

Energy & Environmental Science

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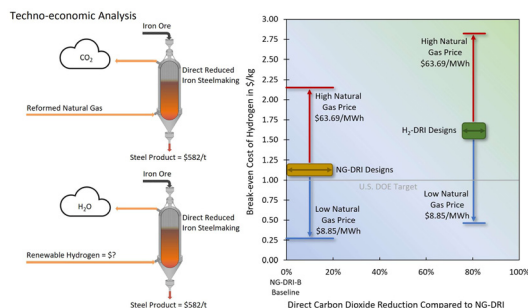
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Green steel: design and cost analysis of hydrogen-based direct iron reduction

Fabian Rosner, Dionissios Papadias, Kriston Brooks, Kelvin Yoro, Rajesh Ahluwalia, Tom Autrey and Hanna Breunig*

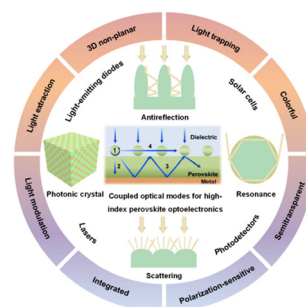


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Yan Zhan,* Chang Li, Zhigang Che, Ho Cheung Shum, Xiaotian Hu* and Huizeng Li*



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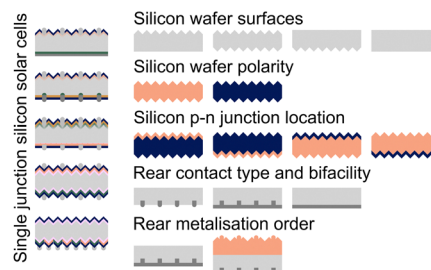
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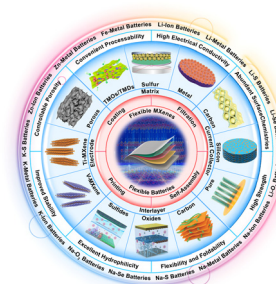
Design considerations for silicon bottom cell



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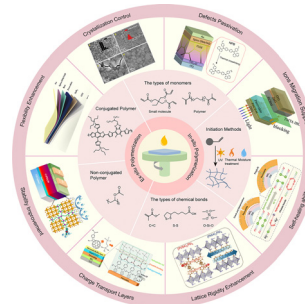
Yongling An,* Yuan Tian, Hengtao Shen, Quanyan Man, Shenglin Xiong and Jinkui Feng*



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Cross-linking polymerization boosts the performance of perovskite solar cells: from material design to performance regulation

Xing Yin, Ziyu Wang, Yingjie Zhao,* Shasha Zhang, Yiqiang Zhang and Yanlin Song*

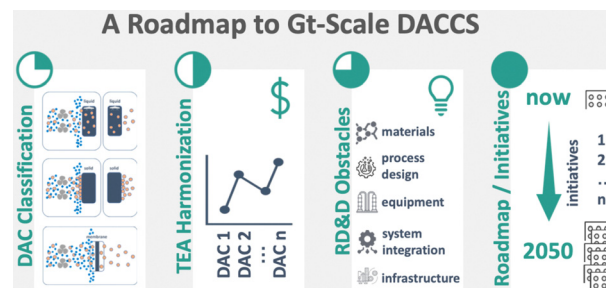


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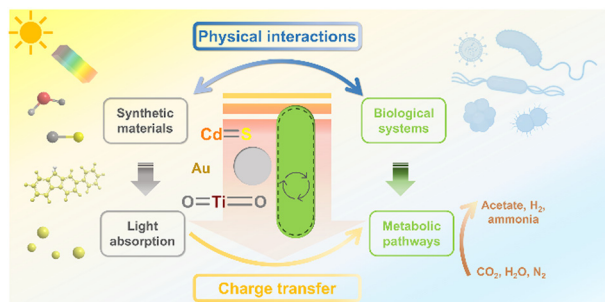
A roadmap for achieving scalable, safe, and low-cost direct air carbon capture and storage

