

In this review, we first discuss the general strategies and underlying mechanisms for the fabrication of versatile carbon superstructures, such as flowers, urchins, and nanoarrays.

In a paper recently published in Nature Communications, the research team introduced a new type of carbon-based material that enables supercapacitors to store as much energy as ...

New concrete and carbon black supercapacitors with optimized electrolytes have 10 times the energy storage of previous designs and can be incorporated into a wide range of architectural ...

Conventional lithium-ion batteries contain problematic substances such as nickel and cobalt, and the solvents used to coat the electrode materials are also toxic. Materials scientists at ...

In a study published today in Nature Communications, the team reveals a new kind of carbon-based material that allows supercapacitors to store as much energy as traditional lead-acid ...

The US flow battery startup Quino Energy aims to repurpose old oil tanks for low cost, long duration clean energy storage.

This review investigates the function of carbon-based nanostructured materials in advanced energy storage systems, encompassing lithium-ion batteries (LIBs), sodium-ion batteries ...

Scientists have upgraded lithium-ion battery storage using a rust anode that reaches maximum capacity after 300 charge-discharge cycles.

That includes researchers at Massachusetts Institute of Technology (MIT), who found a way to combine cement, water, and carbon black to create a "supercapacitor" for this purpose back in ...

Supercapacitors are promising electrochemical energy storage devices due to their high power density, fast charge-discharge kinetics, and long cycle life. However, the use of conventional ...

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