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????: xzchen@fudan .cn. ... Nano Energy 2023, 108, 108202. LINK ... Hu W. B.; Li, H. T., Evolution of nano-polar phases, interfaces and increased dielectric energy storage capacity in photoinitiated cross-linked Poly(vinylidene fluoride)-based copolymers. Colloid and Polymer Science 2013, 291 (8), 1989-1997.

Deliberate design of advantageous nanostructures holds great promise for developing high-performance electrode materials for electrochemical energy storage. However, it remains a tremendous challenge to simultaneously gain high gravimetric, areal, and volumetric capacities as well as high rate performance and cyclability to meet practical requirements ...

He is currently co-Editor-in-Chief of Nano Advances (ISSN 2415-1386) and editorial member of Scientific Reports. He has strong backgrounds in high-throughput screening of energy conversion and storage materials, electrochemical energy devices, and their scale-up and commercialization.

The lack of safe and efficient hydrogen storage is a major bottleneck for large-scale application of hydrogen energy. Reversible hydrogen storage of light-weight metal hydrides with high theoretical gravimetric and volumetric hydrogen density is one ideal solution but requires extremely high operating temperature with large energy input.

Zhonghui Chen, Xuhui An, Liming Dai*, Yuxi Xu*, "Holey Graphene-based Nanocomposites for Efficient Electrochemical Energy Storage", Nano Energy 2020, 73, 104762. 28. Minmin Fan, Dankui Liao, Mohamed F. Aly Aboud, Imran Shakir, Yuxi Xu*, "A Universal Strategy toward Ultrasmall Hollow Nanostructures with Remarkable Electrochemical ...

?SJTU, Stanford University, University of Maryland, HUST? - ??Cited by 12,994?? - ?(Solid-state) Energy Storage? - ?Nanotechnology? - ?Composite Materials? - ?Advanced Characterizations? - ?Advanced Manufacturing?

Realizing All-Climate Li-S Batteries by Using a Porous Sub-Nano Aromatic Framework. Dr. Jie Xu, ... Institute of New Energy, iChEM (Collaborative Innovation Center of Chemistry for Energy Materials), Fudan University, Shanghai, 200433 China. School of Materials Science and Engineering, Anhui University of Technology, Maanshan, 243002 China ...

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Nano Energy 71, 104614 (2020) Ming-Hui Cao, Zulipiya Shadike, Seong-Min Bak, Tian Wang, Enyuan Hu, Steven Ehrlich, Yong-Ning Zhou*, Xiao-Qing Yang*, Zheng-Wen Fu*. Sodium storage property and mechanism of NaCr1/4Fe1/4Ni1/4Ti1/4O2 cathode at ...

Nano Energy, 2021, 89. 106348 >> Fulltext Link. 761: Hierarchically Porous Silica Membrane as Separator for High-Performance Lithium-Ion Batteries Jing Wang, Yupu Liu, Qingfu Cai, Angang Dong, Dong Yang*, Dongyuan Zhao ... Energy Storage Mater, 2019, 19, ...

An in-depth understanding of the charge storage mechanism and the structure-property relationships of the COF electrodes is subsequently provided, highlighting their designing strategies in the latest energy storage applications.

Thick electrode with thickness-independent capacity enabled by assembled two-dimensional porous nanosheets, Energy Storage Materials, 2021, 36, 265-27. Long Zhang#, Yicheng Liu#, Zedong Zhao, Peilu Jiang, Teng Zhang, Mengxiong Li, Shaoxue Pan, Tianyu Tang, Tianqi Wu, Peiying Liu, Yanglong Hou*, Hongbin Lu* .

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He is currently Postdoctoral fellow at the Micro-Nano System, SIST, Fudan University, Shanghai and visiting Research fellow at Graphene & Advanced 2D Materials Research Group, Sunway University, Malaysia. ... especially electrochemical energy storage (Superacpacitors), conversion (solar cells), and electrochemical sensing applications. ...

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