**Lithium Batteries (2022-2024)**

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**Li-Ion Batteries**

1. **In Situ Polymer Gel Electrolyte in Boosting Scalable Fibre Lithium Battery Applications (Highlight)**

Jie Luo & Qichong Zhang

Nano-Micro Lett. 16, 230 (2024). <https://doi.org/10.1007/s40820-024-01451-z>

1. **Boosted Lithium-Ion Transport Kinetics in n-Type Siloxene Anodes Enabled by Selective Nucleophilic Substitution of Phosphorus (Article)**

Se In Kim, Woong-Ju Kim, Jin Gu Kang & Dong-Wan Kim

Nano-Micro Lett. 16, 219 (2024). <https://doi.org/10.1007/s40820-024-01428-y>

1. **Approaching Ultimate Synthesis Reaction Rate of Ni-Rich Layered Cathodes for Lithium-Ion Batteries (Article)**

Zhedong Liu, Jingchao Zhang, Jiawei Luo, Zhaoxin Guo, Haoran Jiang, Zekun Li, Yuhang Liu, Zijing Song, Rui Liu, Wei-Di Liu, Wenbin Hu & Yanan Chen

Nano-Micro Lett. 16, 210 (2024). <https://doi.org/10.1007/s40820-024-01436-y>

1. **Direct Regeneration of Spent Lithium-Ion Battery Cathodes: From Theoretical Study to Production Practice (Review)**

Meiting Huang, Mei Wang, Liming Yang, Zhihao Wang, Haoxuan Yu, Kechun Chen, Fei Han, Liang Chen, Chenxi Xu, Lihua Wang, Penghui Shao & Xubiao Luo

Nano-Micro Lett. 16, 207 (2024). <https://doi.org/10.1007/s40820-024-01434-0>

1. **Innovative Solutions for High-Performance Silicon Anodes in Lithium-Ion Batteries: Overcoming Challenges and Real-World Applications (Review)**

Mustafa Khan, Suxia Yan, Mujahid Ali, Faisal Mahmood, Yang Zheng, Guochun Li, Junfeng Liu, Xiaohui Song & Yong Wang

Nano-Micro Lett. 16, 179 (2024). <https://doi.org/10.1007/s40820-024-01388-3>

1. **Structural Engineering of Anode Materials for Low-Temperature Lithium-Ion Batteries: Mechanisms, Strategies, and Prospects (Review)**

Guan Wang, Guixin Wang, Linfeng Fei, Lina Zhao & Haitao Zhang

Nano-Micro Lett. 16, 150 (2024). <https://doi.org/10.1007/s40820-024-01363-y>

1. **PDOL-Based Solid Electrolyte Toward Practical Application: Opportunities and Challenges (Review)**

Hua Yang, Maoxiang Jing, Li Wang, Hong Xu, Xiaohong Yan & Xiangming He

Nano-Micro Lett. 16, 127 (2024). <https://doi.org/10.1007/s40820-024-01354-z>

1. **Enhanced High-Temperature Cycling Stability of Garnet-Based All Solid-State Lithium Battery Using a Multi-Functional Catholyte Buffer Layer (Article)**

Leqi Zhao, Yijun Zhong, Chencheng Cao, Tony Tang & Zongping Shao

Nano-Micro Lett. 16, 124 (2024). <https://doi.org/10.1007/s40820-024-01358-9>

1. **Macroporous Directed and Interconnected Carbon Architectures Endow Amorphous Silicon Nanodots as Low-Strain and Fast-Charging Anode for Lithium-Ion Batteries (Article)**

Zhenwei Li, Meisheng Han, Peilun Yu, Junsheng Lin & Jie Yu

Nano-Micro Lett. 16, 98 (2024). <https://doi.org/10.1007/s40820-023-01308-x>

1. **Lithium-Ion Charged Polymer Channels Flattening Lithium Metal Anode (Article)**

Haofan Duan, Yu You, Gang Wang, Xiangze Ou, Jin Wen, Qiao Huang, Pengbo Lyu, Yaru Liang, Qingyu Li, Jianyu Huang, Yun-Xiao Wang, Hua-Kun Liu, Shi Xue Dou & Wei-Hong Lai

Nano-Micro Lett. 16, 78 (2024). <https://doi.org/10.1007/s40820-023-01300-5>

1. **Textured Asymmetric Membrane Electrode Assemblies of Piezoelectric Phosphorene and Ti3C2Tx MXene Heterostructures for Enhanced Electrochemical Stability and Kinetics in LIBs (Article)**

