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Fundamental questions
Elemental answers

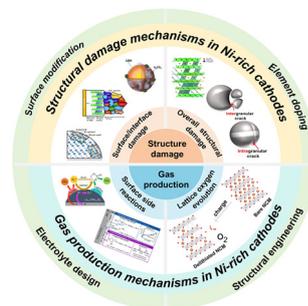


REVIEWS

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Addressing the fundamental issues in Ni-rich cathodes: degradation mechanisms and mitigation strategies

Ziqi Liu, Yiming Zhang, Shanshan Pan, Yong Chen,*
Keer Yang, Shanxi Wu, Musong Liu, Lei Hu,
Shuaicheng Jiang,* Xiaopeng Wang, Guoxiu Wang* and
Meng Yao*

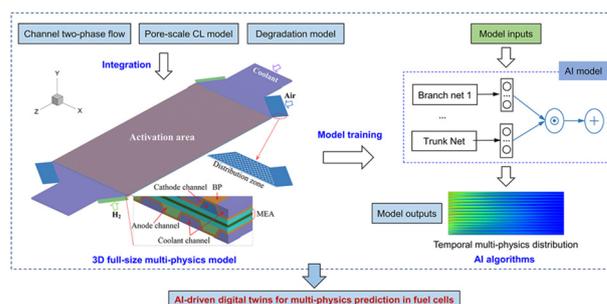


PERSPECTIVE

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Advancing next-generation proton exchange membrane fuel cell design through multi-physics and AI modeling

Guobin Zhang, Zhiguo Qu,* Qiang Zheng, Yichen Zhou,
Ning Wang and Yun Wang*

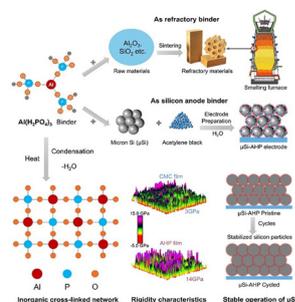


COMMUNICATION

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Metallurgical refractory lining-guided inorganic binder for stable lithium storage in silicon microparticle anodes

Jinwei Zhou, Siyao Wu, Yang Li, Qihou Li and
Feixiang Wu*

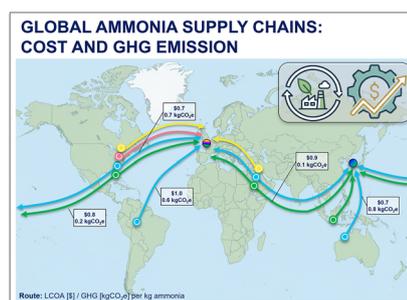


PAPERS

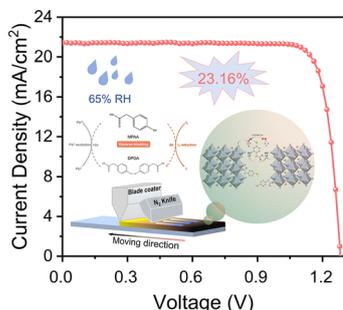
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Toward a sustainable energy future using ammonia as an energy carrier: global supply chain cost and greenhouse gas emissions

Woojae Shin, Haoxiang Lai, Gasim Ibrahim and
Guiyan Zang*



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A regenerable redox mediator for all-air processed wide-bandgap perovskite solar cells under high-humidity conditions

Yuting Song, Xinhang Cai, Haoyu Ge, Xuelian Liu, Ziyang Liu, Aijun Li, Naoyuki Shibayama and Xiao-Feng Wang*

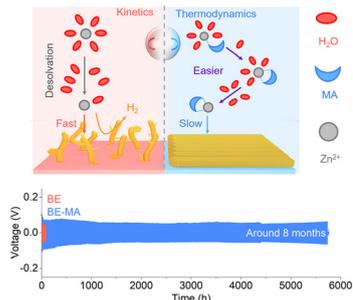
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Sodium-compensating electrolyte additives stabilize interfaces for highly reversible anode-free sodium batteries

Chunlin Xie, Shengfang Liu, Jin Wang, Xianghui Meng, Shuyi Yu, Jiaming Zhang, Haijun Peng, Dan Sun, Yougen Tang and Haiyan Wang†*

