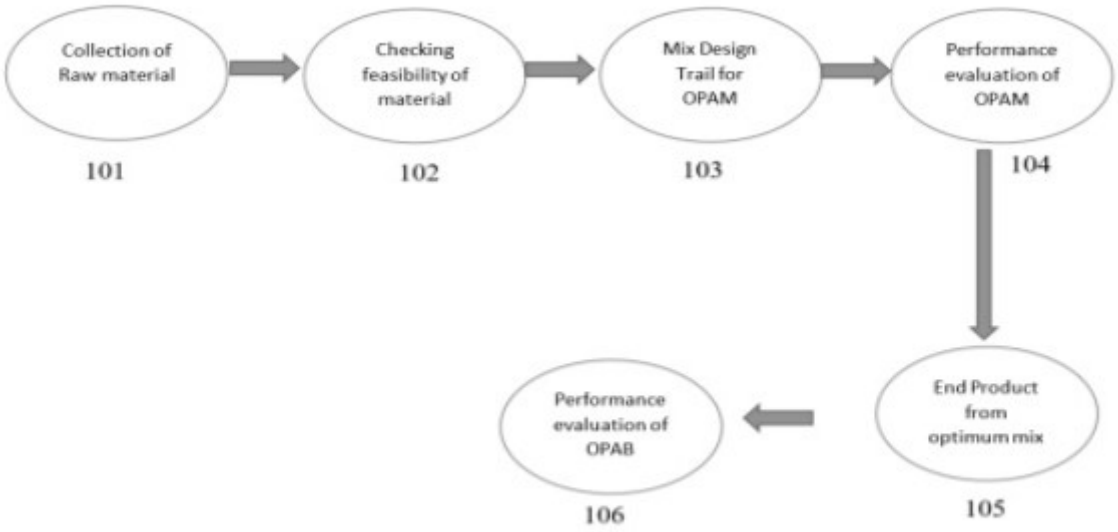

Figure 1

No. of Pages : 16 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/03/2024
(21) Application No.202421018111 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : PLASMA STERILIZATION SYSTEM AND PROCESS TO STRILIZE MEDICAL COMPONENTS AND DEVICES USING MICROWAVE SOURCE

(51) International classification :A61L0002140000, A61L0002240000, H05B0006800000, A61L0002200000, H05H0001460000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention discloses a system and a process to generate uniform 5 microwave plasma using ozonized moist air at low pressure for sterilization of medical devices. The applicability of the present disclosure includes, but not limited to, sterilization of medical equipment and devices in hospitals, bio laboratories of universities, bio safety laboratories and test facilities, pathological laboratories etc. The 10 plasma sterilization system and process as given in the present disclosure is capable of sterilizing a wide range of metallic and nonmetallic equipment such as but not limited to surgical equipment like scalpels, scissors, forceps, sutures, IV tubes, bags, syringes, stents, endoscopes, catheters etc. This microwave based plasma sterilization 15 system and process has been demonstrated for uniform inactivation of various pathogenic microbial species.

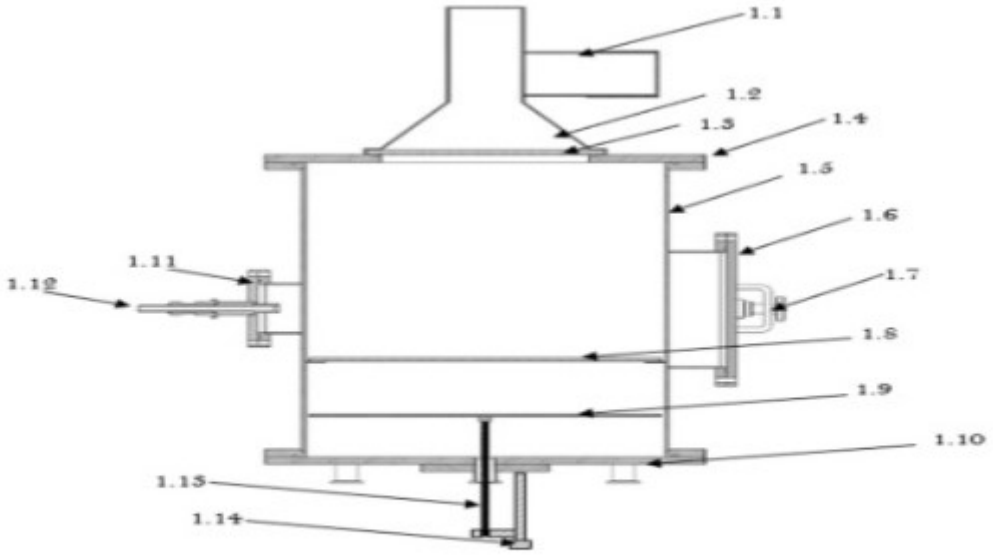

Figure 1 Sectional view of plasma sterilization chamber coupled with conical horn antenna.

No. of Pages : 38 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/03/2024

(21) Application No.202421018369 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : SMART BABY SEAT FOR AUTOMOTIVE

(51) International classification	:B60N0002280000, G08B0021240000, B60N0002000000, G08B0021220000, B60N0002900000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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8)Mr. Harshal Somnath Derle

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10)Prof. Shrihari Ravindra Upasani

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(57) Abstract :

An infant or toddler car seat is provided with smart technology to reduce or eliminate unattended child being left inside a vehicle. The car seat is programmed to alert pre inserted contacts in addition to emergency services. The number of sensors combine together, to trigger an alert that an infant or child is left inside the car on seat as soon as an electronic device wirelessly connected to the central processing unit installed inside the vehicle.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202421020556 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SYSTEM AND A PROCESS FOR COATING A FERTILIZER

(51) International classification :C05F1/02, C05F17/90, C05F9/02, C05G5/30
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SYSTEM AND A PROCESS FOR COATING A FERTILIZER The present disclosure relates to a system and a process for coating a fertilizer. The system is designed in such a way so as to achieve the required grade of the coated urea and also achieves the rate of production of sulphur coated urea fertilizer to 1.5 MT per hour. The system of the present disclosure is simple and efficient, provides urea prills having the diameter in the range of 2 mm to 3 mm and can be utilized for coating slow release fertilizers.

