

Journal of Materials Chemistry A

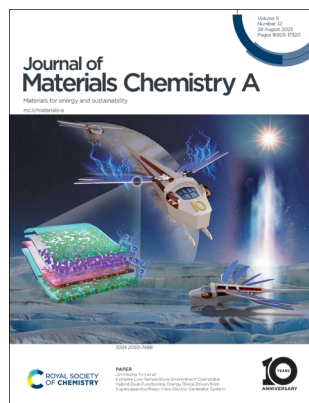
Materials for energy and sustainability

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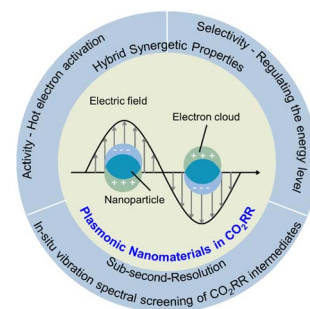
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REVIEW

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Surface plasmon assisted photoelectrochemical carbon dioxide reduction: progress and perspectives

Jia Liu, Chenfeng Xia, Shahid Zaman,* Yaqiong Su, Lin Tan and Shenghua Chen*

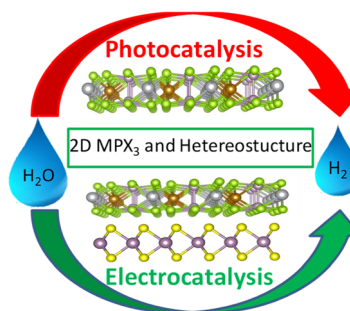


PERSPECTIVE

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2D transition metal-based phospho-chalcogenides and their applications in photocatalytic and electrocatalytic hydrogen evolution reactions

K. Pramoda* and C. N. R. Rao*



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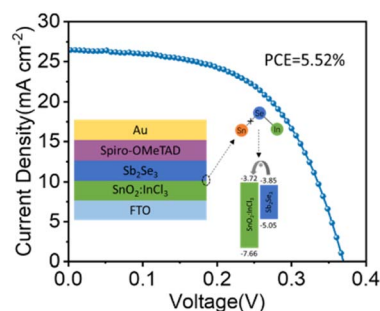


COMMUNICATION

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InCl₃-modified SnO₂ as an electron transporting layer for Cd-free antimony selenide solar cells

Lei Huang, Junjie Yang, Yujian Xia, Peng Xiao, Huiling Cai, Aoxing Liu, Yan Wang, Xiaosong Liu,* Rongfeng Tang,* Changfei Zhu and Tao Chen*

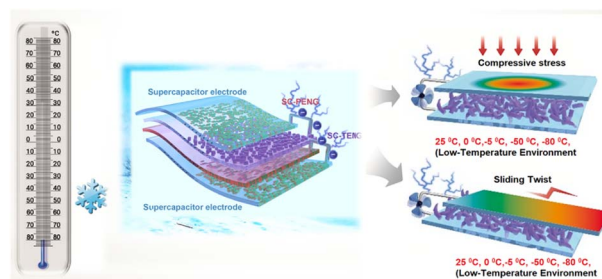


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An extremely low temperature environment operable hybrid dual-functioning energy device driven by a supercapacitor/piezo-triboelectric generator system

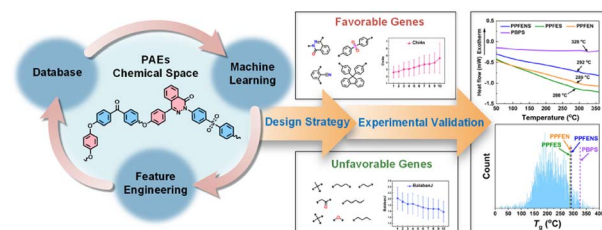
Samayanan Selvam, Young-Kwon Park and Jin-Heong Yim*



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A polymer genome approach for rational design of poly(aryl ether)s with high glass transition temperature