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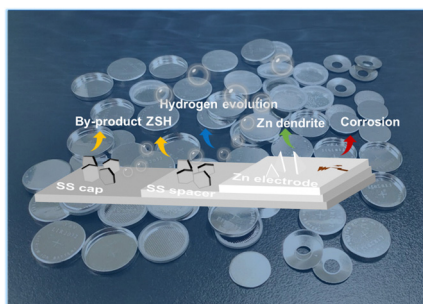


Making the connections: physical and electric interactions in biohybrid photosynthetic systems

Ying Yang, Lu-Ning Liu, Haining Tian, Andrew I. Cooper* and Reiner Sebastian Sprick*

COMMUNICATIONS

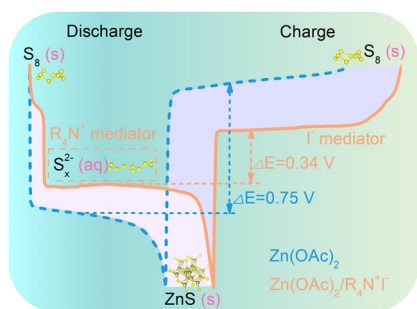
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The pitfalls of using stainless steel (SS) coin cells in aqueous zinc battery research

Gang Wu, Yang Yang, Ruijie Zhu, Wuhai Yang, Huijun Yang* and Haoshen Zhou*

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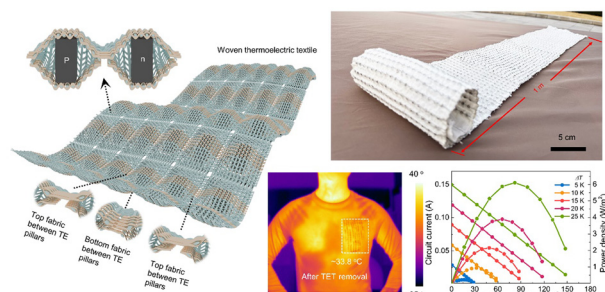


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Scalable manufacturing of a durable, tailorable, and recyclable multifunctional woven thermoelectric textile system

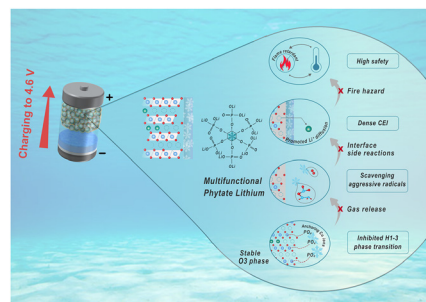
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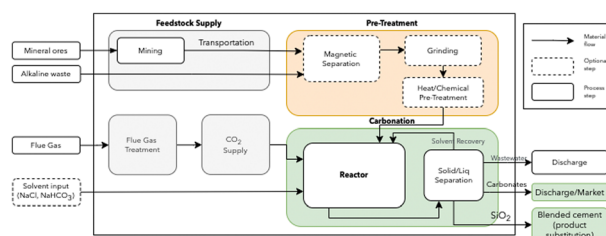
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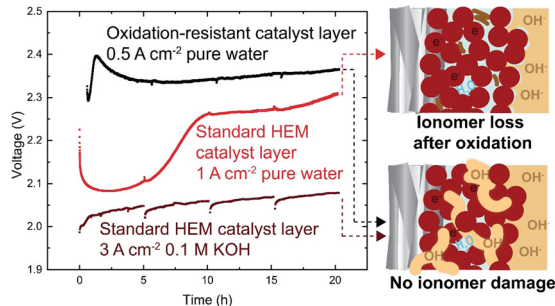
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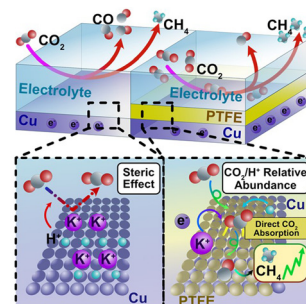
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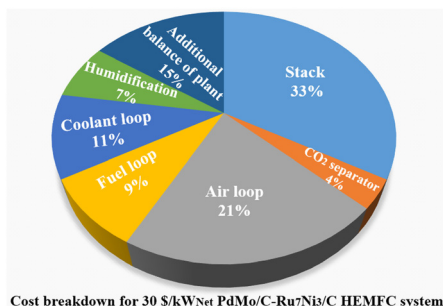
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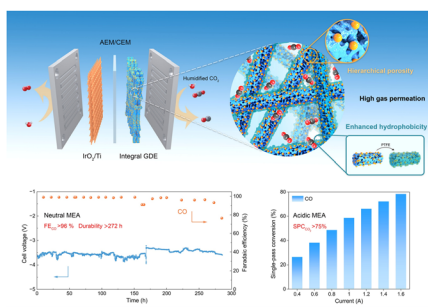
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Material and system development needs for widespread deployment of hydroxide exchange membrane fuel cells in light-duty vehicles

