

Journal of Materials Chemistry A

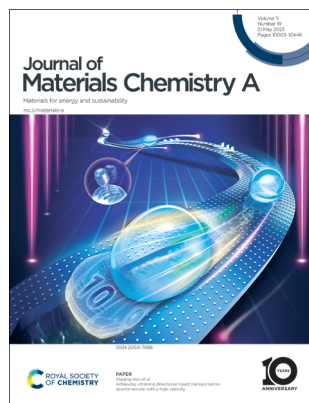
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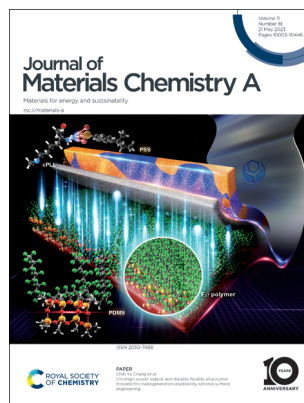
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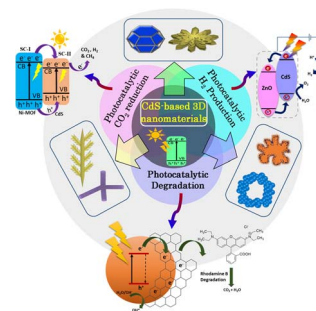
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REVIEWS

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CdS based 3D nano/micro-architectures: formation mechanism, tailoring of visible light activities and emerging applications in photocatalytic H₂ production, CO₂ reduction and organic pollutant degradation

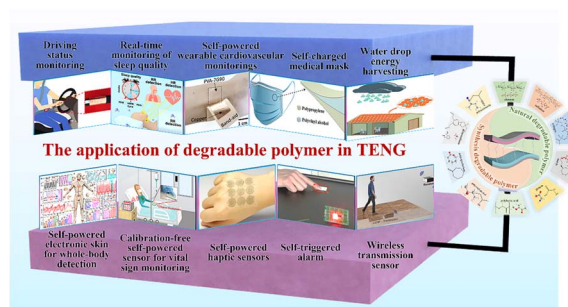
Jai Prakash,* Pragati Kumar, Nupur Saxena, Zonghua Pu, Zhangsen Chen, Ankit Tyagi, Gaixia Zhang and Shuhui Sun*



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The performance of and promotion strategies for degradable polymers in triboelectric nanogenerators

Caixia Gao, Wangshu Tong,* Yingge Zhang, Jiahe Zhang, Songling Liu and Yihe Zhang*



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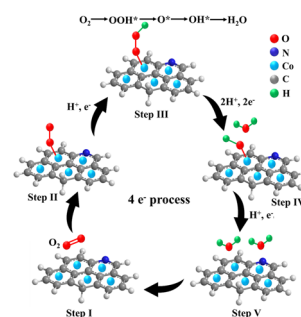


REVIEWS

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Understanding the mechanism and synergistic interaction of cobalt-based electrocatalysts containing nitrogen-doped carbon for 4 e⁻ ORR

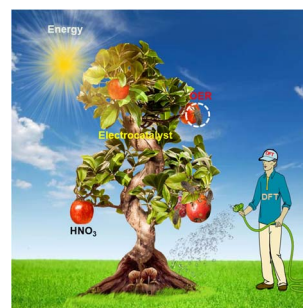
Fatima Nasim and Muhammad Arif Nadeem*



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Progress of electrochemical synthesis of nitric acid: catalyst design, mechanistic insights, protocol and challenges

Ashadul Adalder, Sourav Paul and Uttam Kumar Ghorai*

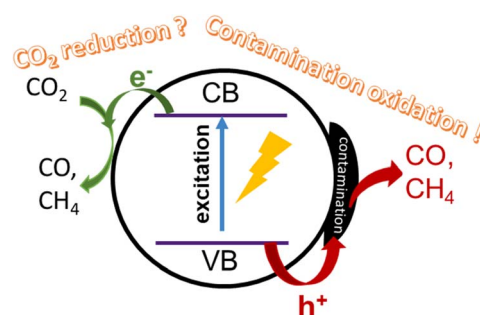


COMMUNICATIONS

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How carbon contamination on the photocatalysts interferes with the performance analysis of CO₂ reduction