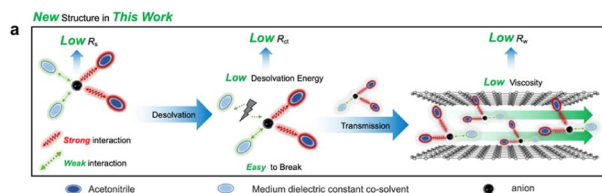
Ce Song, Hongjian Gu, Linyan Zhu, Wanyuan Jiang, Zhihuan Weng, Lishuai Zong, Cheng Liu, Fangyuan Hu, Yuxi Pan* and Xigao Jian*



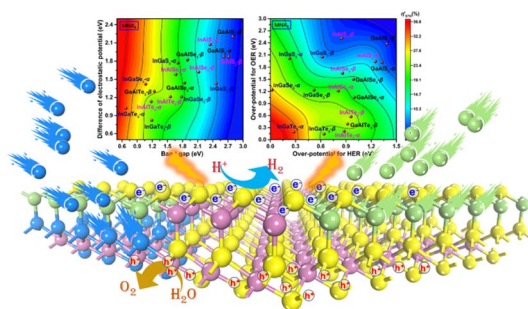
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A strong-weak binary solvation structure for unimpeded low-temperature ion transport in nanoporous energy storage materials

Huachao Yang, Zifan Wang, Yiheng Qi, Qinghu Pan, Chuanzhi Zhang, Yuhui Huang, Jianhua Yan, Kefa Cen, Guoping Xiong, Zheng Bo* and Kostya (Ken) Ostrikov



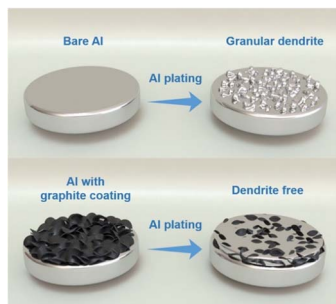
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High solar-to-hydrogen efficiency in the novel derivatives of group-III trichalcogenides for photocatalytic water splitting: the effect of elemental composition

Hao Ma, Wen Zhao,* Saifei Yuan, Hao Ren, Houyu Zhu, Yuhua Chi and Wenyue Guo*

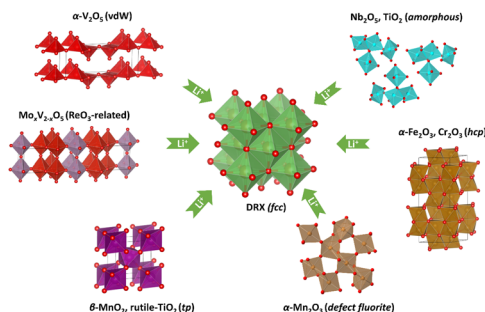
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Aluminum dendrite suppression by graphite coated anodes of Al-metal batteries

Shiman He, Jie Wang, Xu Zhang,* Weiqin Chu, Shu Zhao, Daping He, Min Zhu* and Haijun Yu*

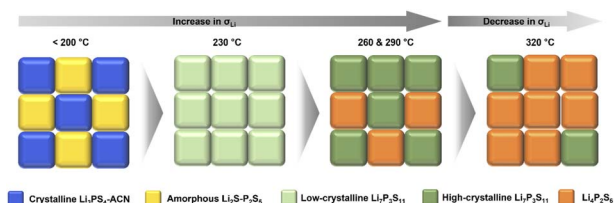
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Electrochemical lithiation-induced formation of disordered rocksalt

Matthew J. A. Leesmith, Nathan R. Halcovitch and Xiao Hua*

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Structural evolution during solution-based synthesis of $\text{Li}_7\text{P}_3\text{S}_{11}$ solid electrolyte by synchrotron X-ray total scattering

Bowen Shao, Ratnottam Das, Yonglin Huang, Ruihao Deng, Sara Seelman and Fudong Han*