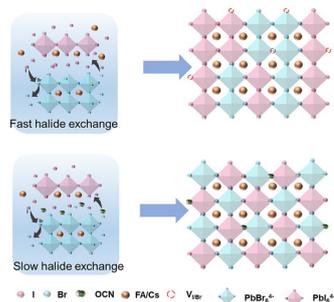
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Kinetic modulation enabling densely oriented electrodeposition of Zn anodes in aqueous batteries

Kuo Wang, Hongtu Zhan, Xiao-Xia Liu and Xiaoqi Sun*

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Halide-mixing braking strategy for 1.95 eV wide-bandgap perovskites enabling high-efficiency triple-junction tandems

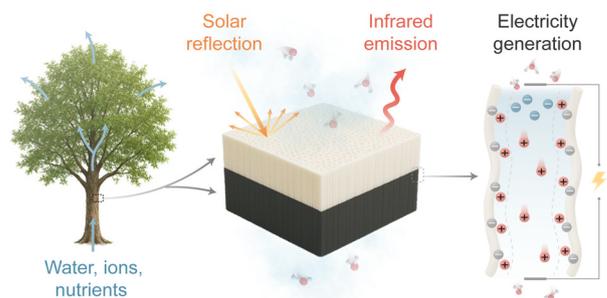
Zuxiong Xu, Jiashuo Han, Guang Li, Guoyi Chen, Dexin Pu, Hongyi Fang, Lishuai Huang, Jiahao Wang, Shiqiang Fu, Zixi Yu, Zhiqiu Yu, Kexin Ming, Yansong Ge, Shun Zhou,* Guojia Fang* and Weijun Ke*



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Sustainable moisture-induced electricity from wood through asymmetric hygroscopic design and radiative cooling

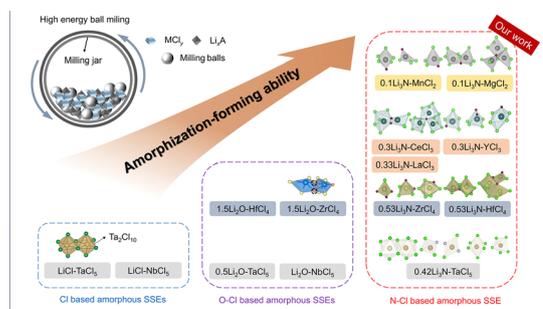
Chenyue Guo, Huajie Tang, Decheng Kong, Qixiang Chen, Xin Wu, Fan Fan, Xinyu Zhao, Renhao Ding, Wenqi Zhong* and Dongliang Zhao*



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Nitrogen-triggered amorphization enables high-performance solid-state electrolytes

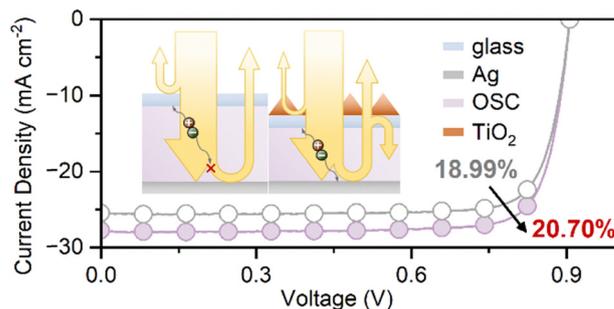
Bolong Hong, Lei Gao,* Bingkai Zhang, Pengfei Nan, Ruishan Zhang, Yuhang Li, Zhihao Lei, Ming Liu, Jing Wu, Longbang Di, Haijin Ni, Songbai Han* and Jinlong Zhu*



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Mitigating photon escape in thin-film photovoltaic devices via non-reciprocal optical path