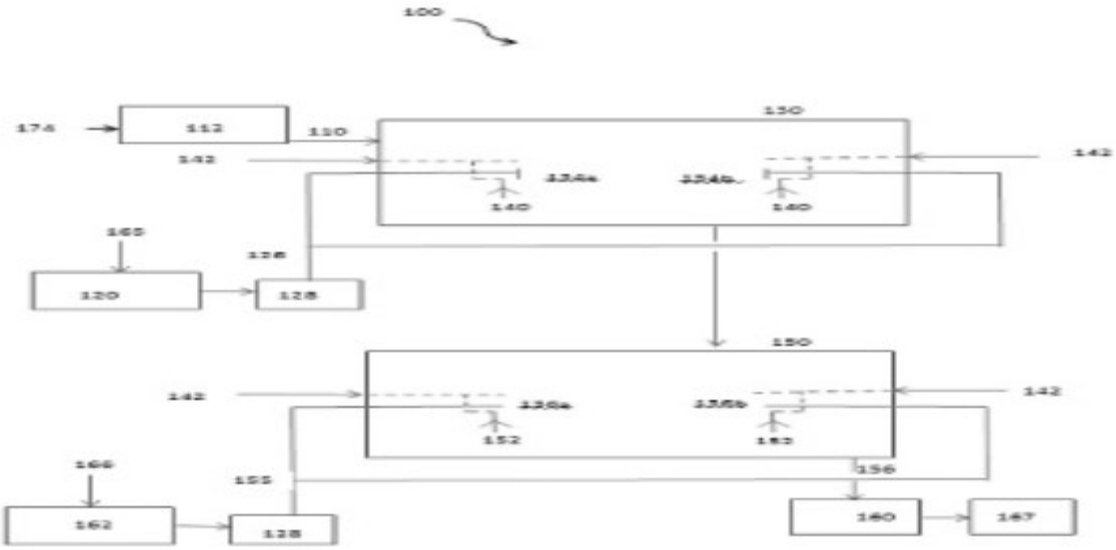

Figure 1

No. of Pages : 31 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/03/2024

(21) Application No.202421017166 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : " HERBAL TOPICAL FORMULATION FOR FUNGAL INFECTIONS "

(51) International classification :A61K36/54, A61K36/58, A61K36/8962, A61K47/00, A61K9/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the herbal topical formulation comprising of the mixture of neem oil, garlic powder, camphor oil and pharmaceutically acceptable excipients for managing fungal infections like tinea infections. The herbal topical formulation is in the form of ointment and/or cream and has anti-fungal, anti-microbial, anti-inflammatory, anti-itching and anti-irritant activity. Further the herbal topical formulation has localized effect with reduced systemic toxicity

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/03/2024
(21) Application No.202421019406 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN ADVANCED DEVICE FOR URINE OUTPUT MEASUREMENT AUTOMATION WITH ALERTS & CENTRAL DASHBOARD

(51) International classification :A61B5/20, A61J1/10, A61J1/14, A61M1/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
1)Mrs. Shilpa Vishal Naik
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(57) Abstract :
Title: “AN ADVANCED DEVICE FOR URINE OUTPUT MEASUREMENT AUTOMATION WITH ALERTS & CENTRAL DASHBOARD” 7. ABSTRACT The present invention relates to a device (100) for automated measurement of urine output in medical settings. The device (100) comprises a single hydrophobic sensor chamber (106) equipped with advanced sensor (130) technology, including infrared (IR), ultrasonic, or proximity-based or any such sensors, for precise and near real-time measurement of urine flow rates and volumes. A solenoid valve (108) assembly, operating based on the tube-pinch principle, controls the release of urine for accurate mass flow measurement (110). Clinical measurement capabilities, such as bladder pressure and intra-abdominal pressure testing, are integrated into the device for real-time monitoring of patient health. Remote control functionality, a display module for visualization of patient data, and an alert generation module for timely alarms enhance device usability and patient care. Additionally, an external sensor module enables attachment of additional sensors for comprehensive fluid intake and output monitoring. The device works on sensor cross referencing of level (130), flow (110) and weight (112) sensors for delivering more accurate results. The invention provides an efficient, accurate, and patient-friendly solution for urine output measurement, improving clinical decision-making and patient care outcomes in medical settings. The figure abstract with the abstract is Fig. 1