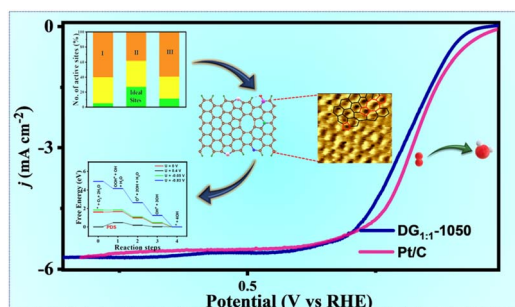


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Elucidating the oxygen reduction reaction kinetics on defect engineered nanocarbon electrocatalyst: interplay between the N-dopant and defect sites

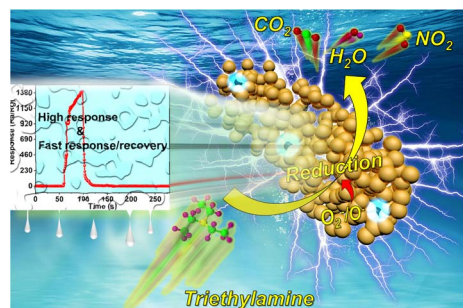
Sakshi Bhardwaj, Samadhan Kapse, Soirik Dan, Ranjit Thapa* and Ramendra Sundar Dey*



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Unique Pd/PdO–In₂O₃ heterostructures for the highly efficient detection of triethylamine

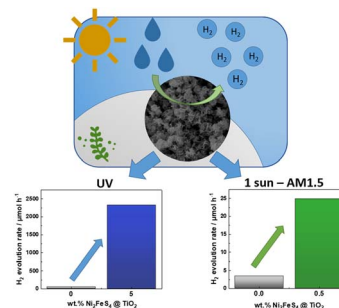
Yumin Zhang, Zongming Deng, Jianhong Zhao,* Tong Zhou, Alain R. Puente Santiago, Tianwei He, Jin Zhang, Qingju Liu* and Guangzhi Hu*



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Ni₂FeS₄ as a highly efficient earth-abundant co-catalyst in photocatalytic hydrogen evolution

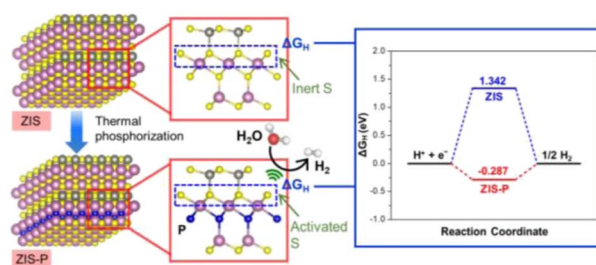
Judith Zander and Roland Marschall*



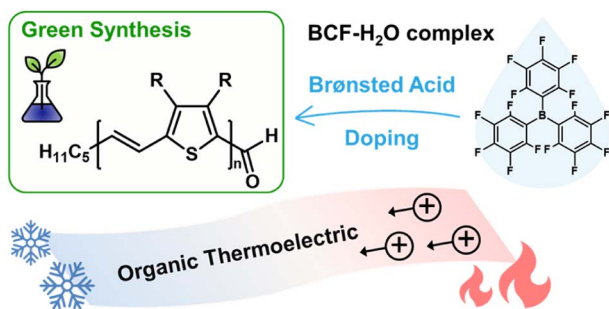
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Heteroatom P filling activates intrinsic S atomic sites of few-layered ZnIn₂S₄ via modulation of H adsorption kinetics for sacrificial agent-free photocatalytic hydrogen evolution from pure water and seawater

Boon-Junn Ng, Wei-Kean Chong, Lutfi Kurnianditia Putri, Xin Ying Kong, Jingxiang Low, Hing Wah Lee, Lling-Lling Tan, Wei Sea Chang and Siang-Piao Chai*



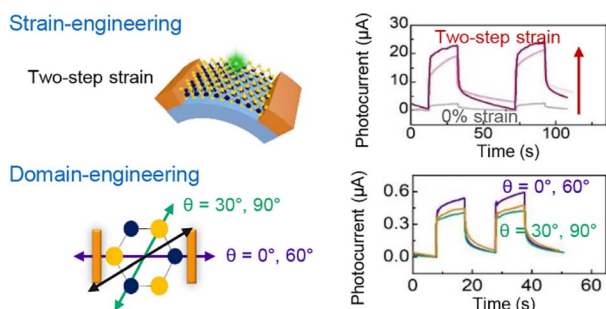
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Synthesis and Brønsted acid doping of solution processable poly(thienylene vinylene) for thermoelectric application

