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See Jian Zhang, Yi Liu *et al.*, pp. 620–630. Image reproduced by permission of Yi Liu from *Energy Environ. Sci.*, 2025, 18, 620.



Inside cover

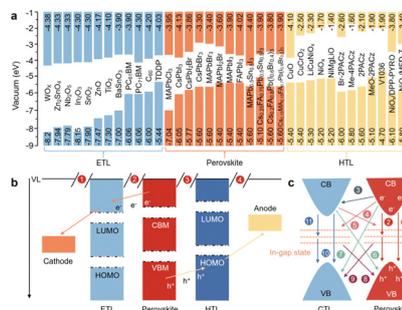
See Fei Gao, Feiqiang Li, Kui Jiao *et al.*, pp. 631–644. Image reproduced by permission of Kui Jiao from *Energy Environ. Sci.*, 2025, 18, 631.

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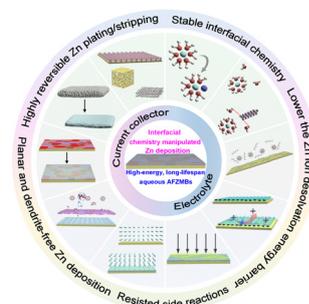
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Tian Wang, Shaocong Tang, Ya Xiao, Weiwei Xiang and Jae Su Yu*



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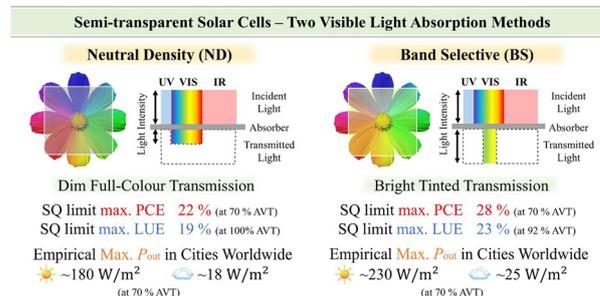
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Semi-transparent solar cells: strategies for maximum power output in cities

Vox Kalai Wong, Johnny Ka Wai Ho, Wallace W. H. Wong and Shu Kong So*

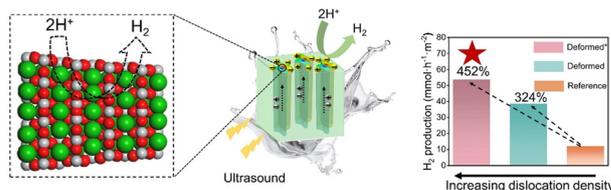


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Dislocation-engineered piezocatalytic water splitting in single-crystal BaTiO₃

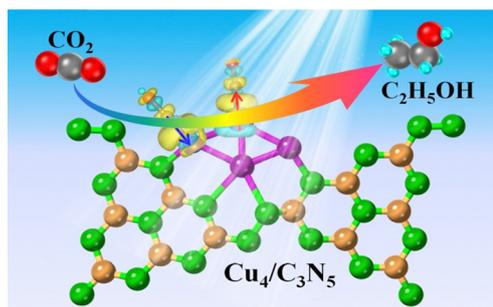
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Anchoring subnanometric Cu₄ clusters in graphitic-C₃N₅ for highly efficient CO₂ photoreduction to ethanol

