**Energy Storge Materials and Devices**

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Nano-Micro Lett. 16, 215 (2024). <https://doi.org/10.1007/s40820-024-01418-0>

1. **Amorphous Iridium Oxide-Integrated Anode Electrodes with Ultrahigh Material Utilization for Hydrogen Production at Industrial Current Densities (Article)**

Lei Ding, Kui Li, Weitian Wang, Zhiqiang Xie, Shule Yu, Haoran Yu, David A. Cullen, Alex Keane, Kathy Ayers, Christopher B. Capuano, Fangyuan Liu, Pu-Xian Gao & Feng-Yuan Zhang

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1. **Dual-Defect Engineering Strategy Enables High-Durability Rechargeable Magnesium-Metal Batteries (Article)**

Fuyu Chen, Bai-Qing Zhao, Kaifeng Huang, Xiu-Fen Ma, Hong-Yi Li, Xie Zhang, Jiang Diao, Jili Yue, Guangsheng Huang, Jingfeng Wang & Fusheng Pan

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1. **Dilute Aqueous-Aprotic Electrolyte Towards Robust Zn-Ion Hybrid Supercapacitor with High Operation Voltage and Long Lifespan (Article)**

Shuilin Wu, Yibing Yang, Mingzi Sun, Tian Zhang, Shaozhuan Huang, Daohong Zhang, Bolong Huang, Pengfei Wang & Wenjun Zhang

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1. **Boosting Hydrogen Storage Performance of MgH2 by Oxygen Vacancy-Rich H-V2O5 Nanosheet as an Excited H-Pump (Article)**

Li Ren, Yinghui Li, Zi Li, Xi Lin, Chong Lu, Wenjiang Ding & Jianxin Zou

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1. **Insights into Nano- and Micro-Structured Scaffolds for Advanced Electrochemical Energy Storage (Review)**

Jiajia Qiu, Yu Duan, Shaoyuan Li, Huaping Zhao, Wenhui Ma, Weidong Shi & Yong Lei

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1. **Ultraconformable Integrated Wireless Charging Micro-Supercapacitor Skin (Article)**

Chang Gao, Qing You, Jiancheng Huang, Jingye Sun, Xuan Yao, Mingqiang Zhu, Yang Zhao & Tao Deng

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1. **All-Covalent Organic Framework Nanofilms Assembled Lithium-Ion Capacitor to Solve the Imbalanced Charge Storage Kinetics (Article)**

Xiaoyang Xu, Jia Zhang, Zihao Zhang, Guandan Lu, Wei Cao, Ning Wang, Yunmeng Xia, Qingliang Feng & Shanlin Qiao

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1. **Moderate Fields, Maximum Potential: Achieving High Records with Temperature-Stable Energy Storage in Lead-Free BNT-Based Ceramics (Article)**

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1. **Hierarchically Structured Nb2O5 Microflowers with Enhanced Capacity and Fast-Charging Capability for Flexible Planar Sodium Ion Micro-Supercapacitors (Article)**

Jiaxin Ma, Jieqiong Qin, Shuanghao Zheng, Yinghua Fu, Liping Chi, Yaguang Li, Cong Dong, Bin Li, Feifei Xing, Haodong Shi & Zhong-Shuai Wu

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1. **Proof of Aerobically Autoxidized Self-Charge Concept Based on Single Catechol-Enriched Carbon Cathode Material (Article)**

Junyan Wang, Wanchun Guo, Kesong Tian, Xinta Li, Xinyu Wang, Panhua Li, Yu Zhang, Bosen Zhang, Biao Zhang, Shuhu Liu, Xueai Li, Zhaopeng Xu, Junjie Xu, Haiyan Wang & Yanglong Hou

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1. **Ultraviolet-Irradiated All-Organic Nanocomposites with Polymer Dots for High-Temperature Capacitive Energy Storage (Article)**

Jiale Ding, Yao Zhou, Wenhan Xu, Fan Yang, Danying Zhao, Yunhe Zhang, Zhenhua Jiang & Qing Wang

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1. **MXene Enhanced 3D Needled Waste Denim Felt for High-Performance Flexible Supercapacitors (Article)**

Wei Fan, Qi Wang, Kai Rong, Yang Shi, Wanxi Peng, Handong Li, Zhanhu Guo, Ben Bin Xu, Hua Hou, Hassan Algadi & Shengbo Ge