Yihui Li, Juan Xie, Ruofei Wang, Shugang Min, Zewen Xu, Yangjian Ding, Pengcheng Su, Xingmin Zhang, Liyu Wei, Jing-Feng Li, Zhaoqiang Chu, Jingyu Sun & Cheng Huang

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1. **Solvation Engineering via Fluorosurfactant Additive Toward Boosted Lithium-Ion Thermoelectrochemical Cells (Article)**

Yinghong Xu, Zhiwei Li, Langyuan Wu, Hui Dou & Xiaogang Zhang

Nano-Micro Lett. 16, 72 (2024). <https://doi.org/10.1007/s40820-023-01292-2>

1. **Mitigating Lattice Distortion of High-Voltage LiCoO2 via Core-Shell Structure Induced by Cationic Heterogeneous Co-Doping for Lithium-Ion Batteries (Article)**

Zezhou Lin, Ke Fan, Tiancheng Liu, Zhihang Xu, Gao Chen, Honglei Zhang, Hao Li, Xuyun Guo, Xi Zhang, Ye Zhu, Peiyu Hou & Haitao Huang

Nano-Micro Lett. 16, 48 (2024). <https://doi.org/10.1007/s40820-023-01269-1>

1. **Unraveling the Fundamental Mechanism of Interface Conductive Network Influence on the Fast-Charging Performance of SiO-Based Anode for Lithium-Ion Batteries (Article)**

Ruirui Zhang, Zhexi Xiao, Zhenkang Lin, Xinghao Yan, Ziying He, Hairong Jiang, Zhou Yang, Xilai Jia & Fei Wei

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1. **Trend of Developing Aqueous Liquid and Gel Electrolytes for Sustainable, Safe, and High-Performance Li-Ion Batteries (Review)**

Donghwan Ji & Jaeyun Kim

Nano-Micro Lett. 16, 2 (2024). <https://doi.org/10.1007/s40820-023-01220-4>

1. **High-Performance Silicon-Rich MicropArticle Anodes for Lithium-Ion Batteries Enabled by Internal Stress Mitigation (Article)**

Yao Gao, Lei Fan, Rui Zhou, Xiaoqiong Du, Zengbao Jiao & Biao Zhang

Nano-Micro Lett. 15, 222 (2023). <https://doi.org/10.1007/s40820-023-01190-7>

1. **Kinetic Limits of Graphite Anode for Fast-Charging Lithium-Ion Batteries (Article)**

Suting Weng, Gaojing Yang, Simeng Zhang, Xiaozhi Liu, Xiao Zhang, Zepeng Liu, Mengyan Cao, Mehmet Nurullah Ateş, Yejing Li, Liquan Chen, Zhaoxiang Wang & Xuefeng Wang Nano-Micro Lett. 15, 215 (2023). <https://doi.org/10.1007/s40820-023-01183-6>

1. **High-Quality Epitaxial N Doped Graphene on SiC with Tunable Interfacial Interactions via Electron/Ion Bridges for Stable Lithium-Ion Storage (Article)**

Changlong Sun, Xin Xu, Cenlin Gui, Fuzhou Chen, Yian Wang, Shengzhou Chen, Minhua Shao & Jiahai Wang

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1. **Competitive Redox Chemistries in Vanadium Niobium Oxide for Ultrafast and Durable Lithium Storage (Article)**

Xiaobo Ding, Jianhao Lin, Huiying Huang, Bote Zhao & Xunhui Xiong

Nano-Micro Lett. 15, 195 (2023). <https://doi.org/10.1007/s40820-023-01172-9>

1. **Engineer Nanoscale Defects into Selective Channels: MOF-Enhanced Li+ Separation by Porous Layered Double Hydroxide Membrane (Article)**

Yahua Lu, Rongkun Zhou, Naixin Wang, Yuye Yang, Zilong Zheng, Miao Zhang, Quan-Fu An & Jiayin Yuan

Nano-Micro Lett. 15, 147 (2023). <https://doi.org/10.1007/s40820-023-01101-w>

1. **Polyimides as Promising Materials for Lithium-Ion Batteries: A Review (Review)**

