Journal of Materials Chemistry A

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IN THIS ISSUE

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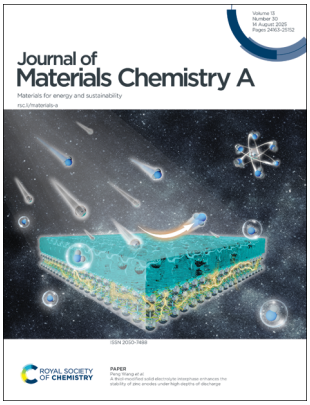

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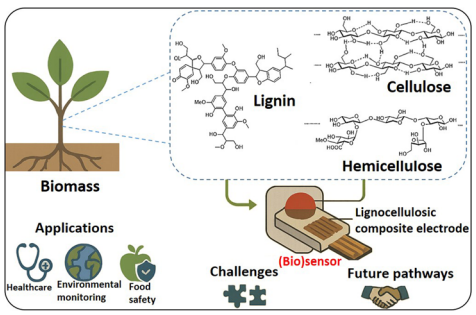
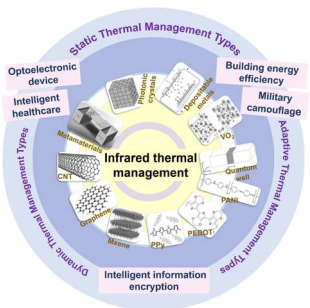
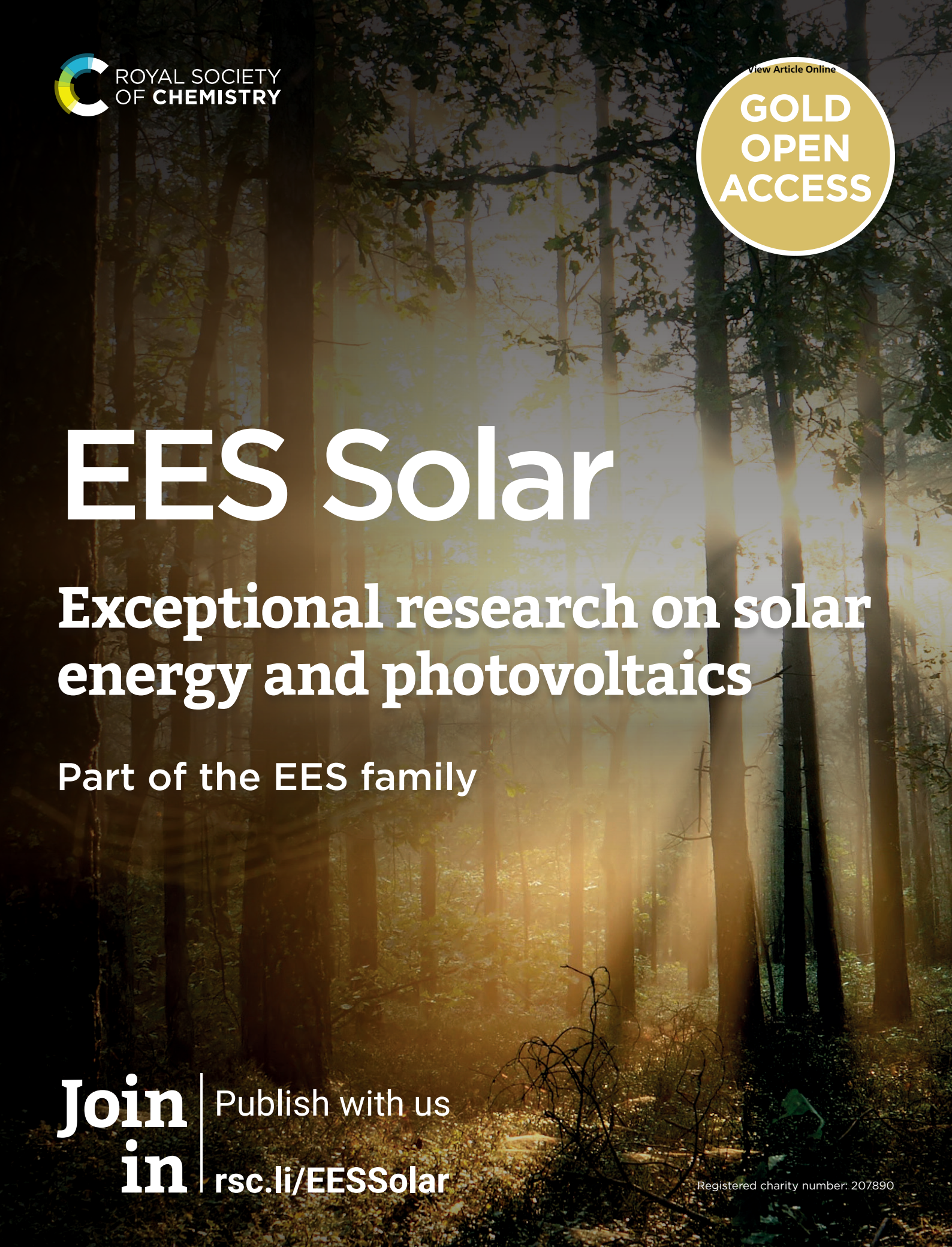
REVIEWS



