Graphite electrode materials for flow batteries

To address the issue, in this work, the rich active site-NiMoO 4 nanorods were used to in situ modify graphite felt for high-performance VRFB.

We report a novel electrode design based on sustainable fructose-derived porous carbon spheres (F-PCS) uniformly deposited on graphite felt (GF) through a simple hydrothermal method, ...

The modified graphite felt owns multiple-dimensioned defects, including micropore, O-containing group, and N doping, as well as derived structure defect, resulting in improvement of ...

Metal-free fabrication of nitrogen-doped vertical graphene on graphite felt electrodes with enhanced reaction kinetics and mass transport for high- performance redox flow batteries.

Among carbon substrates, graphene, carbon nanotubes (CNTs), and highly crystalline graphite are prioritized for their outstanding conductivity; among metals, Cu, Ni, and Ag are excellent conductors ...

In this paper, we present a combined approach that utilizes Fe etching and nitrogen functionalization by means of K 2 FeO 4 and NH 3 to modify the surface structure of graphite fibers.

In the research field of all-vanadium redox flow batteries (VRFBs), the quality of electrode materials is a decisive factor in overall battery performance [1, 2]. With the increasing demand for energy storage, ...

In this study, we employed KOH as an etching agent to improve the electrochemical properties of GF by introducing micropores and oxygen-containing functional groups on its surface, thereby enhancing its ...

Developing efficient electrode is a promising method to improve the battery performance. In this work, a reduced graphene oxide/Mxene hybrid-decorated graphite felt (rGO/Mxene@GF) is ...

In this work, the kinetics of redox reactions relevant to the VO2+/VO2+ reaction have been studied with these treated electrodes and the relationship between the nature of the surface and ...

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