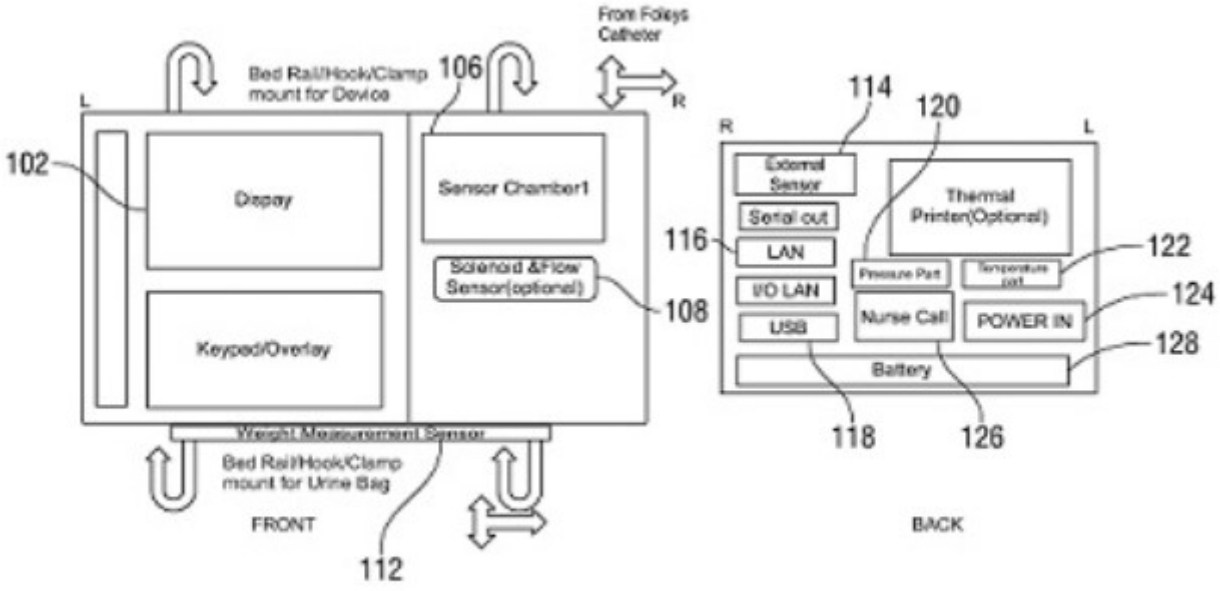

FIG. 1

No. of Pages : 35 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2024
(21) Application No.202421021356 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A COMPOSITION FOR HERBAL-BASED MULTI-FUNCTIONAL PETROL AND DIESEL ADDITIVE AND METHOD OF PREPARATION THEREOF

(51) International classification :C10L1/10, C10L1/18, C10L1/19, C10L1/30, C10M169/04, C12P7/649
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A COMPOSITION FOR HERBAL-BASED MULTI-FUNCTIONAL PETROL AND DIESEL ADDITIVE AND METHOD OF PREPARATION THEREOF Embodiments of the present invention provide a method (100) for preparing herbal-based multifunctional petrol and diesel additive. The method comprises steps of providing (102) powder composition including a first plant powder and a second plant powder; providing (104) a fruit/flower juice containing proteins, minerals, vitamins, and antioxidants; providing (106) an oil containing fatty acids; providing (108) a base oil selected from the group consisting of karanj oil, cottonseed oil, jatropha oil, castor oil, sunflower oil, neem oil, and palm oil; mixing (110) the first plant powder, second plant powder, and fruit/flower juice; drying (112) the mixture; curing (114) the dried mixture, mixing (116); and heating (118) the mixture and cooling, decanting and filtering (120) the mixture to obtain the biofuel composition. A multifunctional petrol/diesel additive comprising blend of powders, a mixture of juice, an oil extract and a base oil. [Figure 1]

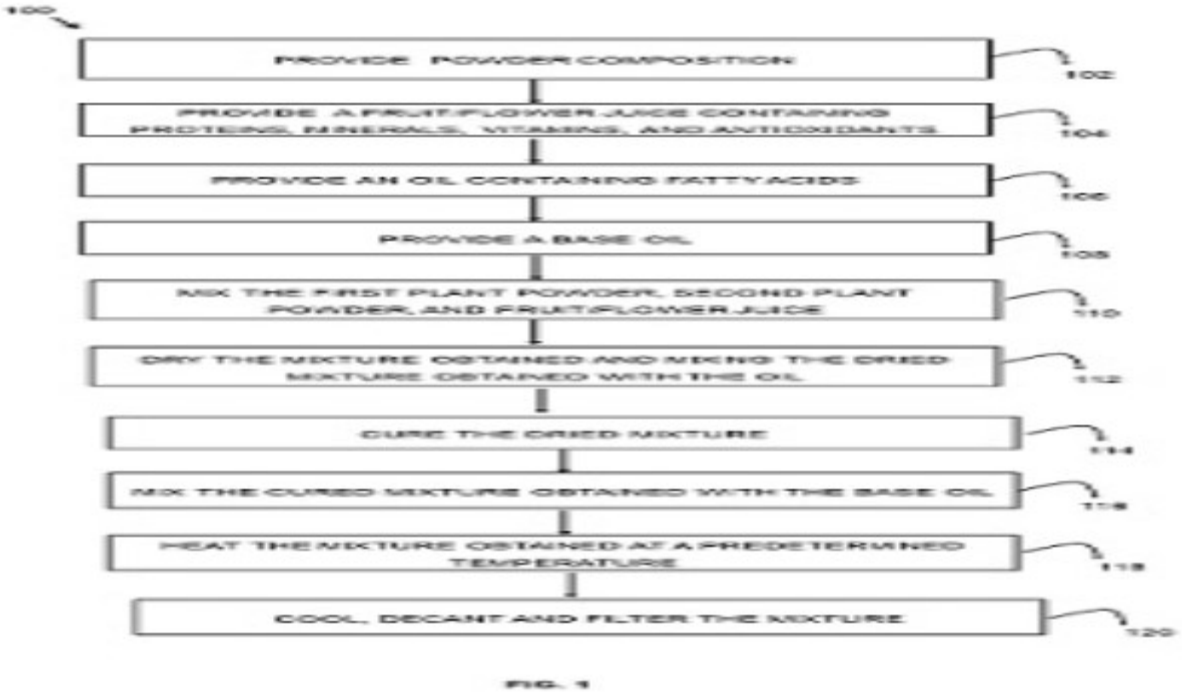

FIG. 1

No. of Pages : 33 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202421020747 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SELEGILINE LOADED MICRONEEDLE ARRAY PATCH AND PROCESS OF PREPARATION THEREOF