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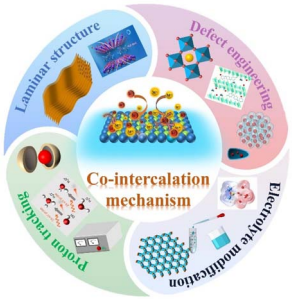

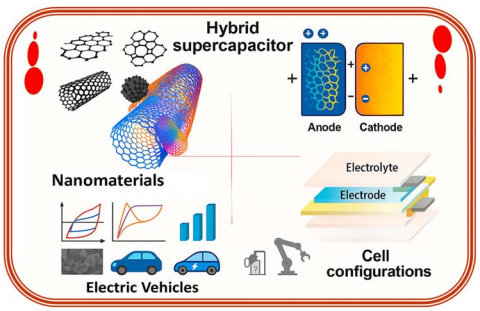

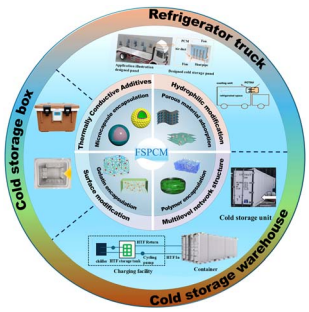

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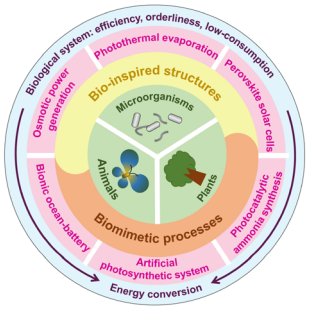

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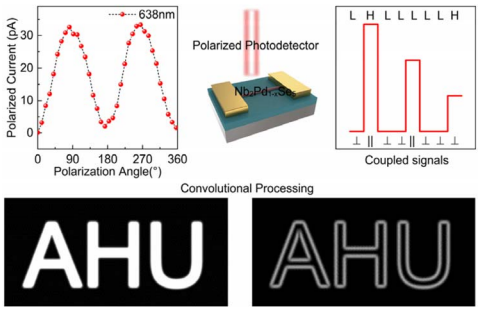
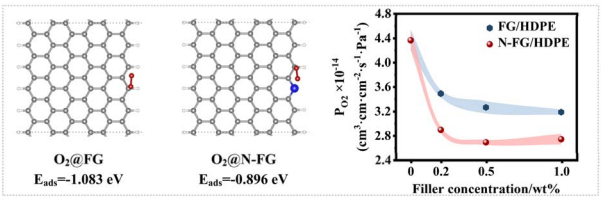


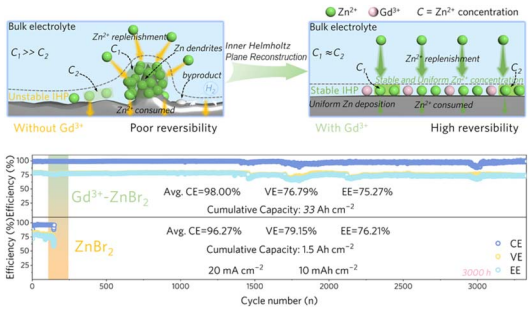
Symmetry-reduction enhanced one-dimensional polarization-sensitive photodetectors for multi-functional applications

Wei Gan, Chentao Zhang, Guanghui Peng, Liqiang Xu, Zihao Tong, Zhuxin Zhang, Chuanqiang Wu,* Yang Zhou* and Zhen Wang*



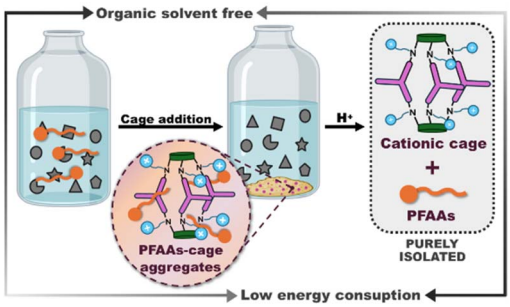
Enhanced multifunctional performance of flash graphene-polymer composites *via* nitrogen doping

Xiangbo Liu, Channa Wang, Yaping Zhang, Chao Ma, Junkai Deng,* Xiangdong Ding* and Changsheng Xiang*