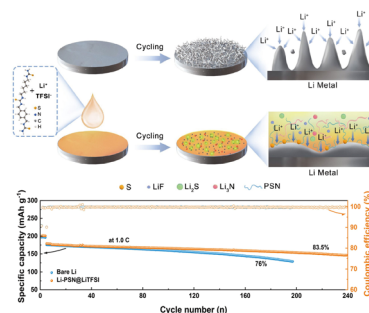
Jiakang You, Mu Xiao, Siqi Liu, Haijiao Lu, Peng Chen, Zhi Jiang, Wenfeng Shanguan, Zhiliang Wang* and Lianzhou Wang*



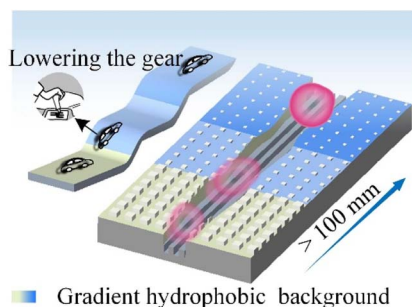
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A polythiourea protective layer for stable lithium metal anodes

Xiaoya He, Zhu Liu, Yulian Yang, Zhiyong Wang, Yuanmao Chen, Qicheng Zhang, Zhangqin Shi, Yihong Tan,* Xinyang Yue* and Zheng Liang*



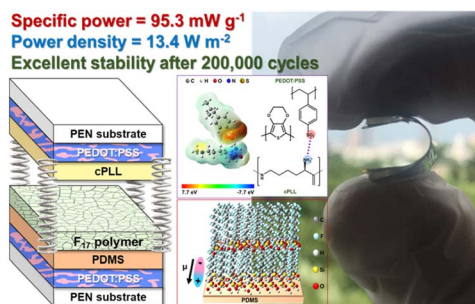
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Achieving ultralong directional liquid transportation spontaneously with a high velocity

Qiankai Liu, Jie Zhang, Pengcheng Sun, Jianping Wang, Wei Zhao, Guolong Zhao, Ni Chen, Yinfei Yang, Liang Li, Ning He, Zuankai Wang and Xiuqing Hao*

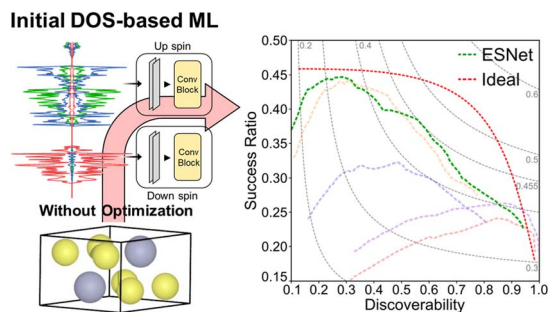
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Ultrahigh power output and durable flexible all-polymer triboelectric nanogenerators enabled by rational surface engineering

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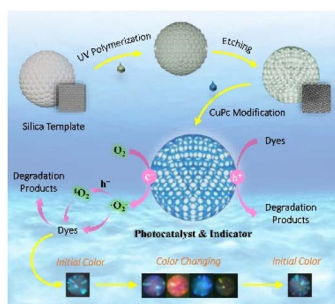
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A chemically inspired convolutional neural network using electronic structure representation

Dong Hyeon Mok, Daeun Shin, Jonggeol Na* and Seoin Back*

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Copper phthalocyanine modified hydrogel inverse opal beads for enhanced photocatalytic removal of dyes

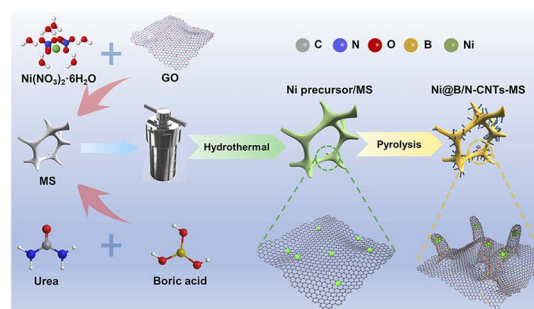
Fengtong Shen, Jingzhen Wang, Libin Wang, Linlin Zang,* Qing Xu, Liguo Sun* and Yanhong Zhang*