Mengyun Zhang, Li Wang, Hong Xu, Youzhi Song & Xiangming He

Nano-Micro Lett. 15, 135 (2023). <https://doi.org/10.1007/s40820-023-01104-7>

1. **Engineering Multi-field-coupled Synergistic Ion Transport System Based on the Heterogeneous Nanofluidic Membrane for High-Efficient Lithium Extraction (Article)**

Lin Fu, Yuhao Hu, Xiangbin Lin, Qingchen Wang, Linsen Yang, Weiwen Xin, Shengyang Zhou, Yongchao Qian, Xiang-Yu Kong, Lei Jiang & Liping Wen

Nano-Micro Lett. 15, 130 (2023). <https://doi.org/10.1007/s40820-023-01106-5>

1. **Fundamental Understanding and Optimization Strategies for Dual-Ion Batteries: A Review (Review)**

Chong Chen, Chun-Sing Lee & Yongbing Tang

Nano-Micro Lett. 15, 121 (2023). <https://doi.org/10.1007/s40820-023-01086-6>

1. **Regulating the Solvation Structure of Li+ Enables Chemical Prelithiation of Silicon-Based Anodes Toward High-Energy Lithium-Ion Batteries (Article)**

Wenjie He, Hai Xu, Zhijie Chen, Jiang Long, Jing Zhang, Jiangmin Jiang, Hui Dou & Xiaogang Zhang

Nano-Micro Lett. 15, 107 (2023). [https://doi.org/10.1007/s40820-023-01068-8](%20https:/doi.org/10.1007/s40820-023-01068-8)

1. **Monolayer MoS2 Fabricated by In Situ Construction of Interlayer Electrostatic Repulsion Enables Ultrafast Ion Transport in Lithium-Ion Batteries (Article)**

Meisheng Han, Yongbiao Mu, Jincong Guo, Lei Wei, Lin Zeng & Tianshou Zhao

Nano-Micro Lett. 15, 80 (2023). <https://doi.org/10.1007/s40820-023-01042-4>

1. **The Critical Role of Fillers in Composite Polymer Electrolytes for Lithium Battery (Review)**

Xueying Yang, Jiaxiang Liu, Nanbiao Pei, Zhiqiang Chen, Ruiyang Li, Lijun Fu, Peng Zhang & Jinbao Zhao

Nano-Micro Lett. 15, 74 (2023). <https://doi.org/10.1007/s40820-023-01051-3>

1. **Single-Phase Ternary Compounds with a Disordered Lattice and Liquid Metal Phase for High-Performance Li-Ion Battery Anodes (Article)**

Yanhong Li, Lei Zhang, Hung-Yu Yen, Yucun Zhou, Gun Jang, Songliu Yuan, Jeng-Han Wang, Peixun Xiong, Meilin Liu, Ho Seok Park & Wenwu Li

Nano-Micro Lett. 15, 63 (2023). <https://doi.org/10.1007/s40820-023-01026-4>

1. **Bifunctional Liquid Metals Allow Electrical Insulating Phase Change Materials to Dual-Mode Thermal Manage the Li-Ion Batteries (Article)**

Cong Guo, Lu He, Yihang Yao, Weizhi Lin, Yongzheng Zhang, Qin Zhang, Kai Wu & Qiang Fu

Nano-Micro Lett. 14, 202 (2022). <https://doi.org/10.1007/s40820-022-00947-w>

1. **Origin of Excellent Charge Storage Properties of Defective Tin Disulphide in Magnesium/ Lithium-Ion Hybrid Batteries (Article)**

Xin Fan, Mike Tebyetekerwa, Yilan Wu, Rohit Ranganathan Gaddam & Xiu Song Zhao

Nano-Micro Lett. 14, 177 (2022). <https://doi.org/10.1007/s40820-022-00914-5>

1. **Facet-Controlled LiMn2O4/C as Deionization Electrode with Enhanced Stability and High Desalination Performance (Communication)**

Yuxin Jiang, Liyuan Chai, Dehe Zhang, Fangping Ouyang, Xiangyuan Zhou, Sikpaam I. Alhassan, Sailin Liu, Yingjie He, Lvji Yan, Haiying Wang & Wenchao Zhang

Nano-Micro Lett. 14, 176 (2022). <https://doi.org/10.1007/s40820-022-00897-3>

1. **Critical Review on cathode–electrolyte Interphase Toward High-Voltage Cathodes for Li-Ion Batteries (Review)**