Wei-Ni Wu, Kei-ichiro Sato, Jun-Hao Fu, Yi-Tsu Chan, Jhih-Min Lin, Shih-Huang Tung, Tomoya Higashihara* and Cheng-Liang Liu*

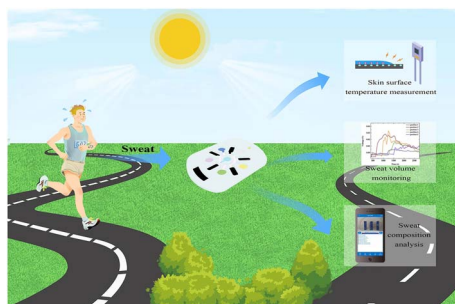
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Ultrahigh photoresponse in strain- and domain-engineered large-scale MoS₂ monolayer films

Ye Seul Jung, Jae Woo Park, Ji Yeon Kim, Youngseo Park, Dong Gue Roe, Junseok Heo, Jeong Ho Cho and Yong Soo Cho*

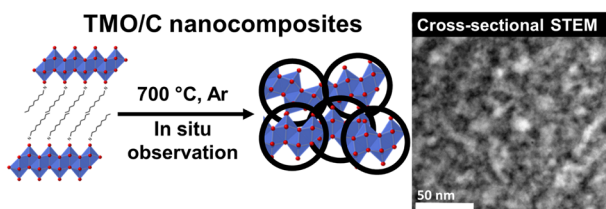
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Integrated multimodal microfluidic E-skin powered by synergistic tandem nanogenerators for sweat-based health monitoring and skin-temperature analysis

Kai Han, Dadong Zhang, Wenbo Zhuang, Yanfen Wan* and Peng Yang*

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Carbonization process and microstructure formation revealed

Mechanistic understanding of microstructure formation during synthesis of metal oxide/carbon nanocomposites

Mennatalla Elmanzalawy, Alessandro Innocenti, Maider Zarrabeitia, Nicolas J. Peter, Stefano Passerini, Veronica Augustyn and Simon Fleischmann*

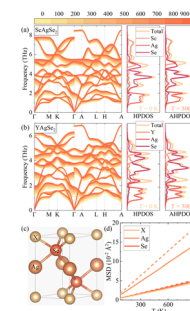


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High thermoelectric performance in $X\text{AgSe}_2$ ($X = \text{Sc}, \text{Y}$) from strong quartic anharmonicity and multi-valley band structure

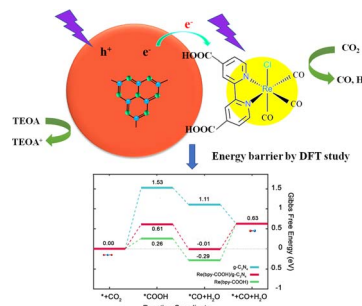
Xuhao Song, Yinchang Zhao,* Jun Ni, Sheng Meng and Zhenhong Dai*



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Constructing a rhenium complex supported on $\text{g-C}_3\text{N}_4$ for efficient visible-light-driven photoreduction of CO_2 to CO via a novel Z-scheme heterojunction

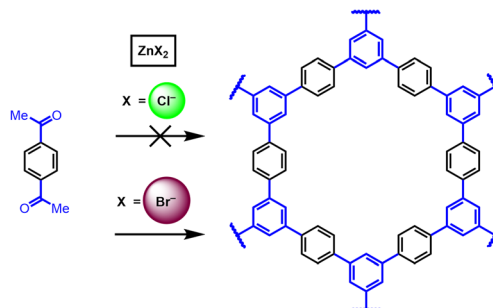
Phuong Ngoc Nguyen, Trang Thanh Tran, Quynh Anh Thi Nguyen, Yoshiyuki Kawazoe, S. V. Prabhakar Vattikuti, Long V. Le, Viet Quoc Bui,* Tuan Manh Nguyen* and Nam Nguyen Dang



