

New super stretchable capacitor

Fiber-type solid-state supercapacitors are being widely investigated as stable power supply for next-generation wearable and flexible electronics. Integrating both high charge storage ...

After the 10th healing cycle, the super-capacitor was able to withstand up to 180% tensile strain and retain 80.2% of its capacitance. Another effective way to improve stretchability and ...

A stretchable, fully self-healable, temperature-tolerant, and water-proof supercapacitor using TUEG3 capped gold nanosheets on oxime-carbamate bonded polyurethane film and ...

The as-assembled all-in-one flexible supercapacitor can be easily stretched, twisted, folded, bent, compressed and stored for long time, which provides a new way to deal with most all-in ...

This work presents a novel approach for designing and constructing advanced hydrogel electrolytes as well as stretchable/compressible supercapacitors.

Electrochemical capacitors are known for their fast charging and superior energy storage capabilities and have emerged as a key energy storage solution for efficient and sustainable power ...

These materials may bring about effective charge transfer mechanisms and completely transform stretchable supercapacitors. Therefore, exploring the application of emerging materials in ...

Here, we present a tough hydrogel-based supercapacitor (THBS) fiber, fabricated via a thermal drawing process (TDP), that enables the integration of all components--electrodes, ...

In this review, the unique mechanical properties, structural designs, and fabrication methods of each flexible component are systematically classified, summarized, ...

Despite their advantages in power management and cycle life, supercapacitors currently have a lower energy density compared to batteries, limiting their use as a sole energy storage solution in many ...

In this review, the unique mechanical properties, structural designs, and fabrication methods of each flexible component are systematically classified, summarized, and discussed based on the recent ...



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