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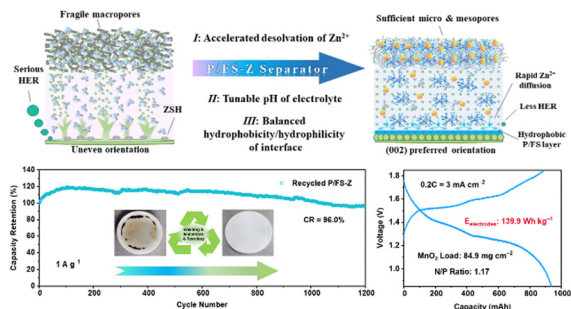
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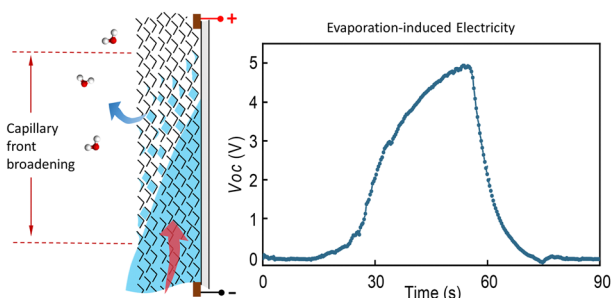
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Highly-reversible and recyclable zinc metal batteries achieved by inorganic/organic hybrid separators with finely tunable hydrophilic–hydrophobic balance