(51) International classification :A61M0037000000, A61K0009000000, A61K0009107000, A61K0031137000, A61K0009510000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed is a selegiline NLC loaded microneedle array patch and process of preparation thereof. The array patch with nanostructured lipid carriers improves solubility and stability of the selegiline. The process comprises preparing selegiline loaded nanostructured lipid carriers and fabricating the selegiline nanostructured lipid carrier loaded microneedle array patch.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202421020839 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : AN AUTONOMOUS BOT TO KILL PYRILLA PERPUSILLA INSECT IN SACCHARUM OFFICINARUM FARM

(51) International classification	:G05D0001020000, A01M0007000000, B64D0001180000, A01N0025020000, A01M0021040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: This invention describes an autonomous bot to combat Pyrilla Perpusilla infestations in Saccharum officinarum farms. Targeting the significant agricultural sector in India, where farming accounts for a considerable portion of the GDP, this invention addresses the technological gap in the industry. By utilizing sophisticated image sensing technology, the intelligent bot autonomously detects Pyrilla Perpusilla colonies beneath the leaves. It administers precise doses of monocrotophos and chlorpyriphos insecticides, effectively safeguarding the sugarcane crop. The device operates on a DC power supply and incorporates a camera module, a servo motor for spraying, and a motor driver for motion control. With its ability to navigate autonomously and accurately target pests, this invention minimizes pesticide wastage, enhances efficacy, and reduces the environmental impact. Additionally, it offers technical advantages such as automation, object recognition, cost-effectiveness, and ease of operation and maintenance, making it a promising solution for sustainable pest management in agricultural settings.

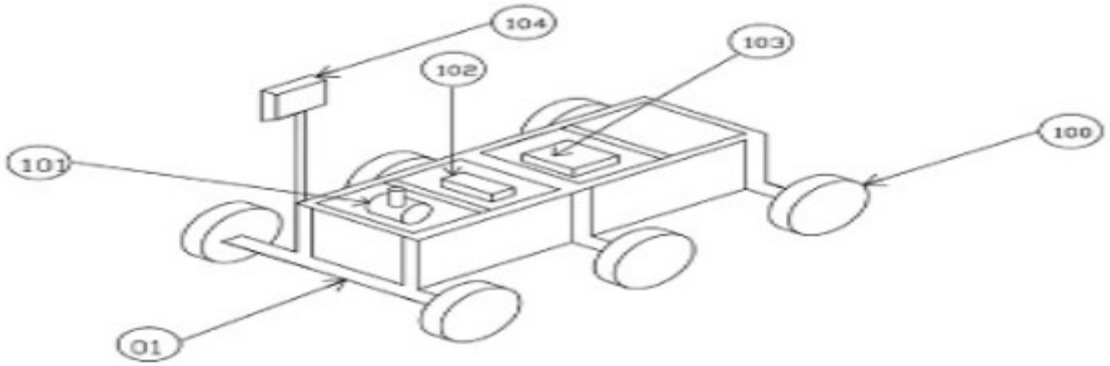

FIGURE - 1

No. of Pages : 25 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2024
(21) Application No.202421020899 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : "ENDOPHYTIC FUNGI PAEF03 EXTRACT CONTAINING NIOSOME LOADED IN VAGINAL GEL FOR PERINEAL CUT OR EPISIOTOMY"

(51) International classification	:A61P0017020000, A61K0009127000, A61K0009000000, A61K0036450000, A61P0017000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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Address of Applicant :Coinvestigator, Dr. D. Y. Patil College Of Pharmacy Akurdi Pune 411044, Maharashtra, India ---------- ----------

(57) Abstract :
The present invention relates to Endophytic fungi PAEF 03 extract containing niosomes loaded gel formulation promotes tissue regeneration and speeds up wound healing by utilizing the healing properties of nature. The present investigation offers to synthesize niosomes using PAEF3 extract which is rich source of polyphenol. Further invention relates to niosomal gel which is a comprehensive approach to healing while reducing discomfort by combining bioactive components sourced from natural sources. By means of sophisticated encapsulating technology, the gel guarantees focused distribution of these advantageous extracts, maximizing their therapeutic outcomes. With a synergistic blend of healing ingredients taken from the wonders of nature, this bio-enhanced gel promises to revolutionize wound management, from tiny cuts to chronic ulcers.