Entian Cui, Yulian Lu, Xiu-Li Yang,* Guojun Dong, Yajun Zhang and Yingpu Bi*

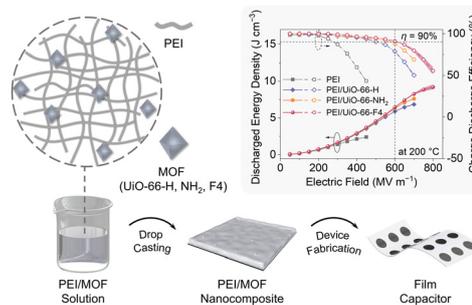


PAPERS

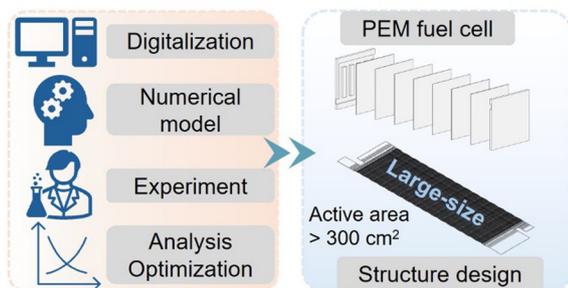
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Advancing high-temperature electrostatic energy storage via linker engineering of metal–organic frameworks in polymer nanocomposites

Zongliang Xie, Zhiyuan Huang, He Li, Tianlei Xu, Haoyu Zhao, Yunfei Wang, Xi Pang, Zhiqiang Cao, Virginia Altoé, Liana M. Klivansky, Zaiyu Wang, Steve W. Shelton, Shiqi Lai, Peng Liu, Chenhui Zhu, Michael D. Connolly, Corie Y. Ralston, Xiaodan Gu, Zongren Peng, Jian Zhang* and Yi Liu*



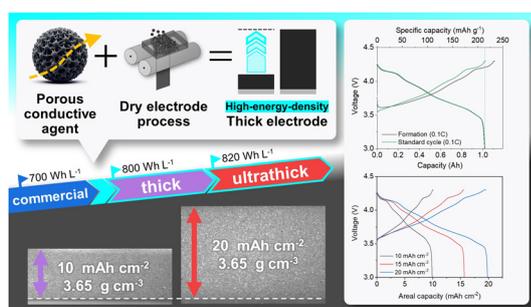
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Digitally-assisted structure design of a large-size proton exchange membrane fuel cell

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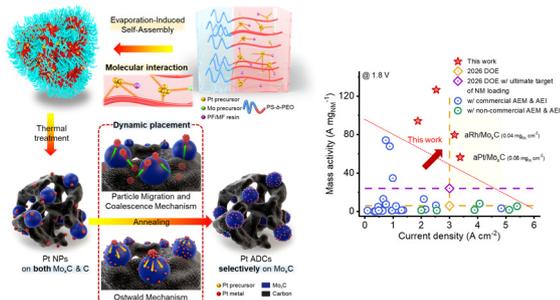
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Dry-processed thick electrode design with a porous conductive agent enabling 20 mA h cm⁻² for high-energy-density lithium-ion batteries

Hyeseong Oh, Gyu-Sang Kim, Jiyeon Bang, San Kim and Kyeong-Min Jeong*

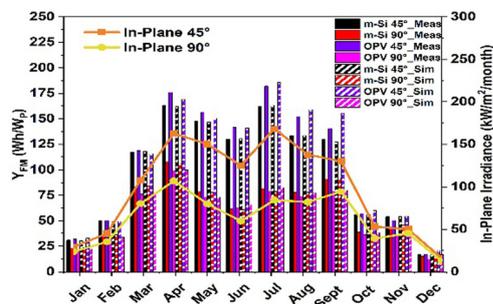
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Self-assembly-assisted dynamic placement of noble metals selectively on multifunctional carbide supports for alkaline hydrogen electrocatalysis

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Long term outdoor performance evaluation of printed semitransparent organic photovoltaic modules for BIPV/BAPV applications

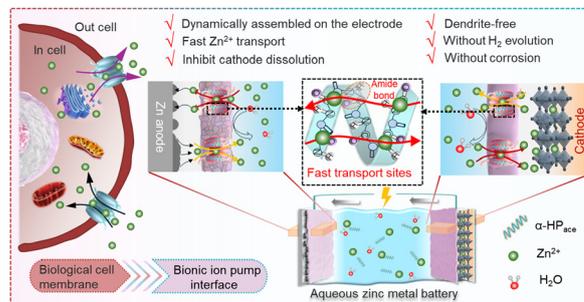
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A dynamically assembled bionic ion pump interface towards high-rate and stable-cycling zinc metal batteries