Lingbo Yao, Gege Wang, Feifan Zhang, Xiaowei Chi* and Yu Liu*

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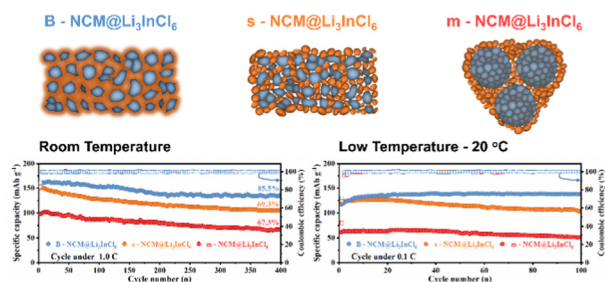
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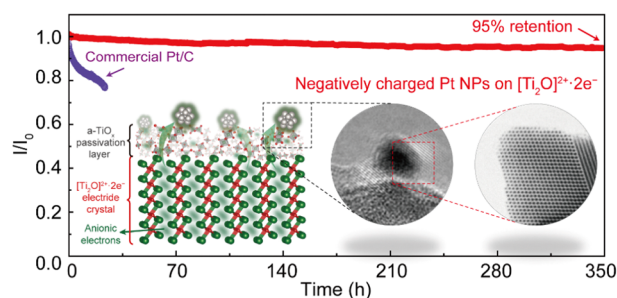
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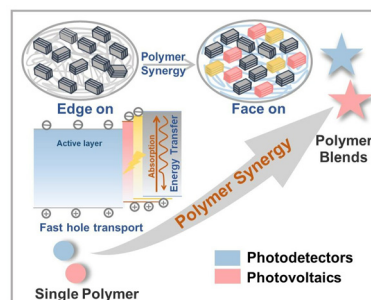
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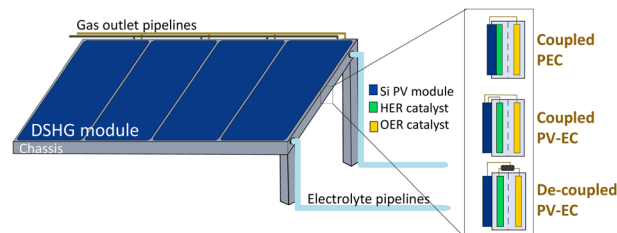
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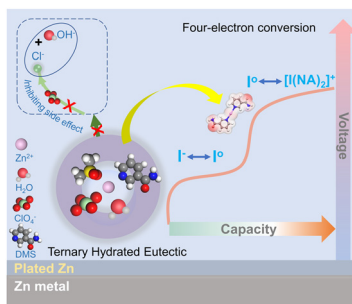
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Comparative techno-economic analysis of different PV-assisted direct solar hydrogen generation systems

Astha Sharma,* Thomas Longden, Kylie Catchpole and Fiona J. Beck



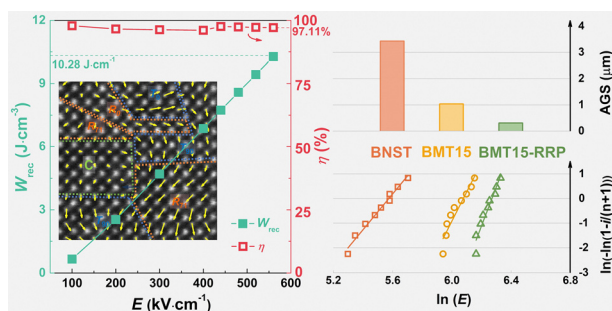
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Designing ternary hydrated eutectic electrolyte capable of four-electron conversion for advanced Zn–I₂ full batteries

Wenda Li, Hengyue Xu, Hongyi Zhang, Facai Wei, Tingting Zhang, Yong Wu, Lingyan Huang, Jianwei Fu, Chengbin Jing, Jiangong Cheng and Shaohua Liu*

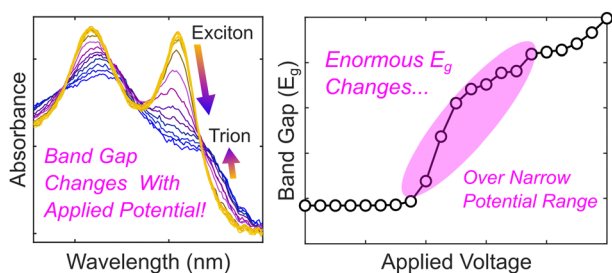
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A high-temperature performing and near-zero energy loss lead-free ceramic capacitor

Da Li, Diming Xu,* Weichen Zhao, Max Avdeev, Hongmei Jing, Yan Guo, Tao Zhou, Wenfeng Liu, Dong Wang* and Di Zhou*

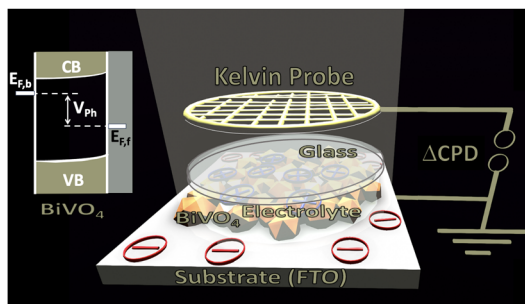
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Quantifying interfacial energetics of 2D semiconductor electrodes using *in situ* spectroelectrochemistry and many-body theory

