

Aqueous Batteries (2022-2025)

Browse in the web

- 1. Zn(TFSI)₂-Mediated Ring-Opening Polymerization for Electrolyte Engineering Toward Stable Aqueous Zinc Metal Batteries (Article)**
Zhenjie Liu, Murong Xi, Rui Sheng, Yudai Huang, Juan Ding, Zhouliang Tan, Jiawei Li, Wenjun Zhang & Yonggang Wang
Nano-Micro Lett. 17, 120 (2025). <https://doi.org/10.1007/s40820-025-01649-9>
- 2. Electrode/Electrolyte Optimization-Induced Double-Layered Architecture for High-Performance Aqueous Zinc-(Dual) Halogen Batteries (Article)**
Chengwang Zhou, Zhezheng Ding, Shengzhe Ying, Hao Jiang, Yan Wang, Timing Fang, You Zhang, Bing Sun, Xiao Tang & Xiaomin Liu
Nano-Micro Lett. 17, 58 (2025). <https://doi.org/10.1007/s40820-024-01551-w>
- 3. A Molecular-Sieving Interphase Towards Low-Concentrated Aqueous Sodium-Ion Batteries (Article)**
Tingting Liu, Han Wu, Hao Wang, Yiran Jiao, Xiaofan Du, Jinzhi Wang, Guangying Fu, Yaojian Zhang, Jingwen Zhao & Guanglei Cui
Nano-Micro Lett. 16, 144 (2024). <https://doi.org/10.1007/s40820-024-01340-5>
- 4. Weakly Polarized Organic Cation-Modified Hydrated Vanadium Oxides for High-Energy Efficiency Aqueous Zinc-Ion Batteries (Article)**
Xiaoxiao Jia, Chaofeng Liu, Zhi Wang, Di Huang & Guozhong Cao
Nano-Micro Lett. 16, 129 (2024). <https://doi.org/10.1007/s40820-024-01339-y>
- 5. Progress on Transition Metal Ions Dissolution Suppression Strategies in Prussian Blue Analogs for Aqueous Sodium-/Potassium-Ion Batteries (Review)**
Wenli Shu, Junxian Li, Guangwan Zhang, Jiashen Meng, Xuanpeng Wang & Liqiang Mai
Nano-Micro Lett. 16, 128 (2024). <https://doi.org/10.1007/s40820-024-01355-y>
- 6. Ultrathin Zincophilic Interphase Regulated Electric Double Layer Enabling Highly Stable Aqueous Zinc-Ion Batteries (Article)**
Yimei Chen, Zhiping Deng, Yongxiang Sun, Yue Li, Hao Zhang, Ge Li, Hongbo Zeng & Xiaolei Wang
Nano-Micro Lett. 16, 96 (2024). <https://doi.org/10.1007/s40820-023-01312-1>
- 7. Polarizable Additive with Intermediate Chelation Strength for Stable Aqueous Zinc-Ion Batteries (Article)**
Yuting Xia, Rongao Tong, Jingxi Zhang, Mingjie Xu, Gang Shao, Hailong Wang, Yanhao Dong & Chang-An Wang
Nano-Micro Lett. 16, 82 (2024). <https://doi.org/10.1007/s40820-023-01305-0>
- 8. Asymmetric Electrolytes Design for Aqueous Multivalent Metal Ion Batteries (Review)**
Xiaochen Yang, Xinyu Wang, Yue Xiang, Longtao Ma & Wei Huang
Nano-Micro Lett. 16, 51 (2024). <https://doi.org/10.1007/s40820-023-01256-6>

