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Title: Capacitor Super User

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What is a supercapacitor?

A supercapacitor is a specially designed capacitor which has a very large capacitance. Supercapacitors combine the properties of capacitors and batteries into one device. Supercapacitors have charge and discharge times comparable to those of ordinary capacitors.

What is the maximum capacitance a supercapacitor can provide?

The maximum capacitance that these capacitors can provide is 1 Farad. If the higher capacitance is required, the capacitors will need to be quite large, which may or may not fit into typical electronic circuits. Enter the supercapacitor.

Are supercapacitors a battery?

That is why, despite battery-like construction, supercapacitors are classified as capacitors and not batteries. Compared to batteries, supercapacitors can go through several thousands of charge-discharge cycles. Therefore, they can serve as an excellent source of charge or power backup in battery-operated circuits.

What is the difference between supercapacitors and traditional capacitors?

Traditional capacitors generally use flat plates to store charge. The greater the surface area, the higher the capacitance, which tends to lead to larger sizes. With supercapacitors, the materials used to store charge offer a much higher surface area.

Supercapacitor construction leverages highly porous carbon materials to form electrodes that store electric charge electrostatically on its surface area. The electrode material offers a ...

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