Reconstructing a Gd^{3+}-enriched inner Helmholtz plane with a dynamic electrostatic shielding effect for highly reversible Zn–bromine flow batteries

Guangyu Zhu, Yichan Hu, Zhenglin Li, Wei Xiong,* Haibo Hu* and Guojin Liang*



Sustainable recovery of perfluoroalkyl acids using a reusable molecular cage

María Pérez-Ferreiro, Quinn M. Gallagher, Michael A. Webb, Alejandro Criado* and Jesús Mosquera*

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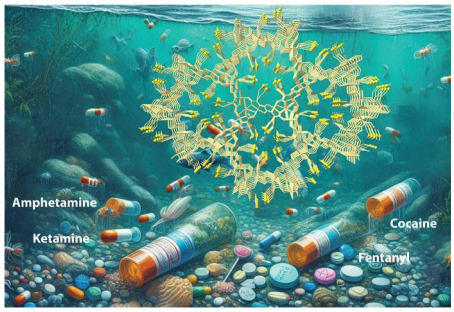

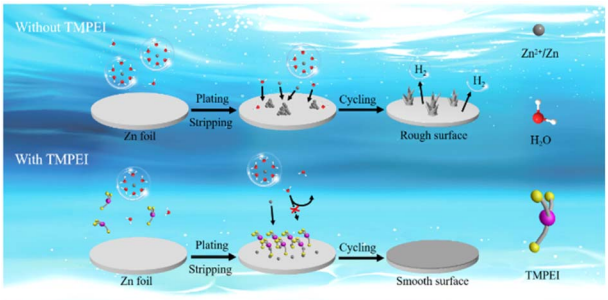

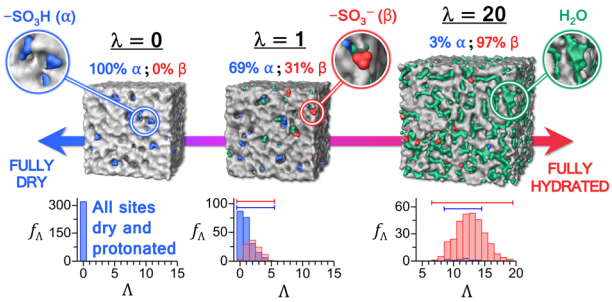

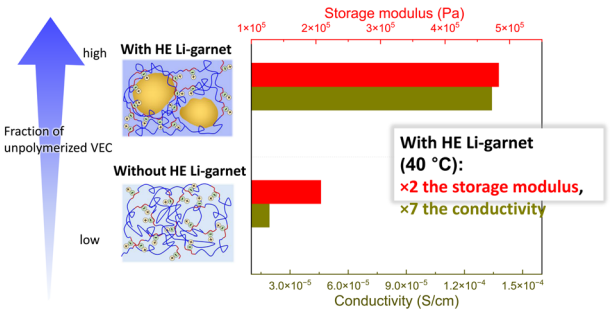

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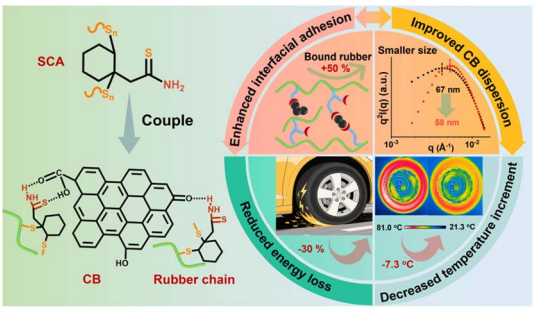
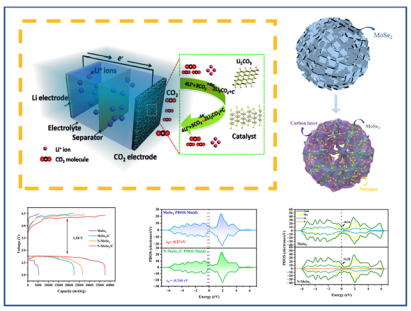


Mediating the carbon black–natural rubber interface with thioamide-functionalized polysulfide for energy-saving composites

Ruoyan Huang, Dong Wang, Zhenghai Tang,* Baochun Guo* and Liqun Zhang*

24532



Synergistic nitrogen-doping and carbon-coating in N-$MoSe_2$/C nanoflowers enable ultra-high discharge capacity for Li–CO_2 batteries