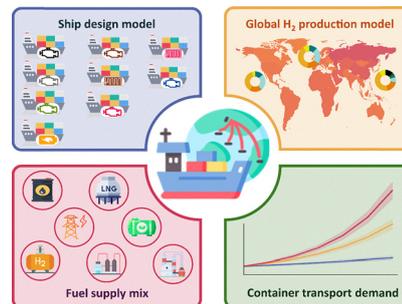
Jing-De Chen, Hao Ren, Ye-Fan Zhang, Song-Jie Zhou, Jia-Liang Zhang, Zhi-Yuan Deng, Yan-Qing Li,* Elvira Fortunato,* Rodrigo Martins* and Jian-Xin Tang*



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Decarbonizing potential of global container shipping with hydrogen-based fuels

Shijie Wei,* Arnold Tukker and Bernhard Steubing



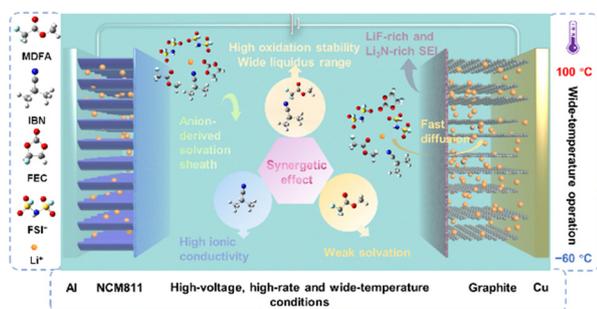
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Single-atom catalyzed formation of inorganic-rich SEI/CEI for durable anode-free solid-state lithium metal batteries

Xiaosa Xu, Junjie Chen, Jin Li, Zhenyu Wang, Zixiao Guo, Pengzhu Lin, Yu Wang, Jing Sun,* Baoling Huang* and Tianshou Zhao*

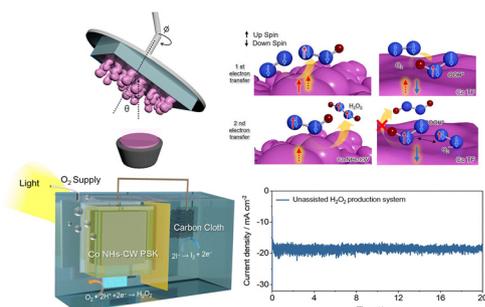
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High-voltage lithium-ion battery with a wide operating temperature range and fast-charging ability

Wen Zhou, Gaohong Liu, Yanbing Mo, Xiao Zhu, Kaiyue Zhu and Xiaoli Dong*

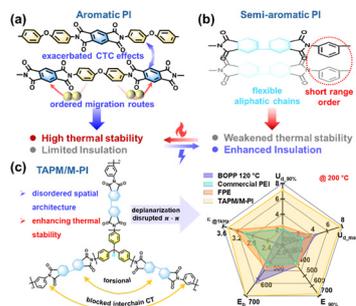
312



Efficient solar-driven hydrogen peroxide production enabled by a perovskite electrochemical device integrated with a cobalt-based chiral catalyst

Young Sun Park, Jaerim Kim, Subin Moon, Eunji Ahn, Hyeonwoong Hwang, Sang-Hoon You, Juwon Lee, Chang-Seop Jeong, Wooyong Jeong, Hyoung-il Kim, Yong-Tae Kim, Kug-Seung Lee, Donghwa Lee, Jong Kyu Kim* and Joocho Moon*

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Disruption of short-range $\pi-\pi$ stacking via a disordered spatial architecture for energy storage at 250 °C

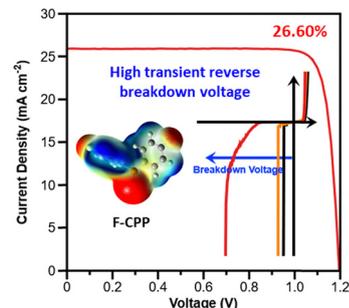
Deng Hu, Hang Luo,* Guanghu He, Xi Chen, Yuting Wan, Fan Wang, Xiaona Li, Huan Wang, Haoran Xie* and Dou Zhang*



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Dielectric molecular-bridges enable durable inverted perovskite solar cells with 26.60% efficiency and a high reverse breakdown voltage