Xiaoyun Xu, Songmei Li,* Junwei An,* Zicheng Luo, Juan Du, Jinyan Zhong, Mei Yu, Shubin Yang and Bin Li*



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Triphenylamine–ethylenedioxythiophene copolymers for perovskite solar cells: impact of substituent type and alternation

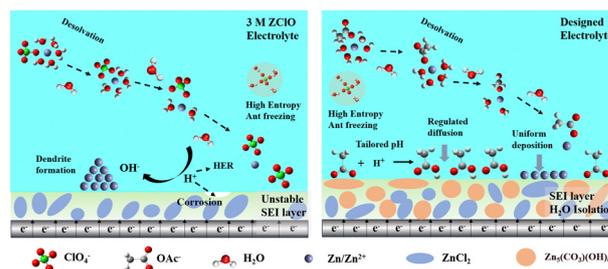
Lifei He, Yuyan Zhang, Bing Zhang, Yanfei Mu, Niansheng Xu,* Yaohang Cai,* Yi Yuan, Jing Zhang, Min Zhang and Peng Wang*



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Regulating interfacial reactions through electrolyte chemistry enables an anion-rich interphase for wide-temperature zinc metal batteries

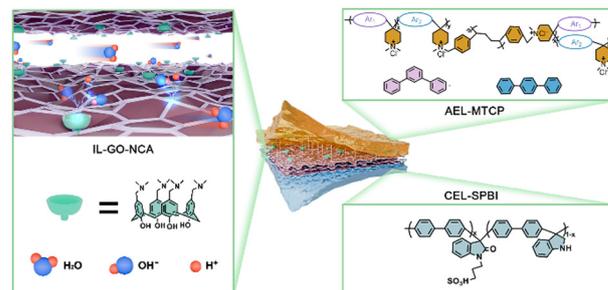
Yimei Chen, Kaijie Zhang, Zhixiao Xu, Facheng Gong, Renfei Feng, Zhehui Jin and Xiaolei Wang*



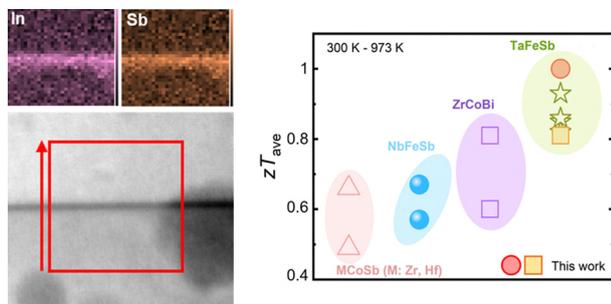
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Enhanced bipolar membranes for durable ampere-level water electrolysis

Fen Luo, Weisheng Yu, Xiaojiang Li, Xian Liang, Wenfeng Li, Fanglin Duan, Yaoming Wang, Xiaolin Ge, Liang Wu* and Tongwen Xu*



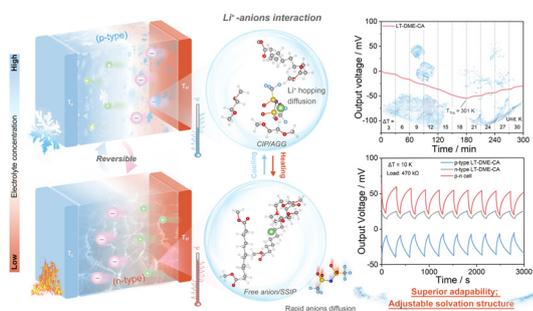
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Performance advancements in P-type TaFeSb-based thermoelectric materials through composition and composite optimizations

