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(57) Abstract :
The present disclosure provides a method (100) for information storage using negatively charged sub-atomic particle. The method (100) includes a step (102) of entrapping a negatively charged sub-atomic particle using a single electron transistor, followed by step (104) configured to determine spin state of the trapped negatively charged sub-atomic particle using a Stern-Gerlach apparatus. Step (106) of the method (100) pertains to controlling spin of the negatively charged sub-atomic particle by application of a beam of light of predetermined wavelength and a second magnetic field to the trapped negatively charged sub-atomic particle. In step (108) of the method (100), occurrence of change of spin event of the negatively charged sub-atomic particle is encoded in form of digital information comprising binary digits.

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