Review of: "Nano supercapacitors (supercapacitors or electrochemical nanocapacitors)"

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Potential competing interests: No potential competing interests to declare.

> *Note: Nanosupercapacitors, also called electrochemical supercapacitors or nanocapacitors, thus emerge as promising fuel sources with astonishingly fast charge release rates. Incredibly fast charging occurs. Created to improve power execution (high-speed capability), they still depend on similar inherent breakpoints.*

About the electrical characteristics and the manufacturing process of a nanocapacitor structure using (metal-insulator-carbon-metal nanotube layers). This structure shows high capacitance and the possibility of extremely high integration density due to the unique structure of the nanotubes. Nanoscale patterns and a high aspect ratio are obtained by electron beam lithography to make these vertical nanostructures. This structure can be used to replace capacitors that use a silicon pillar structure in dynamic random access memory (DRAM) or as a nanoscale capacitor for various nanoelectronic devices. .To build nano supercapacitors, high voltage and high energy density developed multilayer nanostructure technologies to make an improvement in capacitor performance. Controlled sputtering techniques can deposit ultra-smooth submicron layers of dielectric and conductive materials. Using this technology, high voltage nanosupercapacitors with an order of magnitude improvement in energy density may be achievable. . Dielectrics and new materials that are well understood for use with this technology. Nano supercapacitors developed with multi-layer nanostructure technology are inherently solid and show excellent mechanical and thermal properties. >Dielectric materials and exchanges design with more layers. Nanostructure multilayer capacitors will be developed and specified.One of the technologies that has grown significantly in recent years and can be the source of transformation in industries in the near future, different, including nanoelectronics, is the technology of making supercapacitors. It can be said that a supercapacitor is a kind of interface between electrolytic capacitors and rechargeable batteries. The structure and structure of nano supercapacitors based on nanoelectronics store 100 times more charge than electrolyte types in the same volume and are charged and discharged at a much faster rate than batteries. Of course, these capacitors still store up to 10 times less charge than some types of batteries in the same volume. According to these characteristics, supercapacitors are used in cases where frequent charging and discharging are required, a high charging speed is required, or a sudden discharge of the charge is required.

> *Conclusion :*

> *Nanosupercapacitors, also called electrochemical supercapacitors or nanocapacitors, thus emerge as promising fuel sources with astonishingly fast charge release rates. They were created to improve power execution (high-speed capability); however, they still depend on similar inherent breakpoints. Amazingly fast charging occurs.*

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