Dandan Zhu, Qingyang Dai, Xinyu Zhang, Jiacheng Yi and Yong Yang*

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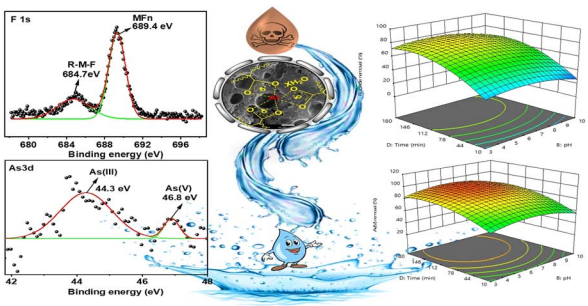

A revolutionizing polymeric framework with integrated aluminium fragment for superior water decontamination empowered by a statistical modeling approach

Shraddha Shukla, Anil R. Gupta, Surjit Bhai Ratnakar, Biswajit Ganguly, Pankaj D. Indurkar* and Saroj Sharma*

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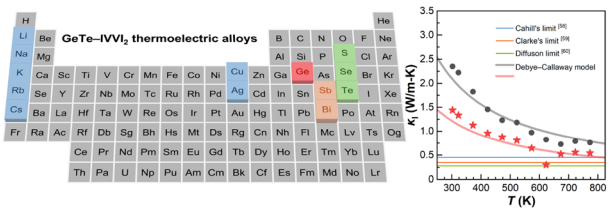

Compromise and synergy in thermoelectric GeTe–$CuSbS_2$ alloys

Zi-Wei Feng, Meng Li, Yongqi Chen, Siqi Liu, De-Zhuang Wang, Liang-Cao Yin, Hao Wu, Wei-Di Liu, Xiao-Lei Shi, Yifeng Wang, Zhi-Gang Chen* and Qingfeng Liu*

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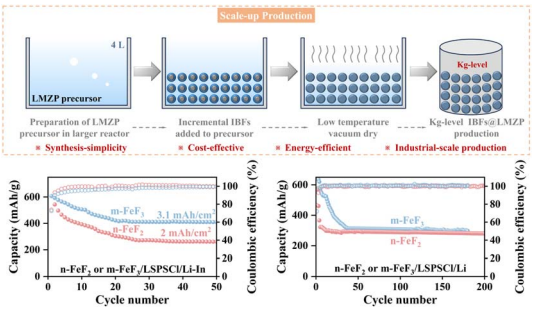

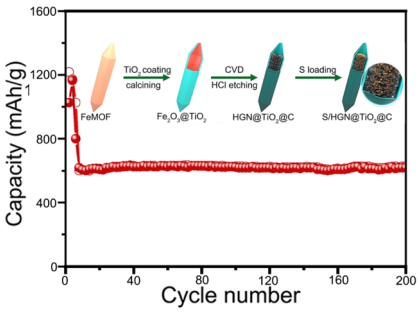

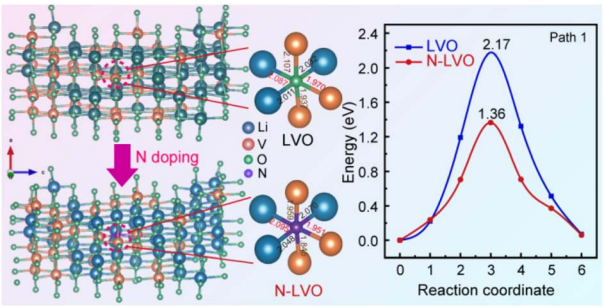

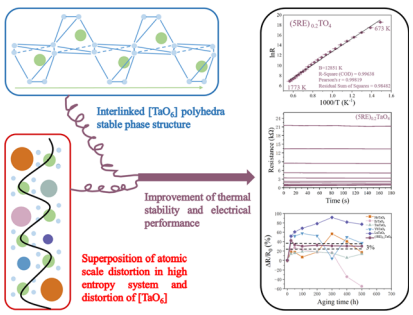

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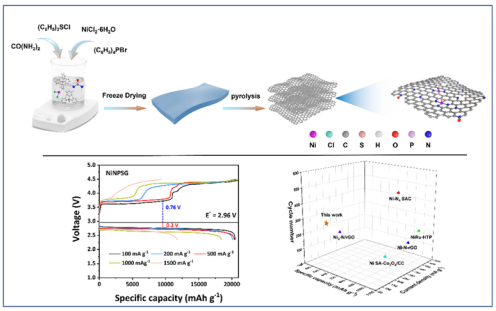