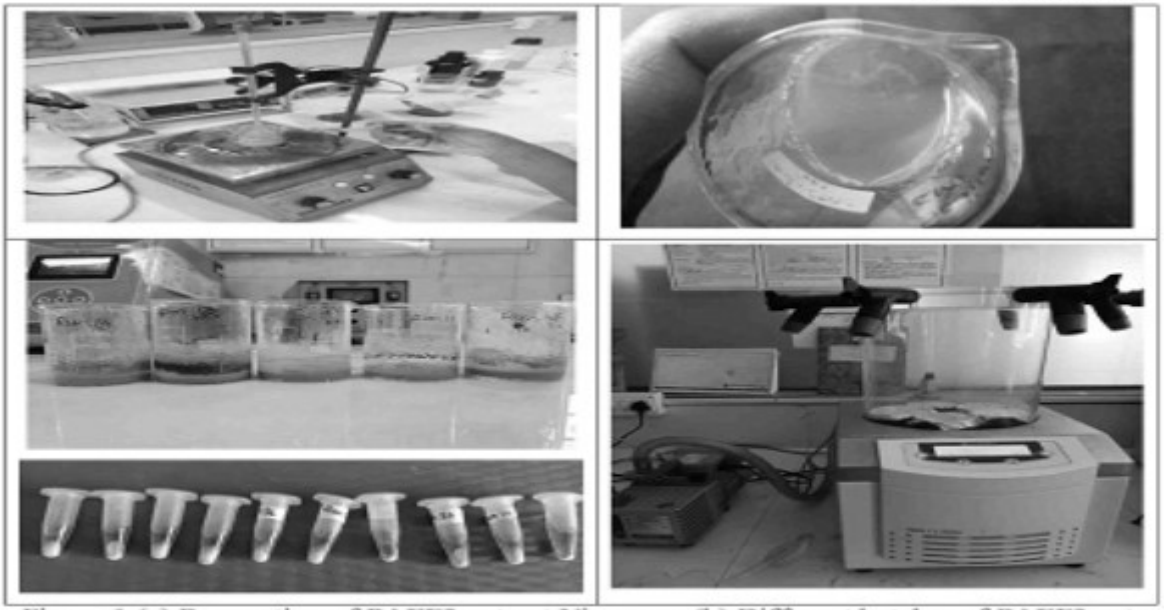

Figure 1:(a) Preparation of PAEF3 extract Niosomes (b) Different batches of PAEF3 extract Niosomes (c)Centrifuged PAEF3 extract Niosomes (d) Lyophilization of PAEF3 extract Niosomes

No. of Pages : 24 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2024
(21) Application No.202421020947 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : CART CRAZE: AI-POWERED SMART SHOPPING CART.

(51) International classification :B62B0003140000, G06Q0030060000, B62B0005060000, B62B0005000000, G06N0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT CART CRAZE: AI-POWERED SMART SHOPPING CART This invention revolutionizes shopping with an AI-powered smart cart that eliminates checkout lines. Leveraging object detection, real-time product data, and weight sensors, it empowers customers with a self-billing system. As you shop, the cart's camera captures images of each item, while weight sensors provide real-time weight verification. An intelligent AI system analyzes the data to identify products and quantities and ensures accuracy in your bill. It can even automatically remove misplaced items from the virtual shopping list. The system is very customizable and mountable to any shopping cart. The system calculates your total bill displayed on the cart's interface, allowing you to skip checkout and pay directly, saving time and enhancing your shopping experience.

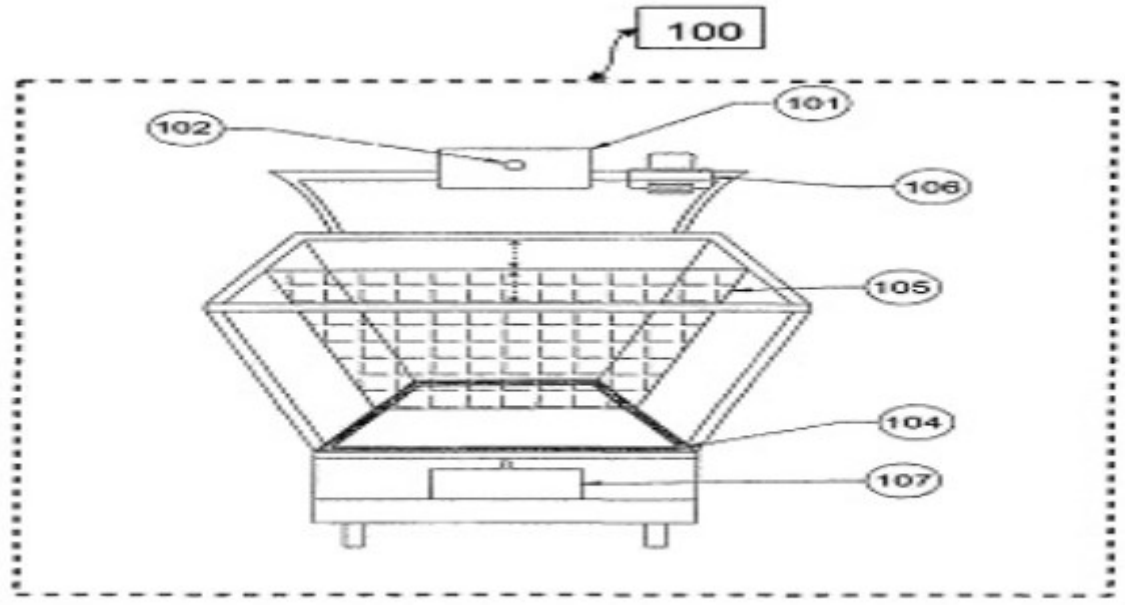

Figure 1

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/03/2024
(21) Application No.202421016630 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : A SILVER PROBE “RAJATA SHALAKA’ DESIGN AND AUTHENTICATION FOR AGNIKARMA PROCEDURE (THERMALCAUTERIZATION) TO TREAT MUSCULO-SKELETAL DISORDERS

(51) International classification :A61P0021000000, A61P0019000000, G01R0001073000, G01R0001067000, G01R0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SILVER PROBE “RAJATA SHALAKA’ DESIGN AND AUTHENTICATION FOR AGNIKARMA PROCEDURE (THERMAL CAUTERIZATION) TO TREAT MUSCULO-SKELETAL DISORDERS The current invention pertains to a precise design of a silver probe, also known as "Rajat Shalaka" to use in 'Agnikarma' procedures to treat musculoskeletal diseases. A silver probe (100) consists of a solid silver metal bullion (101) with its length 25 mm and a breadth 10 mm. The silver probe's front conical end, which features a precise 3 mm blunt tip (102), is an essential part of its design that offers maximum precisi on and greatest benefits in certain problems like paraspinal muscle spasms or cervical spondylosis in addition to other illnesses.

