Surface treatment for electrochemical energy storage

Foam structure is a three-dimensional (3D) porous skeleton, which has been widely studied in the field of electrochemical energy storage due to its excellent structural ...

The rapid depletion of fossil fuels has catalysed the research on alternative renewable energy resources and energy storage devices. Electrochemical e...

The preparation of MXene-based heterostructures composite has been recently investigated as a potential nanomaterial in energy storage. Herein, we provided an overview of ...

Thus, the modification of surface coatings can significantly improve the surface properties of energy storage materials, such as enhancing the conductivity, stability and cycle life of ...

Here, we briefly describe the structures of PB/PBAs and their derivatives followed by a comprehensive review on recent studies of their use in electrochemical energy storage ...

The development of new energy storage technology has played a crucial role in advancing the green and low-carbon energy revolution. This has led to significant progress, ...

In this review, we focus on nanoporous anode fabricated by chemical and electrochemical dealloying, specifically for energy storage applications like LIBs, ZIBs, SIBs, ...

A rational design and treatment method for stainless steel-based electrodes in (photo)electrochemical water splitting, green energy storage and conversion systems, ...

This work describes about the preparations of 3D printed electrochemical energy storage devices such as supercapacitors and batteries using 3D printing techniques, for ...

Abstract Surface treatment by the fluorination treatment with an aqueous solution of KF and HF with a little addition of KBH 4 followed by electroless Ni-P plating has been ...

Coating the surfaces of active masses and auxiliary components in devices of electrochemical energy technology with graphene and closely related materials has been ...

The mesoporous framework of DE, often defined by pores with diameters between 2 and 50 nm, provides a substantial surface area, a fundamental element for charge ...

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In addition, the carbon surface chemistry can be tuned by functionalization with surface groups and/or by doping with heteroatoms, in order to suit specific applications. ...

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Hierarchical porous carbon aerogels derived cellulose with high surface area for electrochemical energy storage Xu Wang, Quan Gao, Yongfa Zhou, Zhihan Wang Show ...

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