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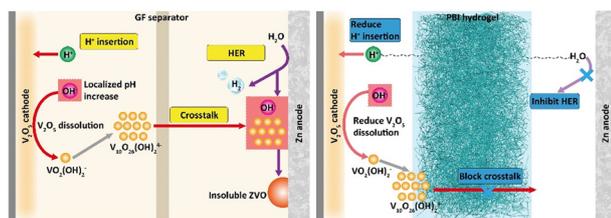
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Reversibly tuning thermopower enabled by phase-change electrolytes for low-grade heat harvesting

Yinghong Xu, Zhiwei Li, Simin Li, Shengliang Zhang and Xiaogang Zhang*

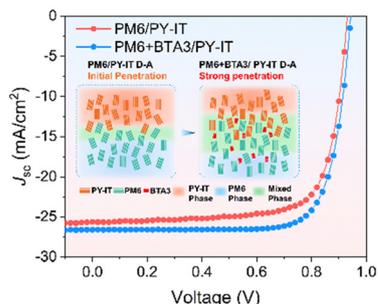
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Inhibiting cathode dissolution and shuttling of V-O species using a polybenzimidazole hydrogel electrolyte for durable high-areal-capacity Zn-V₂O₅ batteries

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Dissolution swelling effect-assisted interfacial morphology refinement enables high efficiency all-polymer solar cells

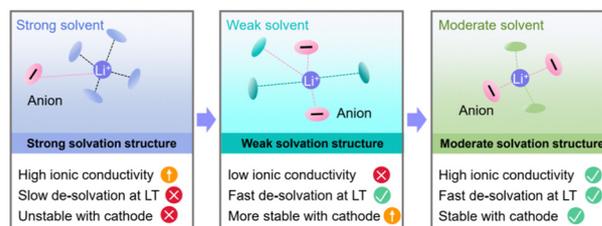
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Moderate solvation structures of lithium ions for high-voltage lithium metal batteries at $-40\text{ }^{\circ}\text{C}$

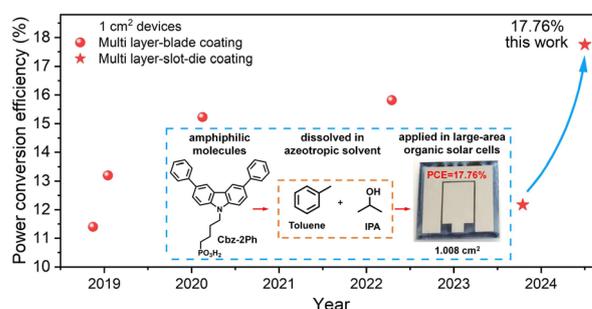
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Efficient organic solar cells with a printed p-i-n stack enabled by an azeotrope-processed self-assembled monolayer

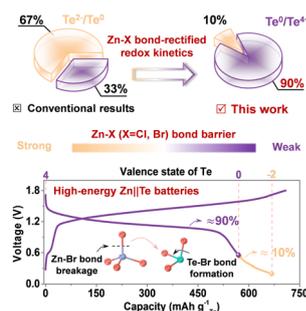
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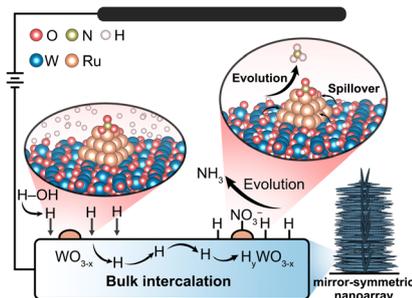
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In situ bulk hydrogen intercalation in a mirror-symmetric Ru/WO_{3-x} nanoarray boosts neutral electrocatalytic nitrate reduction to ammonia

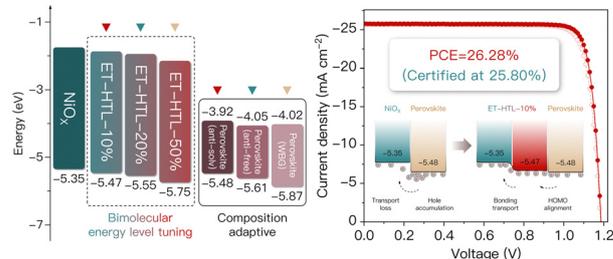
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A versatile energy-level-tunable hole-transport layer for multi-composition inverted perovskite solar cells