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Contactless measurement of the photovoltage in BiVO₄ photoelectrodes

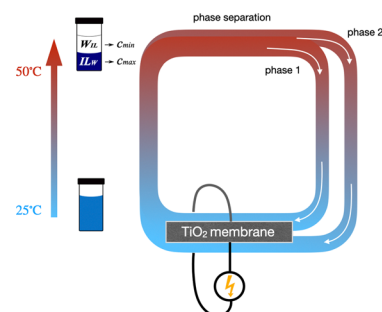
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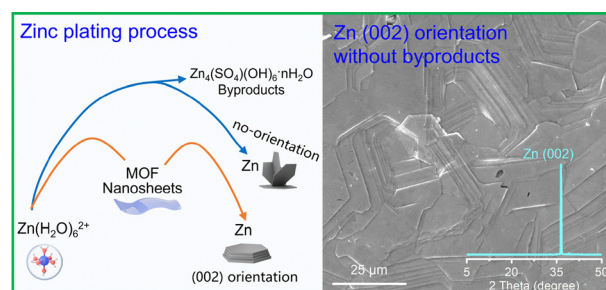
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MOF nanosheets as ion carriers for self-optimized zinc anodes

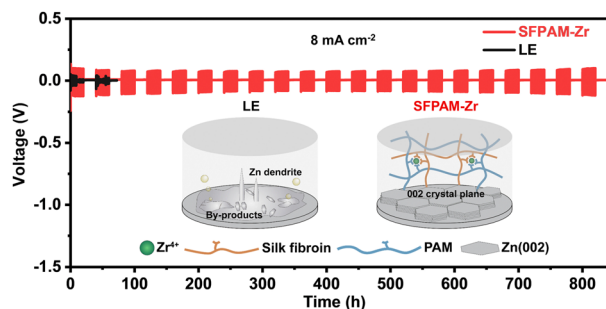
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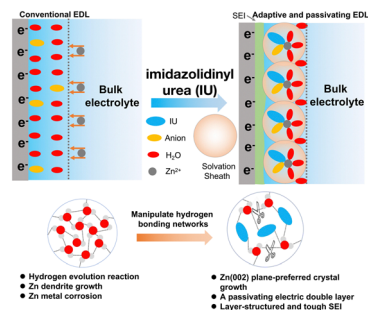
Yong Cheng, Yucong Jiao* and Peiyi Wu*



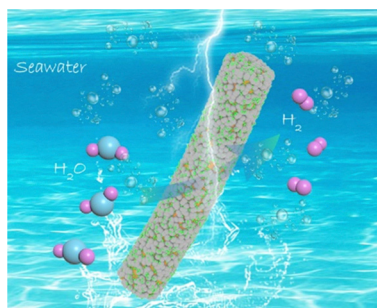
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Preferred planar crystal growth and uniform solid electrolyte interfaces enabled by anion receptors for stable aqueous Zn batteries

Xinyu Wang, Yiran Ying, Xiaomin Li, Shengmei Chen,* Guowei Gao, Haitao Huang* and Longtao Ma*



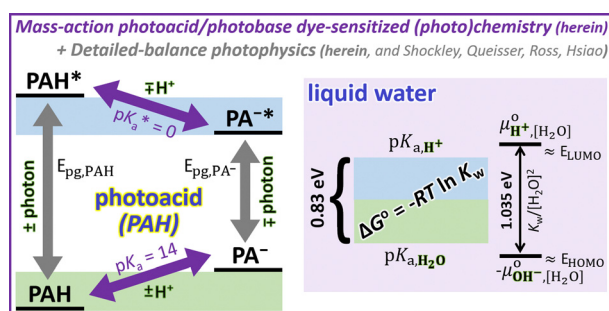
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An ultra-low Pt metal nitride electrocatalyst for sustainable seawater hydrogen production