Jijian Xu

Nano-Micro Lett. 14, 166 (2022). <https://doi.org/10.1007/s40820-022-00917-2>

1. **Natural Stibnite for Lithium-/Sodium-Ion Batteries: Carbon Dots Evoked High Initial Coulombic Efficiency (Article)**

Yinger Xiang, Laiqiang Xu, Li Yang, Yu Ye, Zhaofei Ge, Jiae Wu, Wentao Deng, Guoqiang Zou, Hongshuai Hou & Xiaobo Ji

Nano-Micro Lett. 14, 136 (2022). <https://doi.org/10.1007/s40820-022-00873-x>

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

Tiezhu Xu, Di Wang, Zhiwei Li, Ziyang Chen, Jinhui Zhang, Tingsong Hu, Xiaogang Zhang & Laifa Shen

Nano-Micro Lett. 14, 126 (2022). <https://doi.org/10.1007/s40820-022-00864-y>

1. **High-Energy Batteries: Beyond Lithium-Ion and Their Long Road to Commercialisation (Review)**

Yulin Gao, Zhenghui Pan, Jianguo Sun, Zhaolin Liu & John Wang

Nano-Micro Lett. 14, 94 (2022). <https://doi.org/10.1007/s40820-022-00844-2>

1. **An Endotenon Sheath-Inspired Double-Network Binder Enables Superior Cycling Performance of Silicon Electrodes (Article)**

Meifang Jiang, Pengzhou Mu, Huanrui Zhang, Tiantian Dong, Ben Tang, Huayu Qiu, Zhou Chen & Guanglei Cui

Nano-Micro Lett. 14, 87 (2022). <https://doi.org/10.1007/s40820-022-00833-5>

1. **Ultra-Low-Dose Pre-Metallation Strategy Served for Commercial Metal-Ion Capacitors (Article)**

Zirui Song, Guiyu Zhang, Xinglan Deng, Kangyu Zou, Xuhuan Xiao, Roya Momen, Abouzar Massoudi, Wentao Deng, Jiugang Hu, Hongshuai Hou, Guoqiang Zou & Xiaobo Ji

Nano-Micro Lett. 14, 53 (2022). <https://doi.org/10.1007/s40820-022-00792-x>

1. **A Silicon Monoxide Lithium-Ion Battery Anode with Ultrahigh Areal Capacity (Article)**

Jiang Zhong, Tao Wang, Lei Wang, Lele Peng, Shubin Fu, Meng Zhang, Jinhui Cao, Xiang Xu, Junfei Liang, Huilong Fei, Xidong Duan, Bingan Lu, Yiliu Wang, Jian Zhu & Xiangfeng Duan

Nano-Micro Lett. 14, 50 (2022). <https://doi.org/10.1007/s40820-022-00790-z>

1. **Porous Co2VO4 Nanodisk as a High-Energy and Fast-Charging Anode for Lithium-Ion Batteries (Article)**

Jinghui Ren, Zhenyu Wang, Peng Xu, Cong Wang, Fei Gao, Decheng Zhao, Shupei Liu, Han Yang, Di Wang, Chunming Niu, Yusong Zhu, Yutong Wu, Xiang Liu, Zhoulu Wang & Yi Zhang

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**Li-S Batteries**

1. **Multifunctional SnO2 QDs/MXene Heterostructures as Laminar Interlayers for Improved Polysulfide Conversion and Lithium Plating Behavior (Article)**

Shungui Deng, Weiwei Sun, Jiawei Tang, Mohammad Jafarpour, Frank Nüesch, Jakob Heier & Chuanfang Zhang

Nano-Micro Lett. 16, 229 (2024). <https://doi.org/10.1007/s40820-024-01446-w>

1. **Advances in All-Solid-State Lithium–Sulfur Batteries for Commercialization (Review**

Birhanu Bayissa Gicha, Lemma Teshome Tufa, Njemuwa Nwaji, Xiaojun Hu & Jaebeom Lee

 Nano-Micro Lett. 16, 172 (2024). <https://doi.org/10.1007/s40820-024-01385-6>

1. **Quantum Spin Exchange Interactions to Accelerate the Redox Kinetics in Li–S Batteries (Article)**

Yu Du, Weijie Chen, Yu Wang, Yue Yu, Kai Guo, Gan Qu & Jianan Zhang

Nano-Micro Lett. 16, 100 (2024). <https://doi.org/10.1007/s40820-023-01319-8>

1. **A Review on Engineering Transition Metal Compound Catalysts to Accelerate the Redox Kinetics of Sulfur Cathodes for Lithium–Sulfur Batteries (Review)**