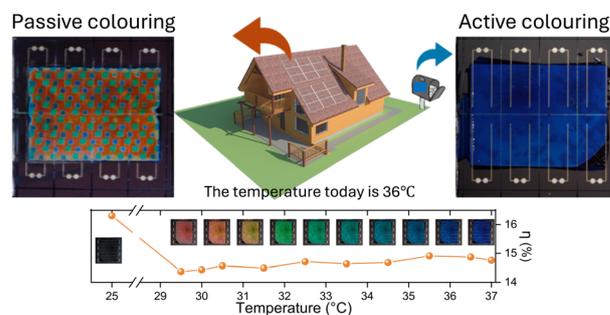
Wenbo Peng, Yong Zhang,* Xianyong Zhou, Jiawen Wu, Deng Wang, Geping Qu, Jie Zeng, Yintai Xu, Bo Jiang, Peide Zhu, Yifan Du, Zhitong Li, Xia Lei, Zhixin Liu, Lei Yan, Xingzhu Wang* and Baomin Xu*



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Arbitrary and active colouring of solar cells with negligible loss of efficiency

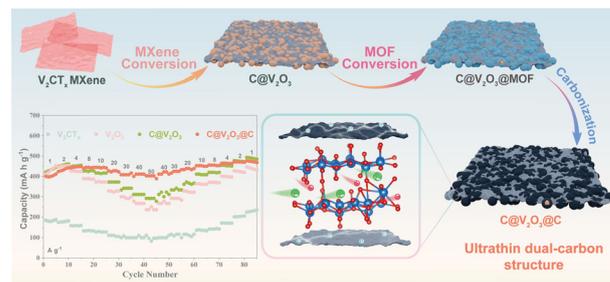
Yan-Song Zhang, Hasan Arif Yetkin, Hakam Agha, Sevan Gharabeiki, Rijeesh Kizhakidathazhath, Lena Merges, Ricardo G. Poeira, Jan P. F. Lagerwall* and Phillip J. Dale*



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Stepwise MXene and MOF conversion assisted ultrathin dual-carbon-protected V₂O₃ nanosheets for ultrafast and durable Zn-ion storage

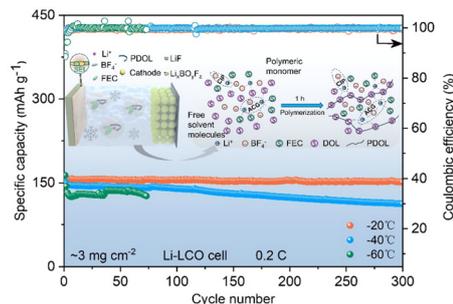
Xiaolin Ma, Ke Han, Hongxing Li, Lulu Song, Yuan Lin, Liangxu Lin, Yang Liu, Yi Zhao,* Zhen Yang* and Wei Huang*



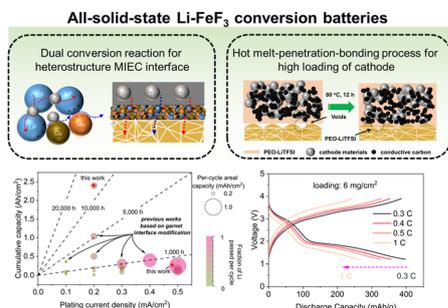
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Constriving a gel polymer electrolyte to drive quasi-solid-state high-voltage Li metal batteries at ultralow temperatures

