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Nano-electromechanical switch and its application in electronic memory

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Abstract

Nano-electromechanical switches are similar to ordinary semiconductor switches, but the performance principles of nano-electromechanical and semiconductor switch is different. Due to the optimal situation which is created in nano-electromechanical switch technology, they can be replaced to semiconductor technology. The remarkable thing in this technology is that nano-electromechanical switch structure of carbon nano-tubes will play an important role because of having exceptional physical properties in a manner which causes many improvements in the field of nano-electromechanical systems such as manufacturing different types of memory, types of sensors with ultra-high sensitivity and so on. This paper explains the application and operational process of nano-electromechanical switches as well as the performance of some types of data storage memory based on carbon nano-tubes as some samples of nanoelectro mechanical systems.

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