Fig 1

No. of Pages : 16 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/03/2024
(21) Application No.202421021088 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : INTRA ORAL X-RAY IMAGING ASSISTANCE DEVICE FOR POSTERIOR REGION

(51) International classification	:A61B0006000000, A61B0006140000, G03B0042040000, A61C0005420000, H04N0005320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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2)Ms. Ananya Ajay Bhoosreddy
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(57) Abstract :
ABSTRACT INTRA ORAL X-RAY IMAGING ASSISTANCE DEVICE FOR POSTERIOR REGION The device invention facilitates in the acquisition of correct intraoral images by ensuring proper placement of the tube head/cone and image receptor, reducing the need for repeat radiographs. The use of this equipment aids in accurate diagnosis, boosts patient comfort, saves time, and improves cost-effectiveness in dental radiography. The device assembly gives freedom of motion to the film stabilizer (103) and tube placement positioner (113), which helps to position and align both the image receptor and the x-ray tube to capture the maxillary posterior and mandibular posterior image precisely. The sliding base bar (111) comes with crucial tube shift positioning technique which aids in identifying canals during root canal treatment and structures within the jawbone. Fig. 1

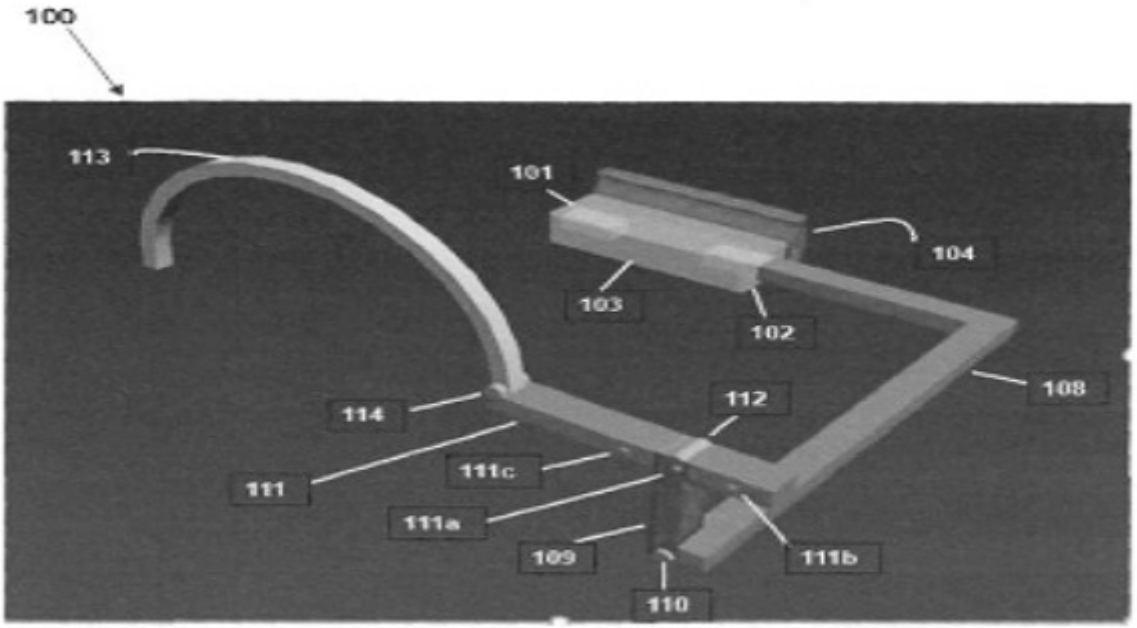

Fig 1

No. of Pages : 21 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024

(21) Application No.202421022595 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : FLOW REGULATING TYPE BANJO BOLT

(51) International classification :F16L27/093
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention whose title is "Flow regulating type banjo bolt" is relates to process of manufacturing and use of banjo bolt with, inserted and housed, specially designed disc with hole in the middle and extended legs towards one side as flow regulating device in the hydraulic system providing a compact and efficient solution for regulating fluid flow rates. By integrating flow control mechanisms directly into the banjo bolt design, this innovation 125 eliminates the need for separate flow control valves, reducing system complexity and improving space utilization. The disclosed invention comprises the process of manufacturing of novel and inventive banjo bolt with housed specially designed disc by way of forming process, and the specially designed disc acts as the flow controller during the positive and reverse flow in the system.