Xuanfeng Chen, Chunhao Qin, Fulu Chu, Fangkun Li, Jun Liu and Feixiang Wu*



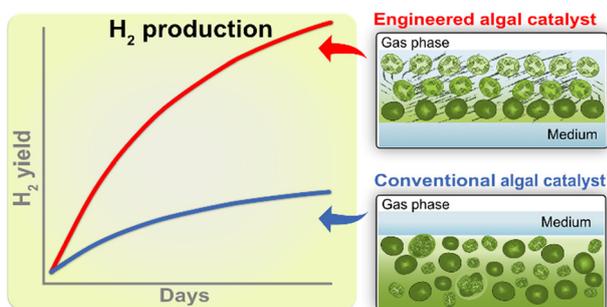
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Heterostructure conductive interface and melt-penetration-bonding process to afford all-solid-state Li-FeF₃ garnet batteries with high cathode loading

Hailong Wu, Jiulin Hu, Songlin Yu and Chilin Li*

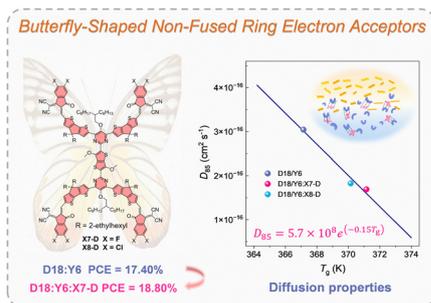
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Engineered biocatalytic architecture for enhanced light utilisation in algal H₂ production

Sergey Kosourov,* Tekla Tammelin and Yagut Allahverdiyeva*

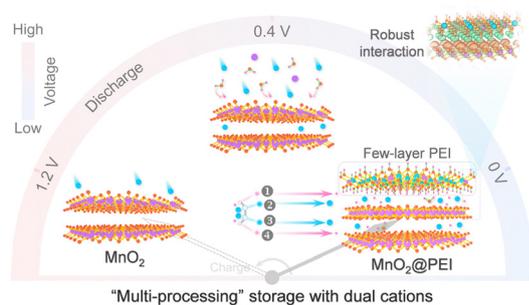
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Resolving the molecular diffusion model based on butterfly-shaped non-fused ring electron acceptors for efficient ternary organic photovoltaics with improved stability

Xueyan Ding, Xiaoling Wu, Shuixing Li,* Tianyi Chen, Jinyang Yu, Heng Liu, Mengting Wang, Xiu-Kun Ye, Nuo Zhang, Xinhui Lu, Chang-Zhi Li, Haiming Zhu, Minmin Shi, Hanying Li and Hongzheng Chen*

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Deciphering the dynamic solid-liquid interphase for energetic high-mass-loading energy storage

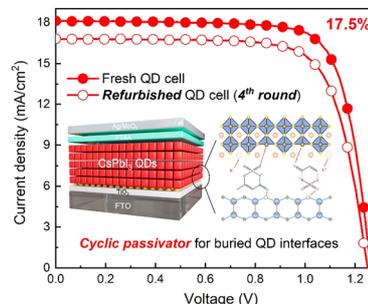
Jinxin Wang, Wei Guo,* Mingming Sun, Geng Zhang, Yang Meng and Qiuyu Zhang*



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Buried interface engineering enables efficient and refurbished CsPbI₃ perovskite quantum dot solar cells

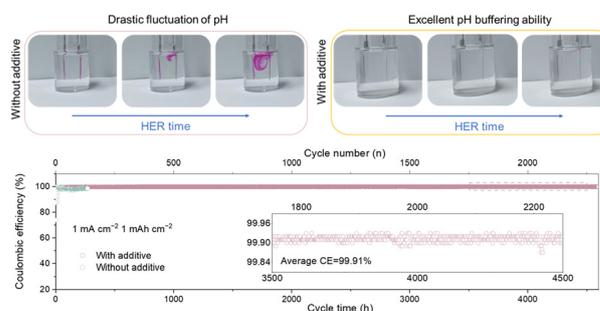
Huifeng Li, Hehe Huang, Du Li, Xuliang Zhang, Chenyu Zhao, Xinyu Zhao, Wanli Ma* and Jianyu Yuan*