Liping Chen, Guiqiang Cao, Yong Li, Guannan Zu, Ruixian Duan, Yang Bai, Kaiyu Xue, Yonghong Fu, Yunhua Xu, Juan Wang & Xifei Li

Nano-Micro Lett. 16, 97 (2024). <https://doi.org/10.1007/s40820-023-01299-9>

1. **A Review on Engineering Design for Enhancing Interfacial Contact in Solid-State Lithium–Sulfur Batteries (Review)**

Bingxin Qi, Xinyue Hong, Ying Jiang, Jing Shi, Mingrui Zhang, Wen Yan & Chao Lai

Nano-Micro Lett. 16, 71 (2024). <https://doi.org/10.1007/s40820-023-01306-z>

1. **Engineering Strategies for Suppressing the Shuttle Effect in Lithium–Sulfur Batteries (Review)**

Jiayi Li, Li Gao, Fengying Pan, Cheng Gong, Limeng Sun, Hong Gao, Jinqiang Zhang, Yufei Zhao, Guoxiu Wang & Hao Liu

Nano-Micro Lett. 16, 12 (2024). <https://doi.org/10.1007/s40820-023-01223-1>

1. **Boosting Lean Electrolyte Lithium–Sulfur Battery Performance with Transition Metals: A Comprehensive Review (Review)**

Hui Pan, Zhibin Cheng, Zhenyu Zhou, Sijie Xie, Wei Zhang, Ning Han, Wei Guo, Jan Fransaer, Jiangshui Luo, Andreu Cabot & Michael Wübbenhorst

Nano-Micro Lett. 15, 165 (2023). <https://doi.org/10.1007/s40820-023-01137-y>

1. **Towards Practical Application of Li–S Battery with High Sulfur Loading and Lean Electrolyte: Will Carbon-Based Hosts Win This Race? (Review)**

Yi Gong, Jing Li, Kai Yang, Shaoyin Li, Ming Xu, Guangpeng Zhang, Yan Shi, Qiong Cai, Huanxin Li & Yunlong Zhao

Nano-Micro Lett. 15, 150 (2023). <https://doi.org/10.1007/s40820-023-01120-7>

1. **Sulfide-Based All-Solid-State Lithium–Sulfur Batteries: Challenges and Perspectives (Perspective)**

Xinxin Zhu, Liguang Wang, Zhengyu Bai, Jun Lu & Tianpin Wu

Nano-Micro Lett. 15, 75 (2023). <https://doi.org/10.1007/s40820-023-01053-1>

1. **All-Solid-State Thin-Film Lithium-Sulfur Batteries (Original Article)**

Renming Deng, Bingyuan Ke, Yonghui Xie, Shoulin Cheng, Congcong Zhang, Hong Zhang, Bingan Lu & Xinghui Wang

Nano-Micro Lett. 15, 73 (2023). <https://doi.org/10.1007/s40820-023-01064-y>

1. **Dual-Functional Lithiophilic/Sulfiphilic Binary-Metal Selenide Quantum Dots Toward High-Performance Li–S Full Batteries (Article)**

Youzhang Huang, Liang Lin, Yinggan Zhang, Lie Liu, Baisheng Sa, Jie Lin, Laisen Wang, Dong-Liang Peng & Qingshui Xie

Nano-Micro Lett. 15, 67 (2023). <https://doi.org/10.1007/s40820-023-01037-1>

1. **Lithium Hexamethyldisilazide Endows Li||NCM811 Battery with Superior Performance (Highlights)**

Junda Huang, Yaxiong Yang, Yanxia Liu & Jianmin Ma

Nano-Micro Lett. 15, 33 (2023). <https://doi.org/10.1007/s40820-022-00998-z>

1. **Carbon-Nitride-Based Materials for Advanced Lithium–Sulfur Batteries (Review)**

Wenhao Sun, Zihao Song, Zhenxing Feng, Yaqin Huang, Zhichuan J. Xu, Yi-Chun Lu & Qingli Zou

Nano-Micro Lett. 14, 222 (2022). <https://doi.org/10.1007/s40820-022-00954-x>

1. **Multi-Dimensional Composite Frame as Bifunctional Catalytic Medium for Ultra-Fast Charging Lithium–Sulfur Battery (Article)**