9. **Hetero Nucleus Growth Stabilizing Zinc Anode for High-Biosecurity Zinc-Ion Batteries (Article)**
Jingjing Li, Zhexuan Liu, Shaohua Han, Peng Zhou, Bingan Lu, Jianda Zhou, Zhiyuan Zeng, Zhizhao Chen & Jiang Zhou
Nano-Micro Lett. 15, 237 (2023). <https://doi.org/10.1007/s40820-023-01206-2>
10. **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
Nano-Micro Lett. 15, 219 (2023). <https://doi.org/10.1007/s40820-023-01194-3>
11. **Zinc–Bromine Rechargeable Batteries: From Device Configuration, Electrochemistry, Material to Performance Evaluation (Review)**
Norah S. Alghamdi, Masud Rana, Xiyue Peng, Yongxin Huang, Jaeho Lee, Jingwei Hou, Ian R. Gentle, Lianzhou Wang & Bin Luo
Nano-Micro Lett. 15, 209 (2023). <https://doi.org/10.1007/s40820-023-01174-7>
12. **Recent Advances in Structural Optimization and Surface Modification on Current Collectors for High-Performance Zinc Anode: Principles, Strategies, and Challenges (Review)**
Yuxin Gong, Bo Wang, Huaizheng Ren, Deyu Li, Dianlong Wang, Huakun Liu & Shixue Dou
Nano-Micro Lett. 15, 208 (2023). <https://doi.org/10.1007/s40820-023-01177-4>
13. **Synergistic “Anchor-Capture” Enabled by Amino and Carboxyl for Constructing Robust Interface of Zn Anode (Article)**
Zhen Luo, Yufan Xia, Shuang Chen, Xingxing Wu, Ran Zeng, Xuan Zhang, Hongge Pan, Mi Yan, Tingting Shi, Kai Tao, Ben Bin Xu & Yinzhu Jiang
Nano-Micro Lett. 15, 205 (2023). <https://doi.org/10.1007/s40820-023-01171-w>
14. **Air-Stable Binary Hydrated Eutectic Electrolytes with Unique Solvation Structure for Rechargeable Aluminum-Ion Batteries (Article)**
Pengyu Meng, Jian Huang, Zhaohui Yang, Min Jiang, Yibo Wang, Wei Zhang, Jiao Zhang, Baode Sun & Chaopeng Fu
Nano-Micro Lett. 15, 188 (2023). <https://doi.org/10.1007/s40820-023-01160-z>
15. **Aqueous Zinc Batteries with Ultra-Fast Redox Kinetics and High Iodine Utilization Enabled by Iron Single Atom Catalysts (Article)**
Xueya Yang, Huiqing Fan, Fulong Hu, Shengmei Chen, Kang Yan & Longtao Ma
Nano-Micro Lett. 15, 126 (2023). <https://doi.org/10.1007/s40820-023-01093-7>
16. **Enhancing Hydrophilicity of Thick Electrodes for High Energy Density Aqueous Batteries (Article)**
Jungeun Lee, Hyeonsoo Lee, Cheol Bak, Youngsun Hong, Daeha Joung, Jeong Beom Ko, Yong Min Lee & Chanhon Kim
Nano-Micro Lett. 15, 97 (2023). <https://doi.org/10.1007/s40820-023-01072-y>
17. **Electrochromic-Induced Rechargeable Aqueous Batteries: An Integrated Multifunctional System for Cross-Domain Applications (Review)**

Qi Zhao, Zhenghui Pan, Binbin Liu, Changyuan Bao, Ximeng Liu, Jianguo Sun, Shaorong Xie, Qing Wang, John Wang & Yanfeng Gao

Nano-Micro Lett. 15, 87 (2023). <https://doi.org/10.1007/s40820-023-01056-y>

18. Trace Amounts of Triple-Functional Additives Enable Reversible Aqueous Zinc-Ion Batteries from a Comprehensive Perspective (Article)

Ruwei Chen, Wei Zhang, Quanbo Huang, Chaohong Guan, Wei Zong, Yuhang Dai, Zijuan Du, Zhenyu Zhang, Jianwei Li, Fei Guo, Xuan Gao, Haobo Dong, Jiexin Zhu, Xiaohui Wang & Guanjie He

Nano-Micro Lett. 15, 81 (2023). <https://doi.org/10.1007/s40820-023-01050-4>

19. Ultrafast Synthesis of Metal-Layered Hydroxides in a Dozen Seconds for High-Performance Aqueous Zn (Micro-) Battery (Article)

Xiangyang Li, Fangshuai Chen, Bo Zhao, Shaohua Zhang, Xiaoyu Zheng, Ying Wang, Xuting Jin, Chunlong Dai, Jiaqi Wang, Jing Xie, Zhipan Zhang & Yang Zhao

Nano-Micro Lett. 15, 32 (2023). <https://doi.org/10.1007/s40820-022-01004-2>

20. A Multifunctional Anti-Proton Electrolyte for High-Rate and Super-Stable Aqueous Zn-Vanadium Oxide Battery (Article)

Yangwu Chen, Dingtao Ma, Kefeng Ouyang, Ming Yang, Sicheng Shen, Yanyi Wang, Hongwei Mi, Lingna Sun, Chuanxin He & Peixin Zhang

Nano-Micro Lett. 14, 154 (2022). <https://doi.org/10.1007/s40820-022-00907-4>

21. Cooperative Chloride Hydrogel Electrolytes Enabling Ultralow-Temperature Aqueous Zinc Ion Batteries by the Hofmeister Effect (Article)

Changyuan Yan, Yangyang Wang, Xianyu Deng & Yonghang Xu

Nano-Micro Lett. 14, 98 (2022). <https://doi.org/10.1007/s40820-022-00836-2>