

The N-doped carbon fiber material was then treated further via ion implantation of nickel ions to improve its performance as an electrocatalyst. ... In addition, hollow carbon nanospheres have ...

Application of carbon fibers to flexible, miniaturized wire/fiber-shaped energy conversion and storage devices . Xin Cai, a Chaoqun Zhang, a ... CF-based wire/fiber energy devices including fiber nanogenerators, wire/fiber solar cells, ...

As a promising candidate for future demand, fiber-shaped electrochemical energy storage devices, such as supercapacitors and lithium-ion batteries have obtained considerable ...

The successful implementation of structural batteries in diverse applications, including automobiles and aircraft, necessitates the development of lightweight composite materials with ...

An ecologically mindful alternative for fulfilling the energy requisites of human activities lies in the utilization of renewable energies. Such energies yield a diminished carbon ...

DOI: 10.1016/j.est.2024.110931 Corpus ID: 267744617; Carbon fiber-reinforced polymers for energy storage applications @article{Ismail2024CarbonFP, title={Carbon fiber-reinforced ...

The multifunctional performance by introducing carbon fiber and other reinforcement components; (A, B) the mechanical strength comparison before and after embedding carbon fibers in the ...

He is now a postdoctoral associate at Institute of Advanced Materials, Beijing Normal University. His current research focuses on synthesis and application of carbon materials and metal ...

A composite flywheel usually includes several different materials such as carbon fiber, glass fiber, and epoxy. ... High-efficiency bidirectional converter for flywheel energy ...

Herein, we demonstrate the formation of fiber electrodes on a carbon fiber (CF) bundle with a surface that is mesostructured by single-walled carbon nanotubes via colloidal self-assembly. The three-dimensional ordered ...

In today's nanoscale regime, energy storage is becoming the primary focus for majority of the world's and scientific community power. Supercapacitor exhibiting high power ...

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