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Melamine sponge templated synthesis of nickel nanoparticles encapsulated in B, N co-doped carbon nanotubes towards the selective electrocatalysis of hydrogen peroxide

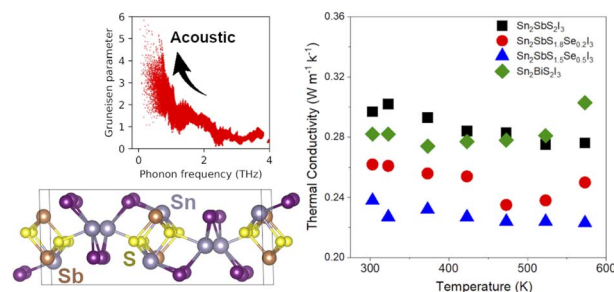
Hui Xu, Shengbo Zhang, Xinyuan Zhang, Min Xu, Jing Geng, Miaomiao Han* and Haimin Zhang*



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Ultralow thermal conductivity in the mixed-anion solid solution $\text{Sn}_2\text{SbS}_{2-x}\text{Se}_x\text{I}_3$

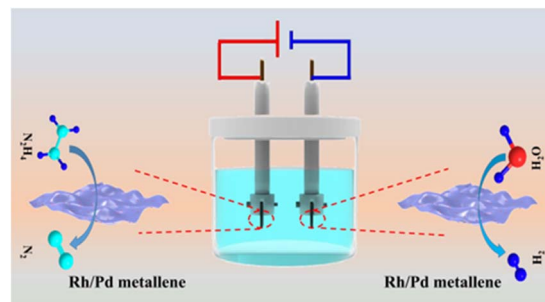
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Heterointerface engineering of Rh/Pd metallene for hydrazine oxidation-assisted energy-saving hydrogen production

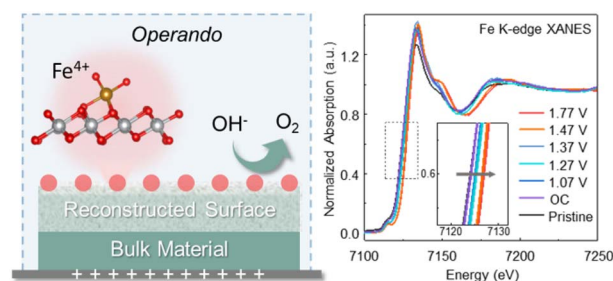
Ziqiang Wang, Guanghui Yang, Pengjun Tian, Kai Deng, Hongjie Yu, You Xu, Xiaonian Li, Hongjing Wang* and Liang Wang*



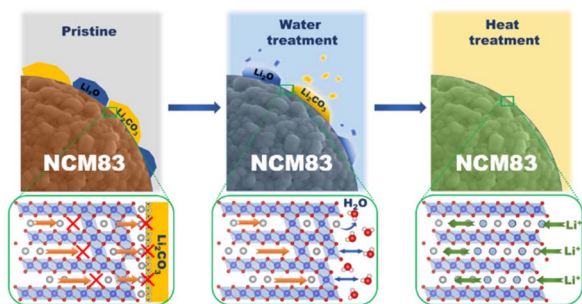
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Dynamically activating Ni-based catalysts with self-anchored mononuclear Fe for efficient water oxidation

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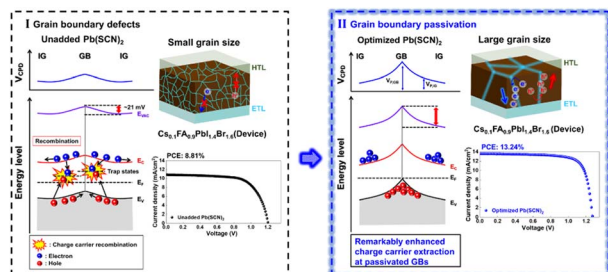
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Fast charge storage kinetics by surface engineering for Ni-rich layered oxide cathodes

Jiacheng Wang, Zhenyu Zhang, Weitao He, Zhixuan Wang, Suting Weng, Quan Li, Xuefeng Wang, Suelen Barg, Liqun Chen, Hong Li and Fan Wu*