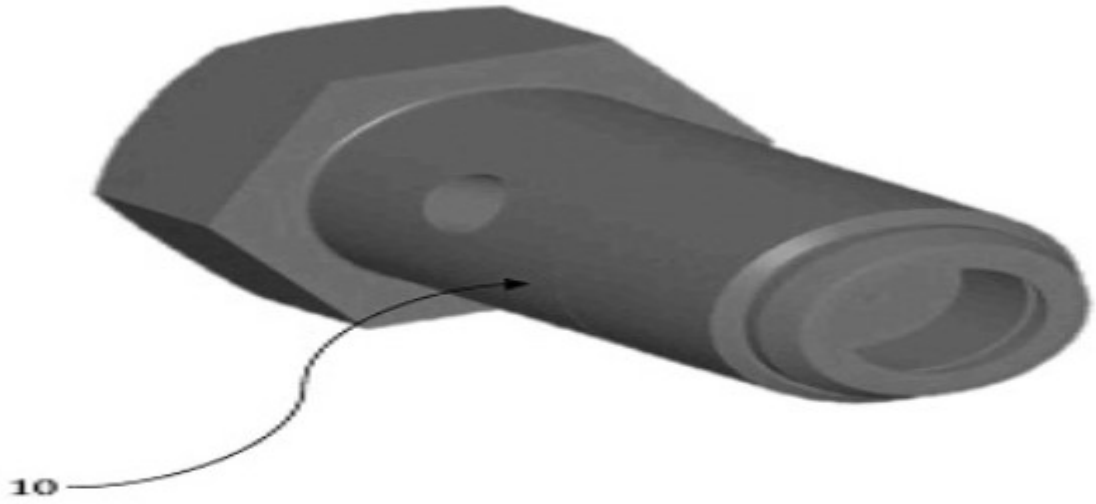

Figure 1 of 4

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/03/2024

(21) Application No.202421022611 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : AI-DRIVEN STATISTICAL ANALYSIS OF SOCIAL MEDIA DATA FOR ENHANCED EVENT PROMOTION AND AUDIENCE INTERACTION

(51) International classification :G06F17/18, G06N20/00, G06Q30/0201, G06Q50/00
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(57) Abstract :
The proposed invention introduces an innovative system for event promotion and audience interaction, leveraging artificial intelligence and statistical analysis of social media data. By harnessing sophisticated algorithms, the system analyzes vast amounts of social media content to extract actionable insights, predict audience behavior, and optimize promotional strategies. Through advanced sentiment analysis, topic modeling, and network analysis techniques, event organizers gain a comprehensive understanding of audience preferences and sentiment dynamics. Additionally, the system facilitates real-time engagement through AI-driven chatbots, interactive polls, and gamification elements, enhancing the overall attendee experience. With its transformative capabilities, this invention revolutionizes event marketing strategies, maximizing reach, engagement, and attendee satisfaction.

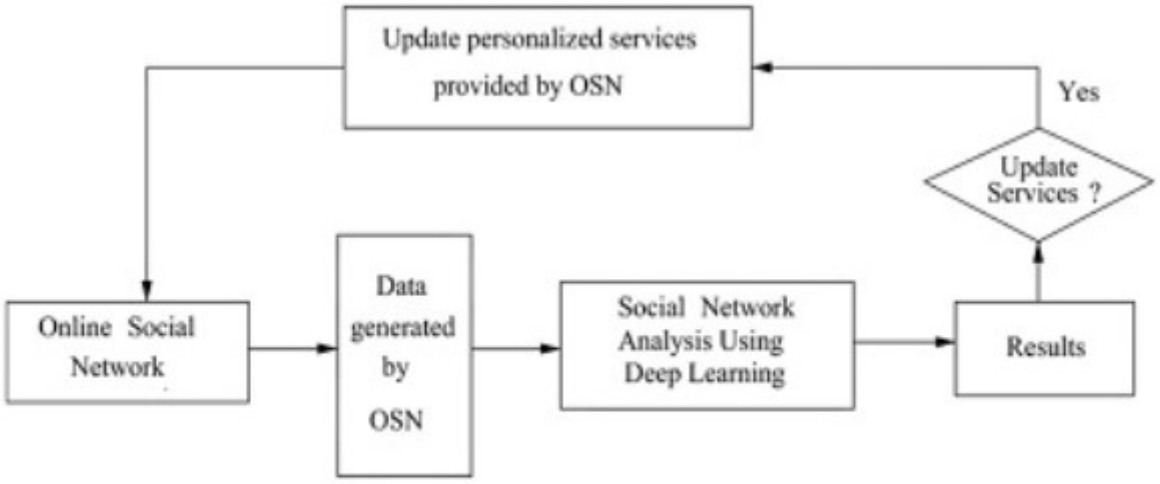

Figure 1: Functional process diagram of proposed system

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(54) Title of the invention : "INNOVATIVE AGENCY EMPOWERMENT MODEL FOR DIGITAL TRANSFORMATION SUCCESS"