Shuhao Tian, Qi Zeng, Guo Liu, Juanjuan Huang, Xiao Sun, Di Wang, Hongcen Yang, Zhe Liu, Xichao Mo, Zhixia Wang, Kun Tao & Shanglong Peng

Nano-Micro Lett. 14, 196 (2022). <https://doi.org/10.1007/s40820-022-00941-2>

1. **Construction of Ultrathin Layered MXene-TiN Heterostructure Enabling Favorable Catalytic Ability for High-Areal-Capacity Lithium–Sulfur Batteries (Article)**

Hao Wang, Zhe Cui, Shu-Ang He, Jinqi Zhu, Wei Luo, Qian Liu & Rujia Zou

Nano-Micro Lett. 14, 189 (2022). <https://doi.org/10.1007/s40820-022-00935-0>

1. **Atomically Dispersed Iron Active Sites Promoting Reversible Redox Kinetics and Suppressing Shuttle Effect in Aluminum–Sulfur Batteries (Article)**

Fei Wang, Min Jiang, Tianshuo Zhao, Pengyu Meng, Jianmin Ren, Zhaohui Yang, Jiao Zhang, Chaopeng Fu & Baode Sun

Nano-Micro Lett. 14, 169 (2022). <https://doi.org/10.1007/s40820-022-00915-4>

1. **High-Index Faceted Nanocrystals as Highly Efficient Bifunctional Electrocatalysts for High-Performance Lithium–Sulfur Batteries (Article)**

Bo Jiang, Da Tian, Yue Qiu, Xueqin Song, Yu Zhang, Xun Sun, Huihuang Huang, Chenghao Zhao, Zhikun Guo, Lishuang Fan & Naiqing Zhang

Nano-Micro Lett. 14, 40 (2022). <https://doi.org/10.1007/s40820-021-00769-2>

**Li-Metal Batteries**

1. **Stable Cycling of All-Solid-State Lithium Batteries Enabled by Cyano-Molecular Diamond Improved Polymer Electrolytes (Article)**

Yang Dai, Mengbing Zhuang, Yi-Xiao Deng, Yuan Liao, Jian Gu, Tinglu Song, Hao Yan & Jin-Cheng Zheng

Nano-Micro Lett. 16, 217 (2024). <https://doi.org/10.1007/s40820-024-01415-3>

1. **Branch-Chain-Rich Diisopropyl Ether with Steric Hindrance Facilitates Stable Cycling of Lithium Batteries at − 20 °C (Article)**

Houzhen Li, Yongchao Kang, Wangran Wei, Chuncheng Yan, Xinrui Ma, Hao Chen, Yuanhua Sang, Hong Liu & Shuhua Wang

Nano-Micro Lett. 16, 197 (2024). <https://doi.org/10.1007/s40820-024-01419-z>

1. **12.6 μm-Thick Asymmetric Composite Electrolyte with Superior Interfacial Stability for Solid-State Lithium-Metal Batteries (Article)**

Zheng Zhang, Jingren Gou, Kaixuan Cui, Xin Zhang, Yujian Yao, Suqing Wang & Haihui Wang

Nano-Micro Lett. 16, 181 (2024).<https://doi.org/10.1007/s40820-024-01389-2>

1. **Enabling an Inorganic-Rich Interface via Cationic Surfactant for High-Performance Lithium Metal Batteries (Article)**

Zejun Sun, Jinlin Yang, Hongfei Xu, Chonglai Jiang, Yuxiang Niu, Xu Lian, Yuan Liu, Ruiqi Su, Dayu Liu, Yu Long, Meng Wang, Jingyu Mao, Haotian Yang, Baihua Cui, Yukun Xiao, Ganwen Chen, Qi Zhang, Zhenxiang Xing, Jisheng Pan, Gang Wu & Wei Chen

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1. **Janus Quasi-Solid Electrolyte Membranes with Asymmetric Porous Structure for High-Performance Lithium-Metal Batteries (Article)**

Zerui Chen, Wei Zhao, Qian Liu, Yifei Xu, Qinghe Wang, Jinmin Lin & Hao Bin Wu

Nano-Micro Lett. 16, 114 (2024). <https://doi.org/10.1007/s40820-024-01325-4>

1. **Highly Efficient Aligned Ion-Conducting Network and Interface Chemistries for Depolarized All-Solid-State Lithium Metal Batteries (Article)**