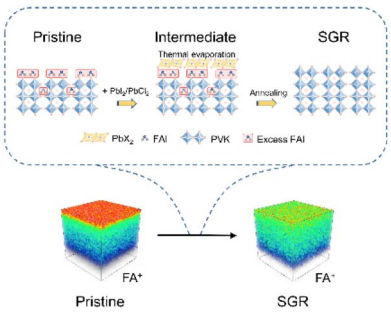

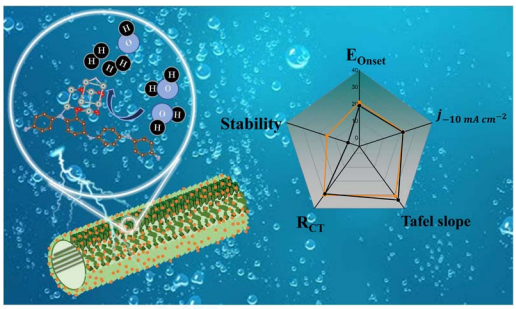

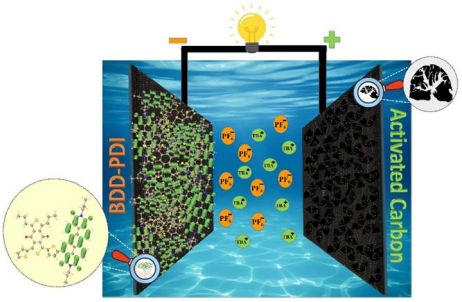

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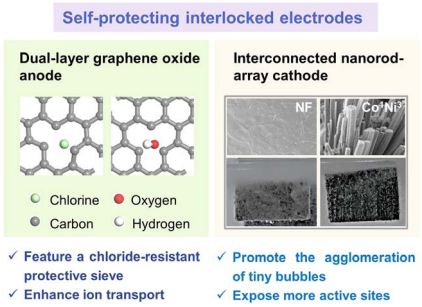

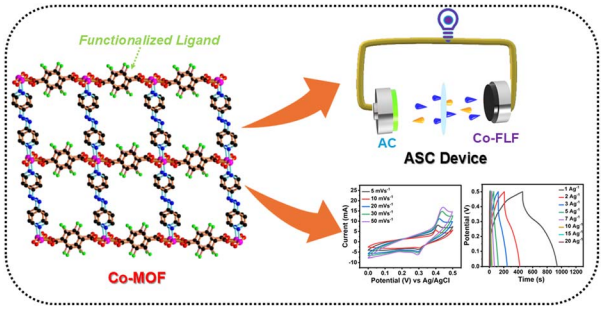

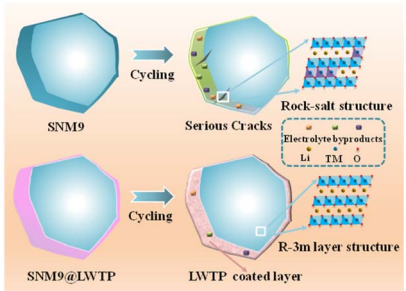

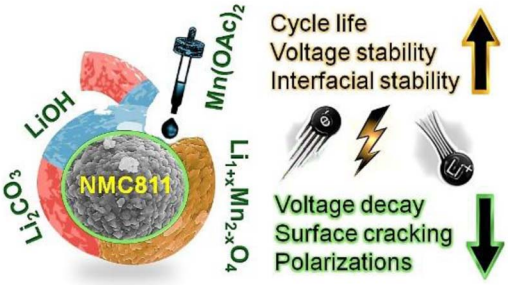

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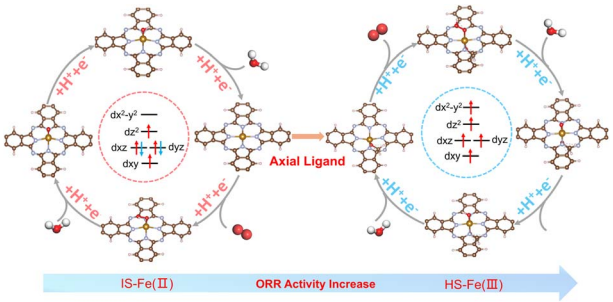