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Zinc bromide: a general mediator for the ionothermal synthesis of microporous polymers via cyclotrimerization reactions

Jaehwan Kim, Minh H. Le, Makayla C. Spicer, Casandra M. Moisanu, Suzi M. Pugh and Phillip J. Milner*



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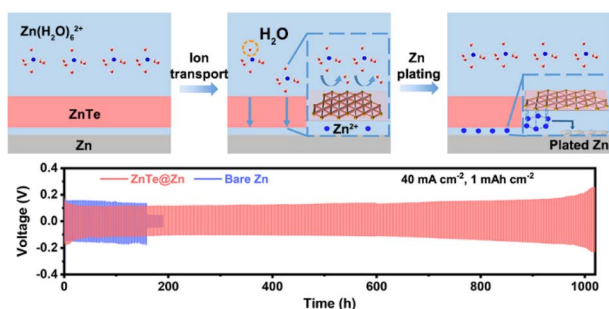
Modification of $\text{Ti}_3\text{C}_2\text{T}_x$ MXene with hyperbranched polyethylene ionomers: stable dispersions in nonpolar/low-polarity organic solvents, oxidation protection, and potential application in supercapacitors

Bahareh Raisi, Lingqi Huang and Zhibin Ye*



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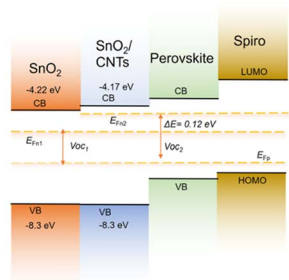
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A zincophilic ion-conductive layer with the desolvation effect and oriented deposition behavior achieving superior reversibility of Zn metal anodes

Leilei Sun, Yang Wang,* Guosheng Duan, Bin Luo, Sinan Zheng, Jingyun Huang* and Zhizhen Ye*

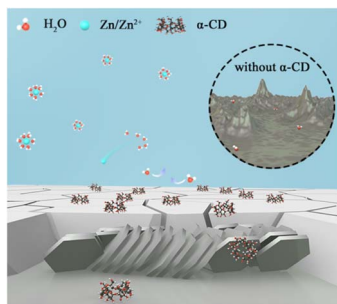
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Interface connection of functionalized carbon nanotubes for efficient and stable perovskite solar cells

Guang Shao,* Hui-Juan Yu, Dian Wang, Jing Xiao, Zhi-Lan Yu, Jun-Feng Qu, Jian Chen, Qurat Ul Ain, Ammar Ahmed Khan, Zeliang Qiu, Ruiyuan Hu, Jianxing Xia,* Khalid A. Alamry and Mohammad Khaja Nazeeruddin*

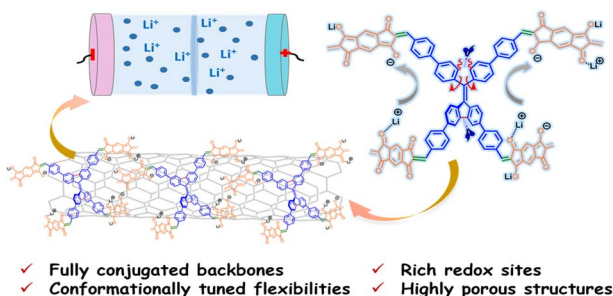
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Is (002) the only one that's important? An overall consideration of the main exposed crystallographic planes on a Zn anode for obtaining dendrite-free long-life zinc ion batteries

Yu Wang, Songyao Zhang, Haoqiang Wang, Yi Wang, Yani Liu, Shuming Dou, Xinrui Miao, Wenli Deng, Xi Lin* and Qunhui Yuan*

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Fully sp²-carbon connected polymeric frameworks with rotatable conformation-enhanced lithium-storage performance

Sidra Mushtaq, Fancheng Meng, Zixing Zhang, Zhiheng Wang, Biao Jiang, Bai Xue* and Fan Zhang*

