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(57) Abstract :

ABSTRACT INTEGRATED ENERGY GENERATION AND MANAGEMENT SYSTEM An integrated energy generation and management system (102) for electric vehicles, comprising, a Piezoelectric Tire System (104) for harvesting mechanical strain energy from vehicle tires, a Traditional Dynamo (106) for converting mechanical energy into electrical energy, a Regenerative Braking System (108) for recovering kinetic energy during braking, a Solar Panel Array (110) for converting sunlight into electrical energy, a Hydrogen Fuel Cell and Electrolysis System (112) for generating and storing hydrogen as an energy carrier, an Electronic Management System (114) coordinating energy flow from said sources and a Power Electronic Controller (116) regulating energy conversion, distribution, and control. FIG. 1

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