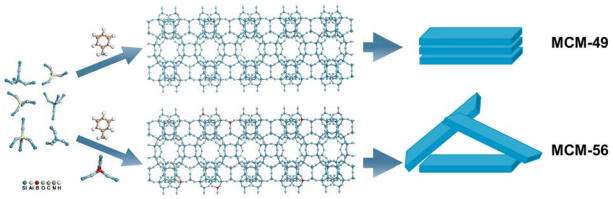

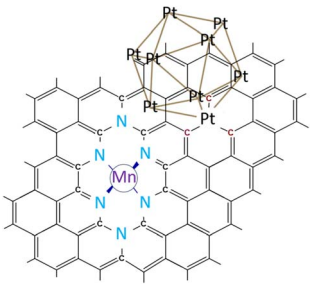

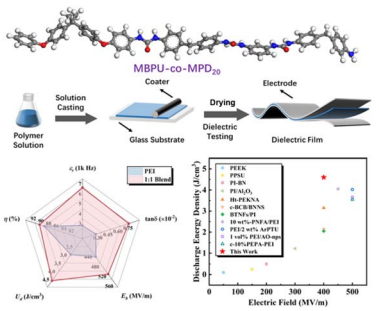

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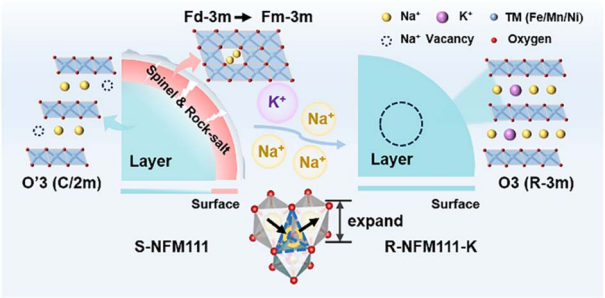
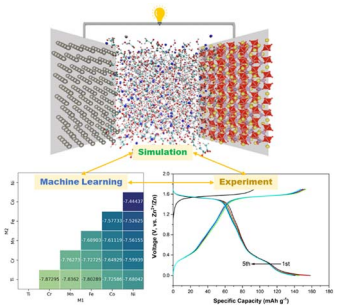


Direct upcycling of spent layered oxide cathodes *via* a dual-functional eutectic salt for sodium-ion batteries

Shili Gan, Xin Zeng, Dongyu Liu, Tiandu Sheng, Lihua Wang* and Jian Li*

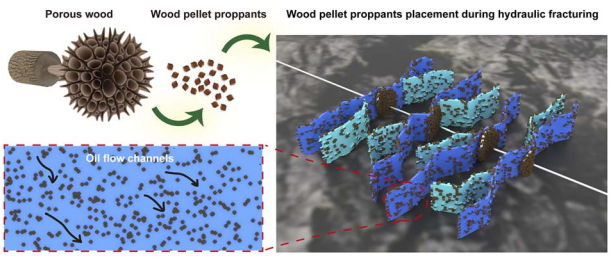
24889



An $Na_3VMn_{0.5}Ti_{0.5}(PO_4)_3$ NASICON cathode with multielectron reactions for sustainable energy storage

Adi Tiara Zikri, Muhammad Hilmy Alfaruqi, Zulkifli, Uyeong Jo, Yuri Choi, Seunggyeong Lee, Sangbin Lee, Sungjin Kim and Jaekook Kim*

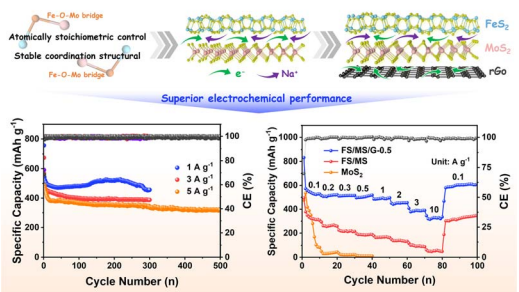
24903



Strength–density synergy of proppants *via* composition and structural tailoring of wood

Chao Ma, Zulin Wu, Mengyu Sun, Xiangdong Ding,* Jun Sun* and Changsheng Xiang*

24916



Anderson-typed POM-derived FeS_2/MoS_2 heterostructure hybridized with graphene for sodium-ion batteries anodes

Lingling Liu, Xu Yao, Ziwei Yin, Jinlong Zhuo, Xiansen Tao, Jingwen Sun,* Jiwen Cui* and Jingquan Sha

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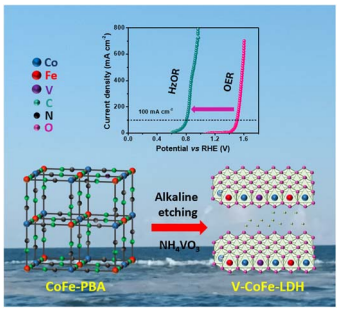