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Highly reversible zinc anode enabled by a trace-amount additive with pH buffering capability

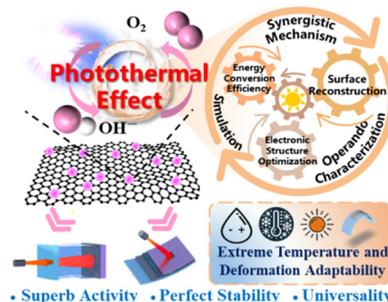
Xiaohui Ma, Qiong Wang, Xi Zhang, Yu Lin, Fengyi Zhang, Jianhang Huang* and Yonggang Wang*



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Advancing extreme-temperature-tolerant zinc–air batteries through photothermal transition metal sulfide heterostructures

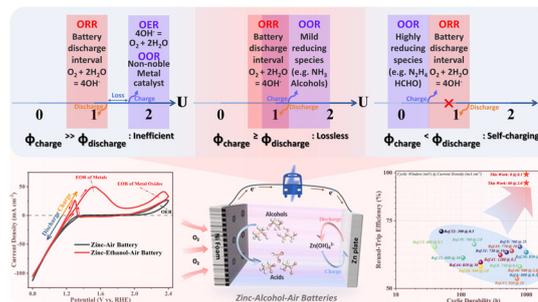
Yuqing Zhong, Yunzheng Zhang, Jiajian Wang, Huile Jin, Shuang Pan,* Shun Wang* and Yihuang Chen*



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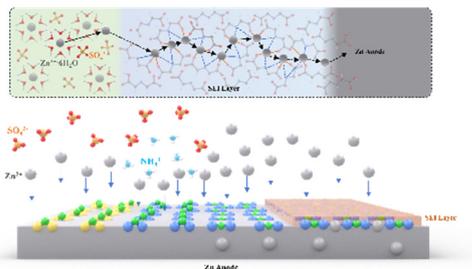
Zinc–alcohol–air batteries with ultra-narrow cyclic voltage windows

Zilong Li, Shunlian Ning, Yanshuo Jin, Nan Wang,* Shuhui Sun* and Hui Meng*



PAPERS

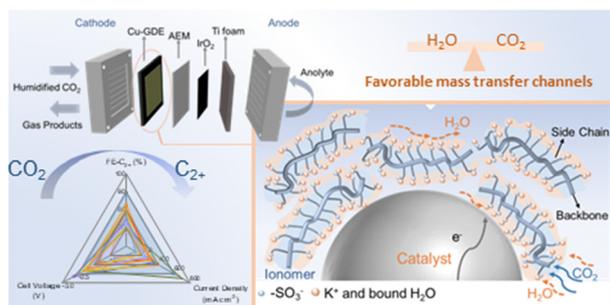
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Novel *in situ* SEI fabrication on Zn anodes for ultra-high current density tolerance enabled by electrical excitation–conjugation of iminoacetonitriles

Ruqian Zhang, Tao Shui,* An Li, Huan Xia, Gang Xu, Lingfeng Ji, Chengjie Lu,* Wei Zhang* and ZhengMing Sun*

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Rational catalyst layer design enables tailored transport channels for efficient CO₂ electrochemical reduction to multi-carbon products

Jiping Sun, Bichao Wu, Zhixing Wang, Huajun Guo, Guochun Yan, Hui Duan, Guangchao Li, Ying Wang* and Jiexi Wang*

CORRECTION

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Correction: A relaxor ferroelectric polymer with an ultrahigh dielectric constant largely promotes the dissociation of lithium salts to achieve high ionic conductivity

Yan-Fei Huang, Tian Gu, Guanchun Rui, Peiran Shi, Wenbo Fu, Lai Chen, Xiaotong Liu, Jianping Zeng, Benhao Kang, Zhichao Yan, Florian J. Stadler, Lei Zhu, Feiyu Kang and Yan-Bing He*