Huashuai Hu, Zhaorui Zhang, Yaowen Zhang, Tiju Thomas, Haiying Du, Keke Huang, J. Paul Attfield and Minghui Yang*

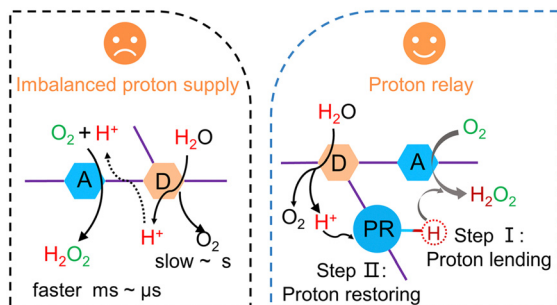
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Detailed-balance limits for sunlight-to-protonic energy conversion from aqueous photoacids and photobases based on reversible mass-action kinetics

Gabriel S. Phun, Rohit Bhide and Shane Ardo*

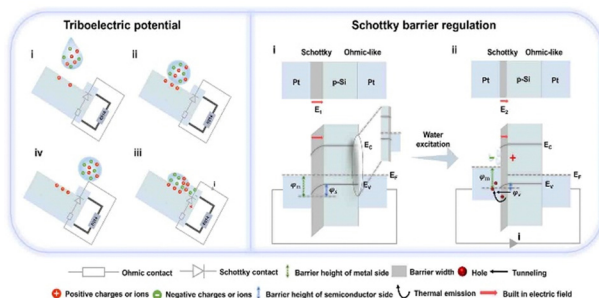
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Proton reservoirs in polymer photocatalysts for superior H₂O₂ photosynthesis

Bo Sheng, Yangen Xie, Qi Zhao, Hua Sheng* and Jincai Zhao

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A constant-current generator *via* water droplets driving Schottky diodes without a rectifying circuit

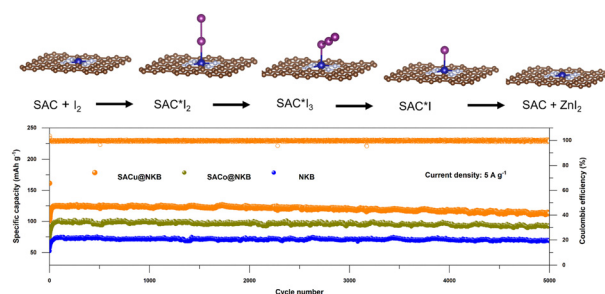
Yahui Li, Qi Zhang, Yuhong Cao, Zhipeng Kang, Han Ren, Zhiyuan Hu, Mang Gao, Xiaole Ma, Jinyuan Yao, Yan Wang, Congchun Zhang, Guifu Ding, Junshan Liu, Jiming Bao,* Hui Wang* and Zhuoqing Yang*



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Single atom catalysts for triiodide adsorption and fast conversion to boost the performance of aqueous zinc–iodine batteries

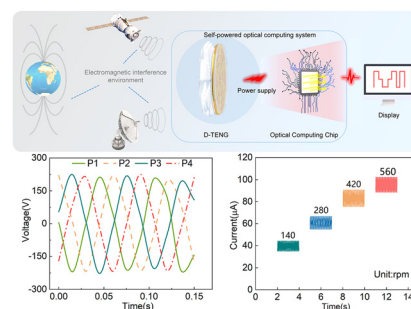
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High power and low crest factor of direct-current triboelectric nanogenerator for self-powered optical computing system

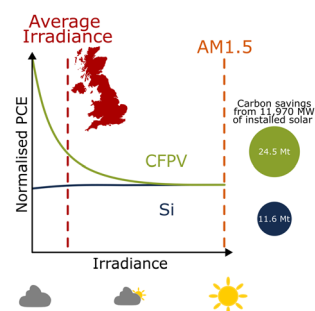
Hongyun Li, Shaobo Lv, Binbin Zhang, Bochao Liu, Jin Yang, Hengyu Guo, Yiyuan Xie* and Zhiming Lin*