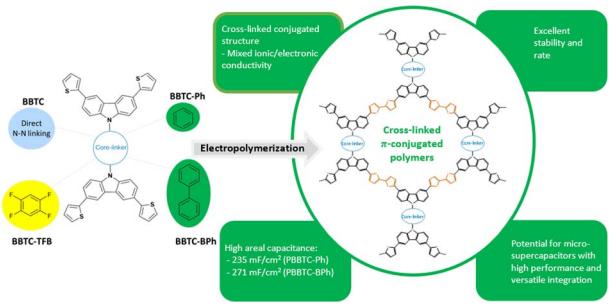

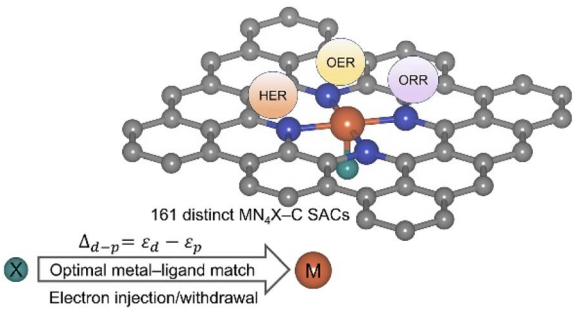

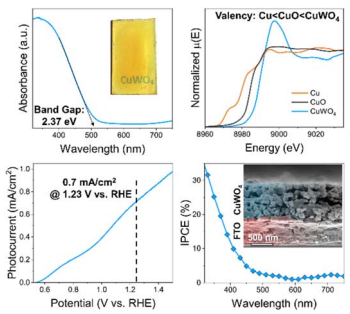

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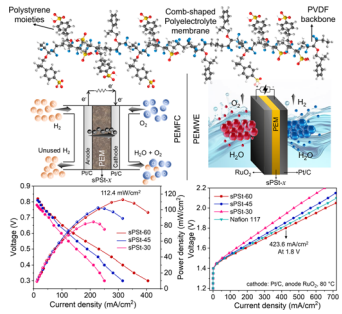

Comb-shaped proton exchange membranes with dangling polystyrene grafted onto PVDF for PEM fuel cells and water electrolysis

Pratyush Patnaik, Vanshita Goyal, Sk Miraz Hossain and Uma Chatterjee*

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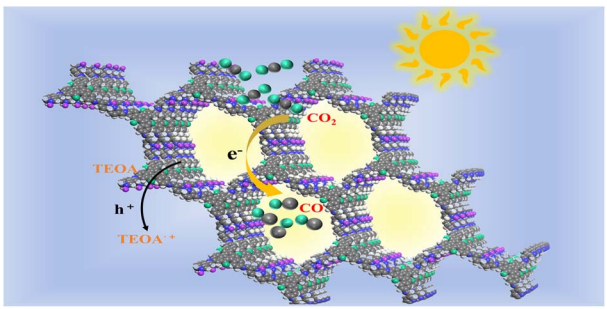
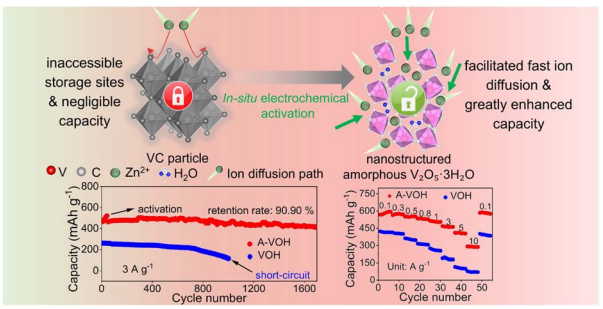


Truxenone-based donor–acceptor covalent organic frameworks incorporated with metal sites for enhanced photocatalytic CO_2 reduction

Yanyan Ren, Haiping Liu, Fang Duan,* Shuanglong Lu, Xin Chen and Mingliang Du*

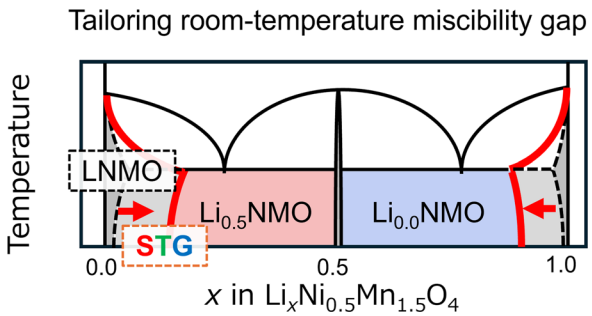
24997



In situ electrochemical activation enabling high-performance cathodes for aqueous zinc-ion batteries

Qingpu Zeng, Shitong Zhou, Neng Yu,* Jiachen Huo, Changfang Sun and Kai Guo*

25008



Tailoring the room-temperature miscibility gap in ordered spinel $LiNi_{0.5}Mn_{1.5}O_4$ cathodes by multi-element doping

Shunsuke Narumi, H. Eugenio Otal, Tien Quang Nguyen, Michihisa Koyama and Nobuyuki Zettsu*

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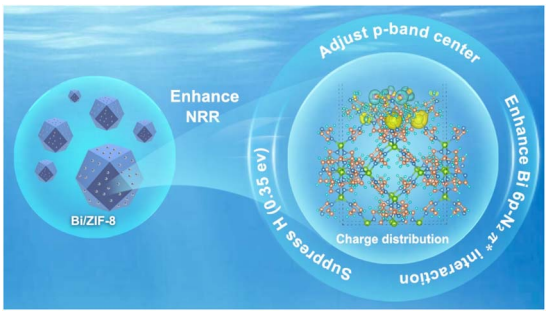
Bi/ZIF-8 catalysts: the important role of ZIF-8 for enhanced electrochemical N_2-to-NH_3 conversion using a neutral electrolyte