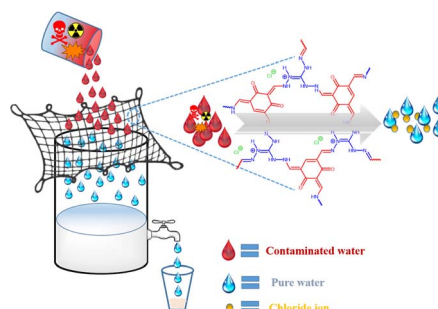


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Rapid and selective removal of toxic and radioactive anionic pollutants using an ionic covalent organic framework (iCOF-2)

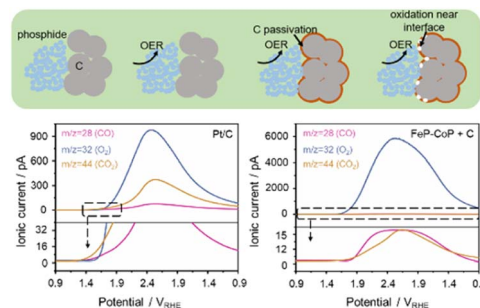
Atikur Hassan, Md Mofizur Rahman Mollah, Soumen Das and Neeladri Das*



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Suppressing carbon corrosion *via* mechanically mixing transition metal phosphide clusters: a comparative *in situ* study in alkaline media

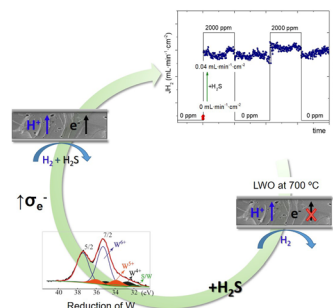
Xiaoyu Wu, Kai Zhao, Xiaoyu Yan, Xiaojuan Cao, Le Ke, Yang Zhao, Lingjiao Li, Xiaoyi Jiang and Ning Yan*



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Promotion of mixed protonic–electronic transport in $\text{La}_{5.4}\text{WO}_{11.1-\delta}$ membranes under H_2S atmospheres

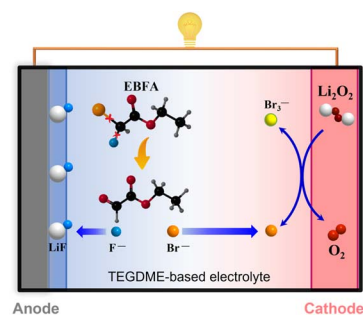
S. Escolástico,* M. Balaguer, C. Solís, F. Toldra-Reig, S. Somacescu, U. Gerhards, A. Aguadero, K. Haas-Santo, R. Dittmeyer and J. M. Serra*



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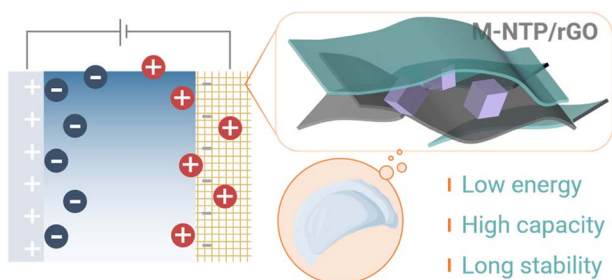
An ethyl bromofluoroacetate redox mediator enables a robust LiF-rich solid electrolyte interphase for advanced lithium–oxygen batteries

Yuan-Jia Rong, Xiao-Ping Zhang,* Chu-Yue Li, Qian-Yan Wang, Min-Sheng Wu and Wei-Rong Chen



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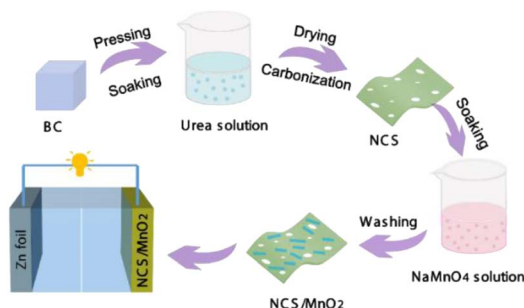
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Chinese dumpling-like $\text{NaTi}_2(\text{PO}_4)_3/\text{MXene}$ @reduced graphene oxide for capacitive deionization with high capacity and good cycling stability