Yongbiao Mu, Shixiang Yu, Yuzhu Chen, Youqi Chu, Buke Wu, Qing Zhang, Binbin Guo, Lingfeng Zou, Ruijie Zhang, Fenghua Yu, Meisheng Han, Meng Lin, Jinglei Yang, Jiaming Bai & Lin Zeng

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1. **Electrolyte Design for Low-Temperature Li-Metal Batteries: Challenges and Prospects (Review)**

Siyu Sun, Kehan Wang, Zhanglian Hong, Mingjia Zhi, Kai Zhang & Jijian Xu

Nano-Micro Lett. 16, 35 (2024). <https://doi.org/10.1007/s40820-023-01245-9>

1. **From Liquid to Solid-State Lithium Metal Batteries: Fundamental Issues and Recent Developments (Review)**

Zhao Zhang & Wei-Qiang Han

Nano-Micro Lett. 16, 24 (2024). <https://doi.org/10.1007/s40820-023-01234-y>

1. **Demystifying the Salt-Induced Li Loss: A Universal Procedure for the Electrolyte Design of Lithium-Metal Batteries (Article)**

Zhenglu Zhu, Xiaohui Li, Xiaoqun Qi, Jie Ji, Yongsheng Ji, Ruining Jiang, Chaofan Liang, Dan Yang, Ze Yang, Long Qie & Yunhui Huang

Nano-Micro Lett. 15, 234 (2023). <https://doi.org/10.1007/s40820-023-01205-3>

1. **In Situ Formed Tribofilms as Efficient Organic/Inorganic Hybrid Interlayers for Stabilizing Lithium Metal Anodes (Article)**

Shaozhen Huang, Kecheng Long, Yuejiao Chen, Tuoya Naren, Piao Qing, Xiaobo Ji, Weifeng Wei, Zhibin Wu & Libao Chen

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1. **Rational Design of High-Performance PEO/Ceramic Composite Solid Electrolytes for Lithium Metal Batteries (Review)**

Yanxia Su, Fei Xu, Xinren Zhang, Yuqian Qiu & Hongqiang Wang

Nano-Micro Lett. 15, 82 (2023). <https://doi.org/10.1007/s40820-023-01055-z>

1. **Quasi-Solid-State Ion-Conducting Arrays Composite Electrolytes with Fast Ion Transport Vertical-Aligned Interfaces for All-Weather Practical Lithium-Metal Batteries (Article)**

Xinyang Li, Yong Wang, Kai Xi, Wei Yu, Jie Feng, Guoxin Gao, Hu Wu, Qiu Jiang, Amr Abdelkader, Weibo Hua, Guiming Zhong & Shujiang Ding

Nano-Micro Lett. 14, 210 (2022). <https://doi.org/10.1007/s40820-022-00952-z>

1. **Revisiting the Role of Physical Confinement and Chemical Regulation of 3D Hosts for Dendrite-Free Li Metal Anode (Article)**

Shufen Ye, Xingjia Chen, Rui Zhang, Yu Jiang, Fanyang Huang, Huijuan Huang, Yu Yao, Shuhong Jiao, Xiang Chen, Qiang Zhang & Yan Yu

Nano-Micro Lett. 14, 187 (2022). <https://doi.org/10.1007/s40820-022-00932-3>

1. **Commercially Viable Hybrid Li-Ion/Metal Batteries with High Energy Density Realized by Symbiotic Anode and Prelithiated Cathode (Article)**

Kui Lin, Xiaofu Xu, Xianying Qin, Ming Liu, Liang Zhao, Zijin Yang, Qi Liu, Yonghuang Ye, Guohua Chen, Feiyu Kang & Baohua Li

Nano-Micro Lett. 14, 149 (2022). <https://doi.org/10.1007/s40820-022-00899-1>

1. **Electrostatic Interaction Tailored Anion-Rich Solvation Sheath Stabilizing High-Voltage Lithium Metal Batteries (Article)**

Junru Wu, Ziyao Gao, Yao Wang, Xu Yang, Qi Liu, Dong Zhou, Xianshu Wang, Feiyu Kang & Baohua Li

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1. **Safe and Stable Lithium Metal Batteries Enabled by an Amide-Based Electrolyte (Article)**

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**Li-Oxygen Batteries**

1. **Atomically Dispersed Ruthenium Catalysts with Open Hollow Structure for Lithium–Oxygen Batteries (Article)**

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