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Decarbonising electrical grids using photovoltaics with enhanced capacity factors

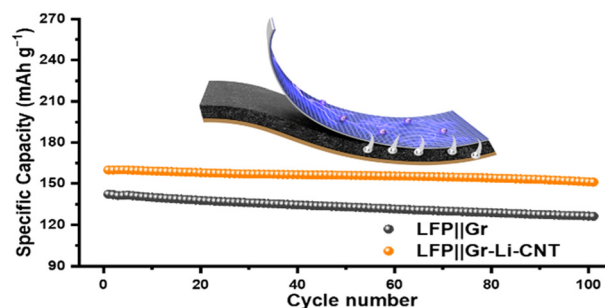
Cai Williams, Hannes Michaels, Andrew F. Crossland, Zongtai Zhang, Natasha Shirshova, Roderick C. I. MacKenzie, Hongjian Sun, Jeff Kettle, Marina Freitag and Christopher Groves*



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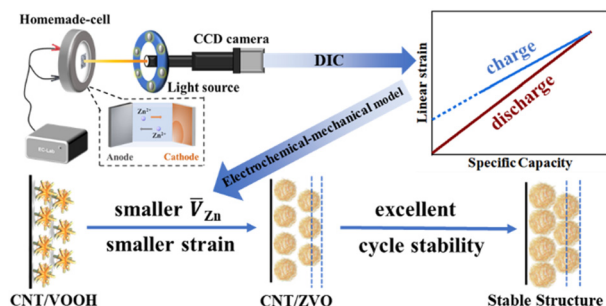
A large-area lithium metal–carbon nanotube film for precise contact prelithiation in lithium-ion batteries

Chao Wang,* Fangzhou Yang, Wang Wan, Shihe Wang, Yongyi Zhang,* Yunhui Huang* and Ju Li*



PAPERS

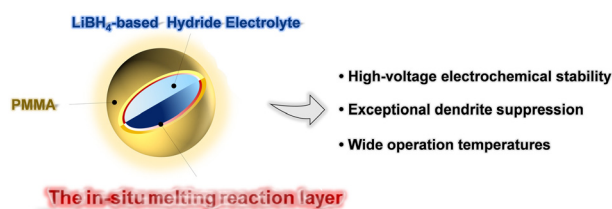
4670



Operando chemical strain analysis of CNT/VOOH during zinc insertion in Zn-ion batteries

Xiuling Shi, Yuchuan Sun, Yibo Weng, Xiaoying Long, Tongxing Lei, Jianli Zhou, Deping Li, Jin Zhang, Yan Huang,* Lijie Ci, Kaikai Li* and Tong-Yi Zhang*

4679



A wide temperature 10 V solid-state electrolyte with a critical current density of over 20 mA cm⁻²

Yiqi Wei, Zhenglong Li, Zichong Chen, Panyu Gao, Mingxi Gao, Chenhui Yan, Zhijun Wu, Qihang Ma, Yinzhu Jiang, Xuebin Yu, Xin Zhang, Yongfeng Liu, Yaxiong Yang,* Mingxia Gao, Wenping Sun, Zhiguo Qu, Jian Chen* and Hongge Pan*

CORRECTION

4693

Correction: Scalable manufacturing of a durable, tailorable, and recyclable multifunctional woven thermoelectric textile system

Yuanyuan Jing, Jun Luo, Xue Han, Jiawei Yang, Qiulin Liu, Yuanyuan Zheng, Xinyi Chen, Fuli Huang, Jiawen Chen, Qinliang Zhuang, Yanan Shen, Haisheng Chen, Huaizhou Zhao,* G. Jeffrey Snyder, Guodong Li,* Ting Zhang* and Kun Zhang*