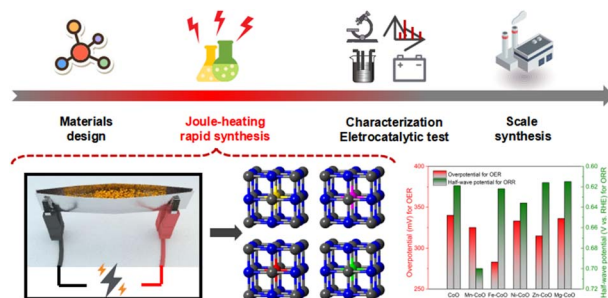
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Wide-bandgap perovskites for multijunction solar cells: improvement of crystalline quality of $\text{Cs}_{0.1}\text{FA}_{0.9}\text{PbI}_{1.4}\text{Br}_{1.6}$ by using lead thiocyanate

Thuy Thi Nguyen, Jihyun Kim, Yeon Soo Kim, Bich Phuong Nguyen and William Jo*

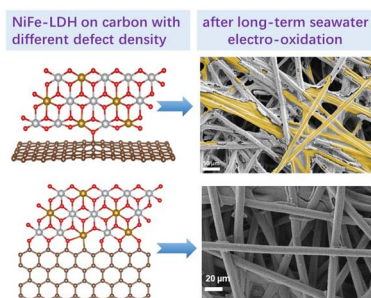
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Rapid synthesis of doped metal oxides via Joule heating for oxygen electrocatalysis regulation

Yajing Li, Han Wu, Jinfeng Zhang, Qi Lu, Xiaopeng Han, Xuerong Zheng, Yida Deng* and Wenbin Hu

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Effects of carbon defects on interfacial anchoring of NiFe-LDH for seawater electro-oxidation

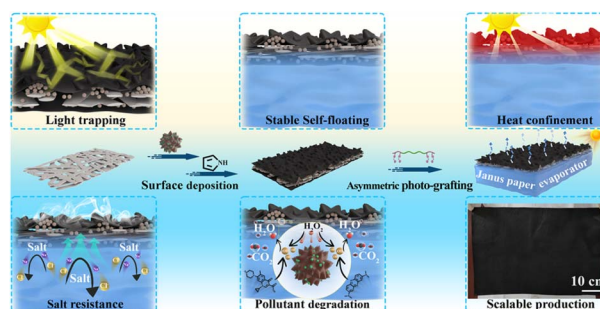
Heng Xu, Shi-Jun Xie, Chao Lv, Jun-Tao Li, Yao Zhou* and Shi-Gang Sun*



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Toward multitasking solar desalination: a Janus and scalable paper evaporator with light trapping, heat confinement, salt resistance, and pollutant degradation

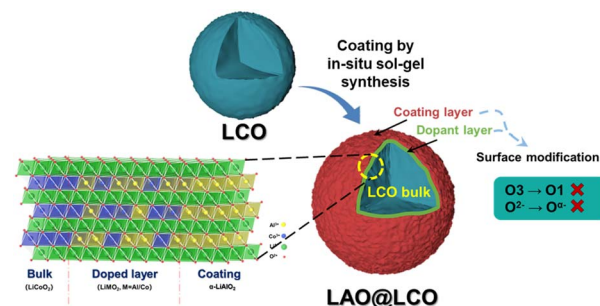
Xin Wang,* Zilong Li, Shuyang Xing, Wei Kuang, Cuihua Dong and Yingying Liu*



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Epitaxial growth of a single hexagonal layered α -LiAlO₂ coating on a high-voltage LiCoO₂ cathode material for enhanced stability

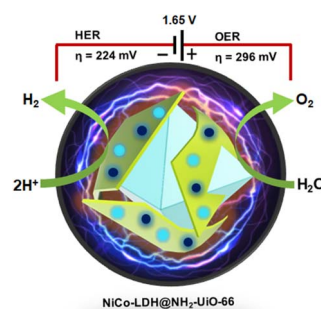
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An ultrathin 2D NiCo-LDH nanosheet decorated NH₂-UiO-66 MOF-nanocomposite with exceptional chemical stability for electrocatalytic water splitting