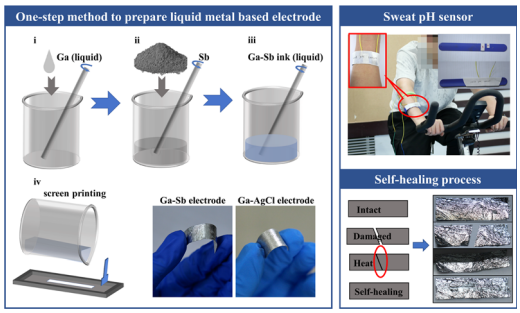
Pengju Guo, Fengxiang Yin* and Jiahui Liang



25032

Ga-Sb and Ga-AgCl liquid metal-based electrodes with self-healing for sweat pH sensors

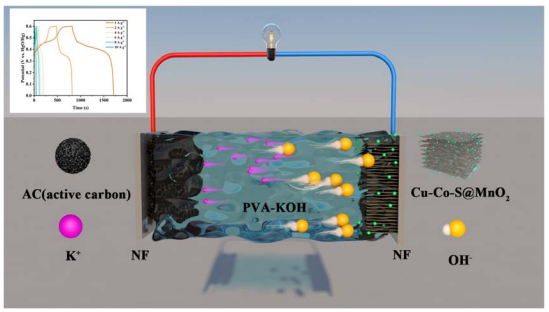
Guangxing Hu, Shuang Cui, Zhuang Li, Yan Shi* and Hongda Wang*



25042

Integrating bimetallic MOF-derived sulfides with MnO_2: synergistic Cu–Co–S@MnO_2 heterojunctions for flexible hybrid supercapacitors

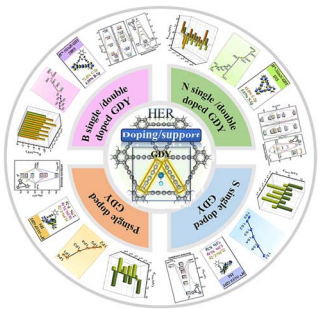
Jiale Hou, Ziheng Huang, Haofeng Lu, Cheng Chen,* Xinfeng Wu, Yonghou Xiao, Wanghui Wei, Minjie Xue, Yanyun Ma, Xinzhou Ma, Shigang Sun and Donghai Lin*



25054

Nickel single-atom catalysts anchored on heteroatom (X = B, N, P, and S)-doped graphdiyne for a highly efficient hydrogen evolution reaction

Wangdi Zhang, Xiaojun Li,* Jun Lu, Shuna Li, Yunguang Zhang, Zhongkui Zhang, Mengqi Zhang and Wenyu Xi



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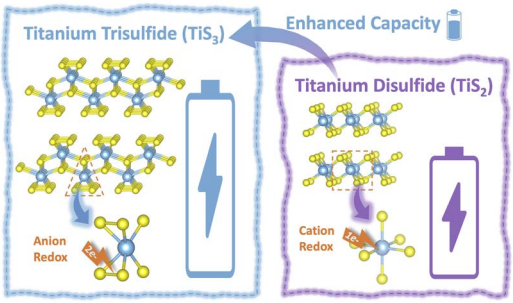

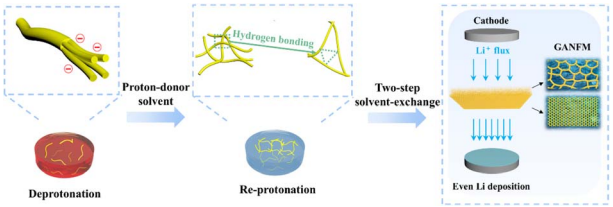

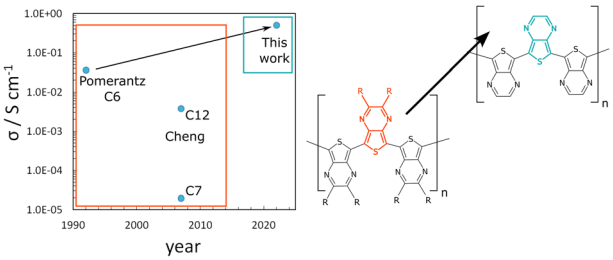

CORRECTIONS

CORRECTIONS

25149

Correction: Improvement of photocatalytic antibacterial action of Mn, S_v-co-doped $ZnIn_2S_4$ prepared by a novel O_v-rich α-MnO_2 decomposition approach

Hui Zhang, Jie Zhang,* Zeyu Zuo, Ruiyong Zhang,* Mengmeng Sun,* Jizhou Duan, Wolfgang Sand, Bo Xiao and Baorong Hou