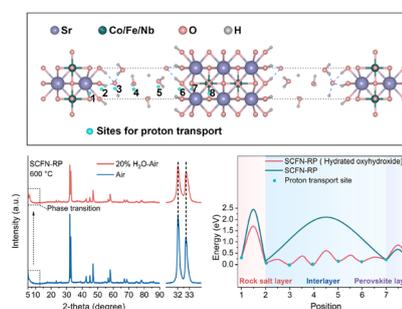
Chuan Luo, Yu Chen,* Xing Wu, Yang Peng, Jing Zhou, Yuwei Duan, Yang Shen, Hongxiang Li, Yihui Wu and Qiang Peng*



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The interlayer proton capture and transport mechanism in oxygen electrodes boosts proton ceramic electrolysis

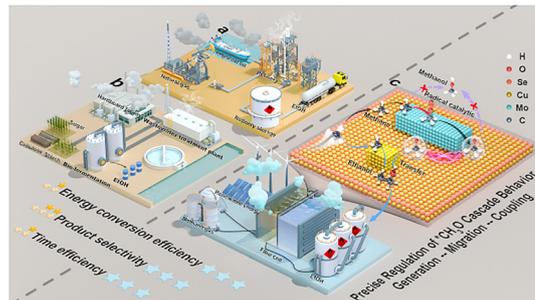
Meijuan Fei, Zhaohui Cai, Peng Chen, Dongliang Liu, Cheng Huang, Jianqiu Zhu, Linjuan Zhang, Wei Wang, Chuan Zhou,* Wei Zhou* and Zongping Shao*



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Unlocking high alcohol product selectivity in methane-to-ethanol conversion at practically relevant current density via dual-site-driven cascade electrocatalysis

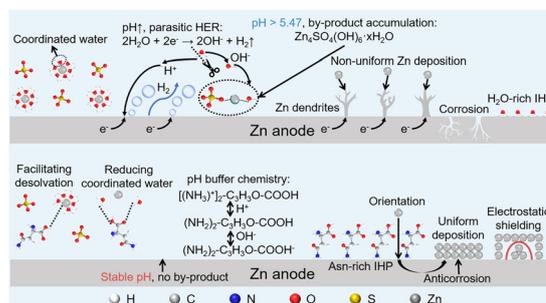
Libin Zeng, Xinyue Wang, Dashuai Wang, Xianyun Peng, Zhibin Liu, Na Wu, Kexin Wang, Zhongjian Li, Bin Yang, Qinghua Zhang, Lecheng Lei, Paolo Samori and Yang Hou*



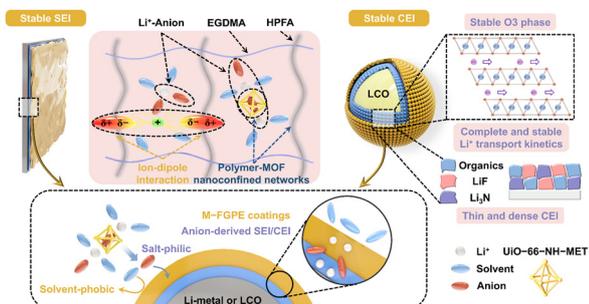
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Synergistic regulation of electrolyte environment and anode interface for constructing ultralong-life Zn-metal batteries with high depth discharge

Cheng-Lin Miao, Lu Feng, Xiao-Xue Wang, De-Hui Guan,* Xin-Yuan Yuan and Ji-Jing Xu*



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Conjugated topologically confined composite electrolytes for robust high-voltage and high-temperature semi-solid-state lithium metal batteries

Wang Xu, Yongbiao Mu, Yaoyu Yin, Anjun Hu,*
Yuanjian Li, Jian Wang,* Qi Liu, Jianping Long,
Lin Zeng* and Shimou Chen*

CORRECTION

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Correction: Ion exchange-induced $\text{Li}_x\text{Mg}_y\text{BO}_z$ coating synergized with reinforced bulk doping enables fast-charging long-cycling high-voltage LiCoO_2

Ting Wang, Yuqi Zhou, Jiaqi Huang, Fangzhou Zhao, Wanglai Cen, Lanlu Lu, Yifei Dang, Kecheng Cao, Yan Meng,*
Yongzhi Zhang* and Dan Xiao