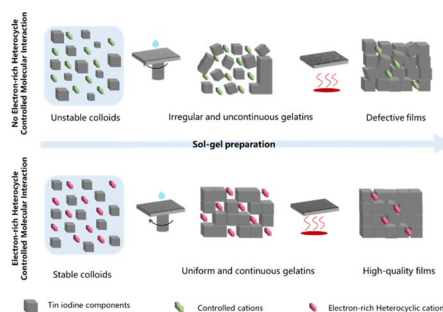
Saddam Sk, Ragunath Madhu, Deepak S. Gavali, Vidha Bhasin, Ranjit Thapa, Shambhu Nath Jha, Dibyendu Bhattacharyya, Subrata Kundu* and Ujjwal Pal*



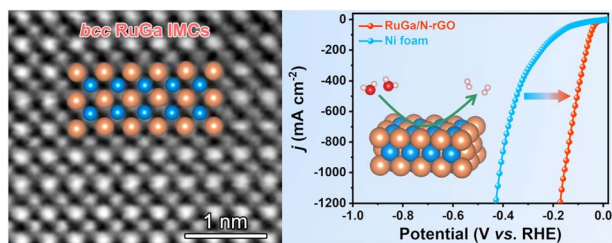
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Molecular interaction modulating Ruddlesden-Popper tin-based perovskite crystallization

Han Pan,* Yong Zheng, Wenqing He, Wenxing Yang,* Xiu Gong, Xiaodong Liu, Qiang Wei, Yan Liu, Yan Shen and Mingkui Wang*



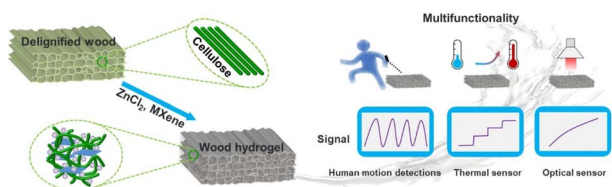
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Atomically dispersed ruthenium sites with electron-rich environments in intermetallic compounds for high-current-density hydrogen evolution

Huaifang Zhang, Chuanqi Cheng, Jin Zhou, Chaoqun Ma, Peidong Shi, Haoming Wu, Pengfei Yin, Wenbin Cao, Jing Xia, Lijie Zhu,* An-Liang Wang* and Qipeng Lu*

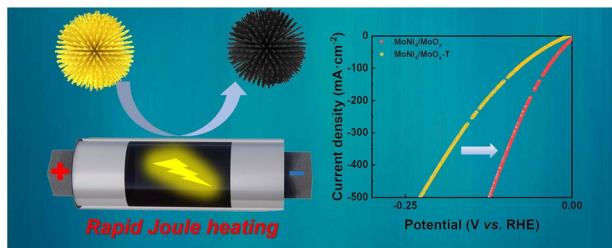
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Construction of MXene functionalized wood-based hydrogels using $ZnCl_2$ aqueous solution for flexible electronics

Zhongguo Wang, Xiong-Fei Zhang,* Lian Shu and Jianfeng Yao*

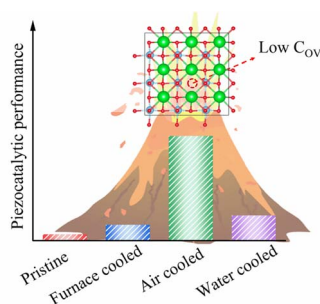
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Rapid synthesis of efficient Mo-based electrocatalyst for the hydrogen evolution reaction in alkaline seawater with 11.28% solar-to-hydrogen efficiency

Zhan Zhao, Jianpeng Sun, Zizhen Li, Xiaofeng Xu, Zisheng Zhang, Chunhu Li, Liang Wang and Xiangchao Meng*

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Significantly enhanced piezocatalytic activity of $BaTiO_3$ by regulating the quenching process

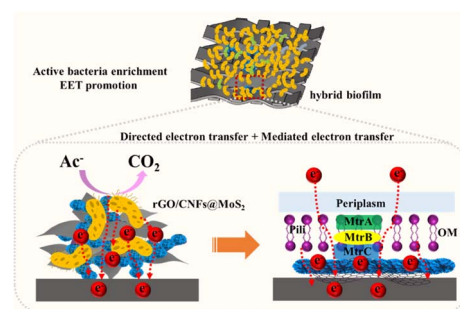
Cheng-Chao Jin,* Jun-Di Ai, Dai-Ming Liu, Li-Ning Tan, Liang Cao, Bing-Lin Shen, Xu-Ting Qiu and Ling-Xia Zhang*