(51) International classification	:G06F0021620000, A61B0005000000, G06Q0050260000, C22B0003440000, G16H0050500000
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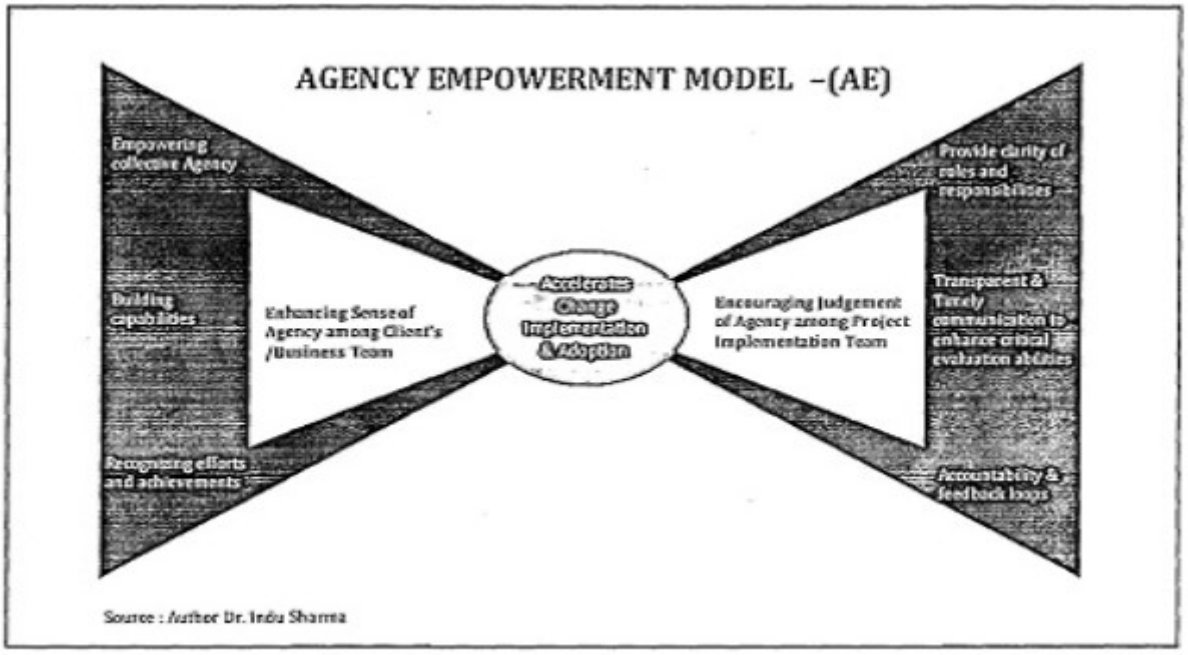
(57) Abstract :
Digital transformations are pivotal for organizations aiming for increased growth, enhanced productivity, and competitive superiority, driven by technological advancements, data digitalization, and communication innovations. However, despite significant investments to boost efficiency and market dominance, these transformations often face high failure rates due to substantial obstacles. The core challenge lies not in the technological comprehension but in overcoming human resistance, stemming from a lack of empowerment and engagement among stakeholders. Traditional change management strategies frequently fail to address this issue, leading to the stagnation of transformation efforts. The Agency Empowerment model presents a revolutionary solution by focusing on the empowerment of individuals and groups, thus facilitating successful digital transitions. This model emphasizes the importance of involving stakeholders in the transformation process and aligning their efforts with the organization's goals, fostering a sense of ownership and proactive engagement. By promoting a culture of optimism and resilience, the Agency Empowerment model significantly improves the likelihood of achieving lasting organizational change. It offers a novel approach to change management that not only addresses the traditional barriers but also establishes a new benchmark for effective and sustainable digital transformation.



Drawing 1

No. of Pages : 14 No. of Claims : 1

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(54) Title of the invention : A CYLINDRICAL JACK UP BARGE

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(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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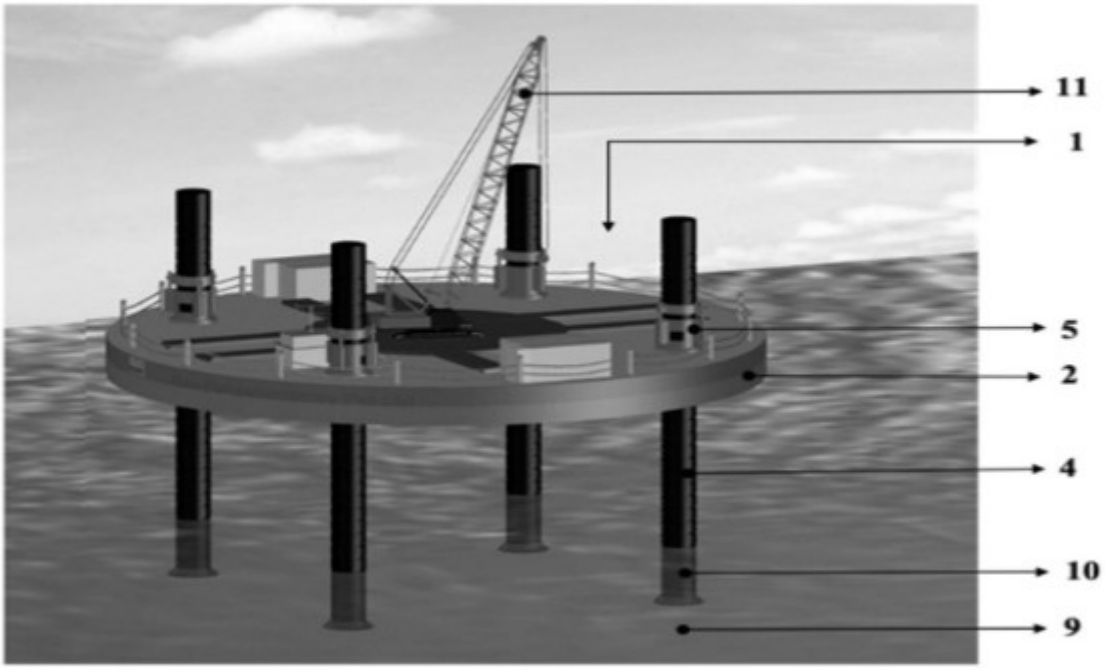
(57) Abstract :
[0041] The invention provides a cylindrical jack up barge (1) with minimum draft that reduces the impact of waves and tides. The barge has self-floating cylindrical hull (2) with a preferable height of 4.5 m and diameter of 45 m. The hull has multiple legs (4) made of high strength carbon steel to support the barge (1) when it is fixed or elevated in a specific location. The hull (2) has provisions for driving multiple piles (6), performing drilling operation for a relief well during emergency and providing offshore construction support. It has provisions for jack up systems (5) to stack the barge (1) at desired location. The hull (2) has bulkheads and tanks that provide necessary buoyancy to float the hull and store fuel and water, respectively. The barge (1) transports heavy drilling tubulars and other equipment including support for pipe laying vessel in the offshore areas.



No. of Pages : 19 No. of Claims : 4

CONTINUED TO PART- 2