Xiaojie Shen, Yuecheng Xiong, Fei Yu* and Jie Ma*

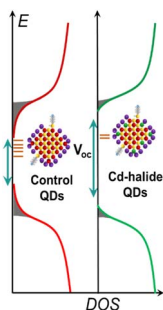
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High performance N-doped carbon nanosheet/ MnO_2 cathode derived from bacterial cellulose for aqueous Zn-ion batteries

Wenhai Wang, Ashley P. Black, Cheng Liu, Vlad Martin-Diaconescu, Laura Simonelli and Dino Tonti*

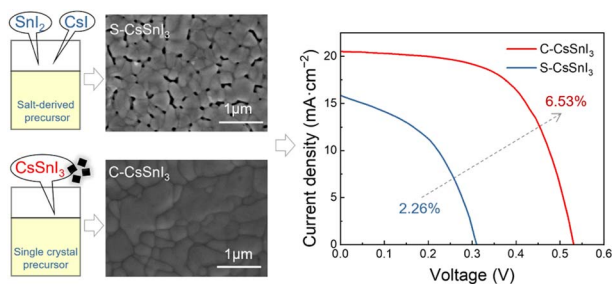
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High open-circuit voltage in lead sulfide quantum dot solar cells via solution-phase ligand exchange with low electron affinity cadmium halides

Neha V. Dambhare, Arindam Biswas, Anjali Sharma, Dipak Dattatray Shinde, Chandan Mahajan, Anurag Mitra and Arup K. Rath*

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A single crystal derived precursor for improving the performance of CsSnI_3 perovskite solar cells

Qiang Sun, Anjie Gu, Haixuan Yu, Yan Shen and Minghui Wang*

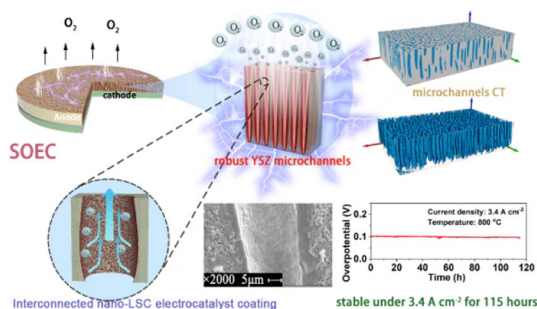


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17298

Solid oxide electrolyzer positive electrodes with a novel microstructure show unprecedented stability at high current densities

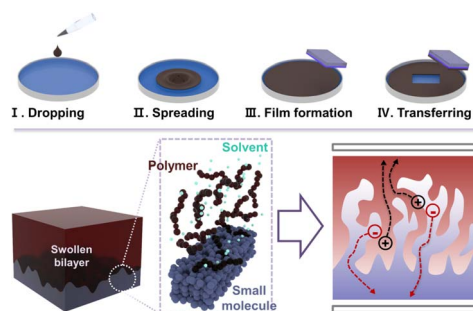
Qing Ni, Yu Li, Zongchao Zhu, Zhexiang Yu, Dong Xu, Xiaoming Hua, Yi Zhen, Lin Ge* and Lei Bi*



17307

Pseudo-bilayered inverted organic solar cells using the Marangoni effect

Jihwan Jo, Seonju Jeong, Dongchan Lee, Seungjin Lee, Bumjoon J. Kim, Shinuk Cho and Jung-Yong Lee*



CORRECTION

17316

Correction: Stabilizing the $\text{Li}_{1.4}\text{Al}_{0.4}\text{Ti}_{1.6}(\text{PO}_4)_3/\text{Li}$ interface with an *in situ* constructed multifunctional interlayer for high energy density batteries

Can Huang, Shuo Huang, Aolai Wang, Ziyang Liu, Dexuan Pei, Jianhe Hong, Shuen Hou, Levente Vitos and Hongyun Jin*

