

Carbon felt for all-vanadium redox flow batteries





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A newly prepared type of carbon felt with oxygen-rich phosphate groups is proposed as a promising electrode with good stability for all-vanadium redox flow batteries ...

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Employing electrolytes containing Bi^{3+} , bismuth nanoparticles are synchronously electrodeposited onto the surface of a graphite felt electrode ...

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[Three-dimensional mesoporous graphene-modified carbon felt for ...](#)

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[Characterization of Carbon Felt Electrodes for ...](#)

Although the treatment methods were studied to some extent in literature, this work combines several characterization techniques and ...

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[Outstanding electrochemical performance of a graphene-modified ...](#)

The development of more efficient electrode materials is essential to obtain vanadium redox flow batteries (VRFBs) with enhanced energy densities and to make these ...

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[Characterization of Carbon Felt Electrodes for Vanadium Redox Flow](#)

By nature, many renewable energy sources like wind and solar power plants have a fluctuating energy output. Redox flow batteries (RFBs) are a promising technology to ...

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[Carbon felt coated with tungsten-bismuth-based oxides as highly ...](#)

Carbon felt coated with tungsten-bismuth-based oxides as highly active and selective negative electrodes for high power density all-vanadium redox flow batteries +. All ...

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[Performance Enhancement of Vanadium Redox Flow Battery by ...](#)

A high-performance carbon felt electrode for all-vanadium redox flow battery (VRFB) systems is prepared via low-temperature atmospheric pressure plasma treatment in air to improve the ...

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[All-vanadium redox flow batteries](#)

The most commercially developed chemistry for redox flow batteries is the all-vanadium system, which has the advantage of reduced effects of species crossover as it ...

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[Binder-Free CNT-Modified Excellent Electrodes for All-Vanadium Redox](#)

Electrodes are one of the key components that influence the performance of all-vanadium redox flow batteries (VRFBs). A porous graphite felt with modified fiber surfaces that ...

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Improving the performance of negative electrode for vanadium redox flow

The inherent disadvantages of untreated carbon felt (pristine-CF) still restrict the vanadium redox flow battery (VRFB) from further improving in electrochemical performances. ...

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[Compressed composite carbon felt as a negative electrode for a ...](#)

Carbon felt (CF) electrodes are commonly used as porous electrodes in flow batteries. In vanadium flow batteries, both active materials and discharge products are in a ...

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Graphene-Nanowall-Decorated Carbon Felt with Excellent Electrochemical

Abstract 3D graphene-nanowall-decorated carbon felts (CF) are synthesized via an in situ microwave plasma enhanced chemical vapor deposition method and used as ...

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[Superior Electrocatalytic Activity of a Robust ...](#)

A newly prepared type of carbon felt with oxygen-rich phosphate groups is proposed as a promising electrode with good stability for all ...

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[Graphene-Nanowall-Decorated Carbon Felt with ...](#)

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A high-performance carbon felt electrode for all-vanadium redox flow battery (VRFB) systems is prepared via low-temperature atmospheric ...

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Although the treatment methods were studied to some extent in literature, this work combines several characterization techniques and provides a comprehensive overview of ...

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Vanadium redox flow batteries (VRFBs) hold significant promise for large-scale energy storage applications. However, the sluggish reaction kinetics on the electrode surface ...

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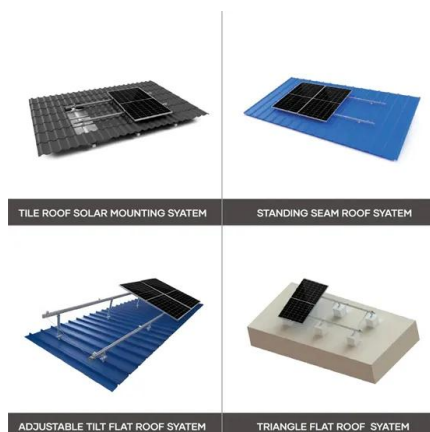
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[Improving energy storage properties of carbon felt electrodes for](#)

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...

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[Analysis of the electrochemical performance of carbon felt ...](#)

In the present research, the performance of three commercial graphite felts (a 6 mm thick Rayon-based Sigracell®, a 4.6 mm thick PAN-based Sigracell®, and a 6 mm thick PAN ...

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N, O Co-doped carbon felt for high-performance all-vanadium redox flow

Herein, we, for the first time, successfully prepared N, O co-doped carbon felt (CF) by plasma treatment as electrodes in all-vanadium redox flow batteries (VRFB).

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[A new strategy for integrating abundant oxygen functional groups ...](#)

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