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Nanoflower-like MoS₂ anchored on electrospun carbon nanofiber-interpenetrated reduced graphene oxide as a microbial fuel cell anode achieving high power density

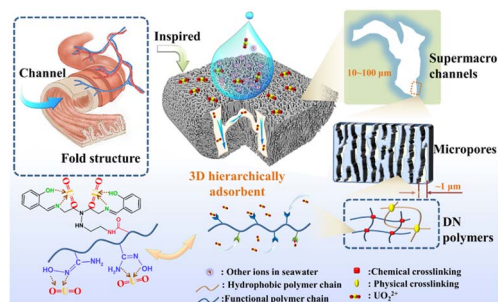
Yuanfeng Liu, Tingli Ren, Zijing Su and Congju Li*



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A 3D hierarchical porous adsorbent constructed by cryo-polymerization for ultrafast uranium harvesting from seawater

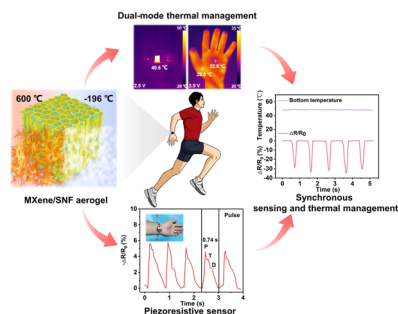
Dagang Li, Yaozu Liao,* Zheng Chen, Xixin Chang, Xu Zhang, Chongcheng Chen, Chang Cui, Zilei Zhang, Constantin Muhire, Weiwu Tang, Dongxiang Zhang,* Jinying Li and Xiyan Xu*



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An extreme condition-resistant superelastic silica nanofiber/MXene composite aerogel for synchronous sensing and thermal management

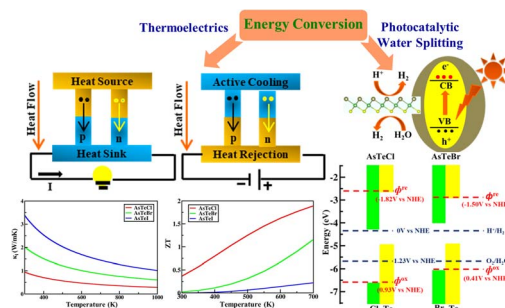
Jiafei Ren, Xing Huang, Ruolin Han, Guangxin Chen, Zheng Zhou* and Qifang Li*



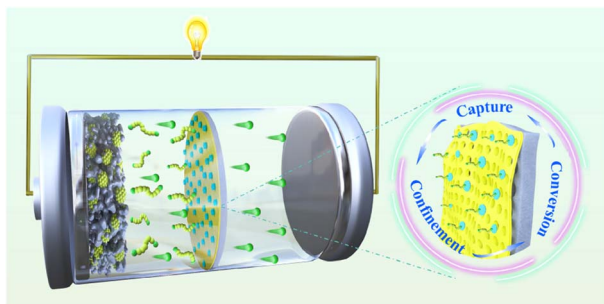
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As-based ternary Janus monolayers for efficient thermoelectric and photocatalytic applications

Poonam Chauhan, Jaspreet Singh and Ashok Kumar*



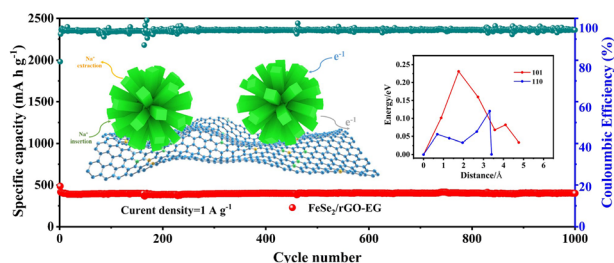
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Developing a MXene quantum dot-based separator for Li-S batteries

Ke Yang, Chan Li, Haoyuan Qi, Yunfei Dai, Yuhong Cui and Yibo He*

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Effect of solvent on the crystal phase, morphology, and sodium storage performance of FeSe₂

Manman Ren,* Haoting Zang, Shilei Cao, Hongling Guo, Jihui Zhang, Weiliang Liu, Jinshui Yao, Xu Zhang* and Zhen Zhou