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1. **Coupling of Adhesion and Anti-Freezing Properties in Hydrogel Electrolytes for Low-Temperature Aqueous-Based Hybrid Capacitors (Article)**

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1. **Structural Isomers: Small Change with Big Difference in Anion Storage (Article)**

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1. **Layered Potassium Titanium Niobate/Reduced Graphene Oxide Nanocomposite as a Potassium-Ion Battery Anode (Article)**

Charlie A. F. Nason, Ajay Piriya Vijaya Kumar Saroja, Yi Lu, Runzhe Wei, Yupei Han & Yang Xu

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1. **NH3-Induced In Situ Etching Strategy Derived 3D-Interconnected Porous MXene/Carbon Dots Films for High Performance Flexible Supercapacitors (Article)**

Yongbin Wang, Ningjun Chen, Bin Zhou, Xuefeng Zhou, Ben Pu, Jia Bai, Qi Tang, Yan Liu & Weiqing Yang

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1. **Built-In Electric Field-Driven Ultrahigh-Rate K-Ion Storage via Heterostructure Engineering of Dual Tellurides Integrated with Ti3C2Tx MXene (Article)**

Long Pan, Rongxiang Hu, Yuan Zhang, Dawei Sha, Xin Cao, Zhuoran Li, Yonggui Zhao, Jiangxiang Ding, Yaping Wang & ZhengMing Sun

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1. **Effectively Modulating Oxygen Vacancies in Flower-Like δ-MnO2 Nanostructures for Large Capacity and High-Rate Zinc-Ion Storage (Article)**

Yiwei Wang, Yuxiao Zhang, Ge Gao, Yawen Fan, Ruoxin Wang, Jie Feng, Lina Yang, Alan Meng, Jian Zhao & Zhenjiang Li

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1. **Adsorption Site Regulations of [W–O]-Doped CoP Boosting the Hydrazine Oxidation-Coupled Hydrogen Evolution at Elevated Current Density (Article)**

Ge Meng, Ziwei Chang, Libo Zhu, Chang Chen, Yafeng Chen, Han Tian, Wenshu Luo, Wenping Sun, Xiangzhi Cui & Jianlin Shi

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1. **Dual-Doped Nickel Sulfide for Electro-Upgrading Polyethylene Terephthalate into Valuable Chemicals and Hydrogen Fuel (Article)**

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1. **Air-Stable Binary Hydrated Eutectic Electrolytes with Unique Solvation Structure for Rechargeable Aluminum-Ion Batteries (Article)**

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1. **A Bilayer High-Temperature Dielectric Film with Superior Breakdown Strength and Energy Storage Density (Article)**

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Zhen Pan, Yong Qian, Yang Li, Xiaoning Xie, Ning Lin & Yitai Qian

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1. **Intrinsic Self-Healing Chemistry for Next-Generation Flexible Energy Storage Devices (Review)**

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1. **Nanostructuring of Mg-Based Hydrogen Storage Materials: Recent Advances for Promoting Key Applications (Review)**

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1. **Bending Resistance Covalent Organic Framework Superlattice: “Nano-Hourglass”-Induced Charge Accumulation for Flexible In-Plane Micro-Supercapacitors (Article)**

Xiaoyang Xu, Zhenni Zhang, Rui Xiong, Guandan Lu, Jia Zhang, Wang Ning, Shuozhen Hu, Qingliang Feng & Shanlin Qiao

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1. **Additive-Driven Interfacial Engineering of Aluminum Metal Anode for Ultralong Cycling Life (Article)**

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1. **Animal- and Human-Inspired Nanostructures as Supercapacitor Electrode Materials: A Review (Review)**

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1. **A Novel Hybrid Point Defect of Oxygen Vacancy and Phosphorus Doping in TiO2 Anode for High-Performance Sodium Ion Capacitor (Article)**

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1. **Electrochemical Proton Storage: From Fundamental Understanding to Materials to Devices (Review)**

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1. **Enabling Multi-Chemisorption Sites on Carbon Nanofibers Cathodes by an In-situ Exfoliation Strategy for High-Performance Zn–Ion Hybrid Capacitors (Article)**

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1. **Continuous Fabrication of Ti3C2Tx MXene-Based Braided Coaxial Zinc-Ion Hybrid Supercapacitors with Improved Performance (Article)**

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