Xia hongyan hybrid energy storage

Tuning MOF-Derived Co 3 O 4 /NiCo 2 O 4 Nanostructures for High-Performance Energy Storage. Ali Rashti. Ali Rashti. Department of Chemical Engineering, Auburn University, Auburn, Alabama 36849, United States ... Hongyan Li, Yuanyuan Han, Lisha Xu, Su Sheng, Hongri Liu, ... Jingjing Xia, Liuming Zhang, Shouguo Xuan, ...

Hongyan Xia; Jiajia Li; Kai Wang; Xinguang Hou; Ting Yang; Jiajun Hu; Zhongqi Shi; Superior wear resistance of epoxy composite with highly dispersed graphene spheres, Advanced Composites and Hybrid Materials, 2021, /: /. ..., Advanced Composites and Hybrid Materials, 2021, /: /. ... A green-synthetic spiderweb-like Si@Graphene-oxide anode ...

In this work, a new type of hybrid energy storage device is constructed by combining the zinc-ion supercapacitor and zinc-air battery in mild electrolyte. Reduced graphene oxide with rich defects, large surface area, and abundant oxygen-containing functional groups is used as active material, which exhibits two kinds of charge storage mechanisms of capacitor and battery ...

Hongyan Xia"s 6 research works with 69 citations and 278 reads, including: Superior wear resistance of epoxy composite with highly dispersed graphene spheres ... or graphene-based hybrid ...

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Membranes with high ion selectivity and conductivity are critical for the wide application of electrochemical energy conversion and storage devices. Herein, functional molecular cross-linked two-dime...

The vanadium redox flow battery (VRFB) is a large-scale energy storage technique and has been regarded as a promising candidate to integrate intermittent renewable energy with the grid. Its long-term stability has so far been limited by the core component, an ion exchange membrane with low ion selectivity. Here a hybrid membrane with superhydrophilic ...

The electrochemical profiles of three kinds of Li-ion intercalated compounds,, and, used as positive electrodes for hybrid aqueous electrochemical supercapacitors in combination with activated carbon (AC) negative electrode were studied in a solution. The effects of pH in the electrolyte solution on the stability of Li-ion intercalation reaction, the evolution ...

Study of the oversized capacity and the increased energy loss of hybrid energy storage systems and design of an improved controller based on the low-pass filter Yang Jiao, Daniel Månsson Article 104241

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Zinc-air batteries deliver great potential as emerging energy storage systems but suffer from sluggish kinetics of the cathode oxygen redox reactions that render unsatisfactory cycling lifespan. The exploration on bifunctional electrocatalysts for oxygen reduction and evolution constitutes a key solution, where rational design strategies to ...

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Polymeric membranes with aligned zeolite nanosheets for sustainable energy storage. Yongsheng Xia, Hongyan Cao, Fang Xu, Yuxin Chen, Yu Xia, Dezhu Zhang, Liheng Dai, Kai Qu, Cheng Lian, Kang Huang (), Weihong Xing, Wanqin Jin and Zhi Xu () Additional contact information Yongsheng Xia: Nanjing Tech University

The vanadium flow battery (VFB) as one kind of energy storage technique that has enormous impact on the stabilization and smooth output of renewable energy. Key materials like membranes, electrode, and electrolytes will finally determine the performance of VFBs. In this Perspective, we report on the current understanding of VFBs from materials to stacks, ...

Membrane possessing high ion selectivity and proton conductivity is of great importance to the proper operation of energy storage techniques. Hereon, a hybrid membrane was prepared by doping polydopamine (PDA) modified MOF-808 into the sulfonated poly (ether ether ketone) (SPEEK) matrix.

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