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Materials for energy and sustainability

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Mengjie Zhang, Hanshu Mao, Yeru Liang and Xiaoyuan Yu*



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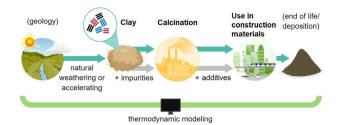


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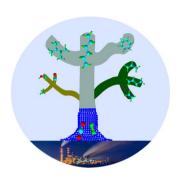
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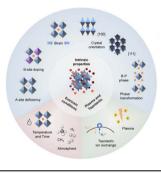
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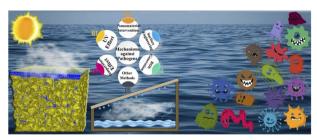
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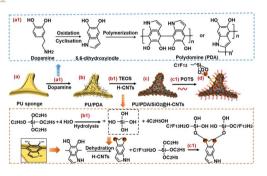


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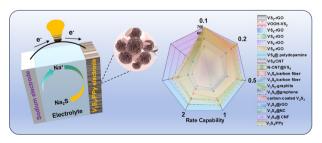


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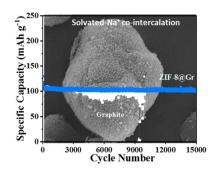
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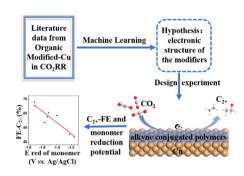
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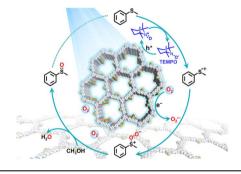
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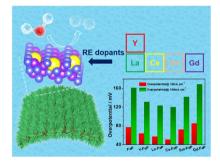
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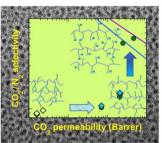
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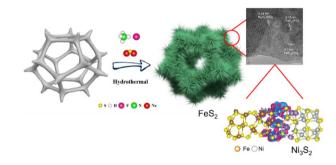


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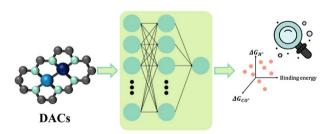
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A highly efficient heterostructure nanorod bifunctional electrocatalyst for realizing enhanced overall water splitting at a large current density

Derun Li, Shixin Wu, Tao Jiang, Shuangshuang Huang, Zhaowu Wang,* Hengyi Wu, Guangxu Cai and Feng Ren*

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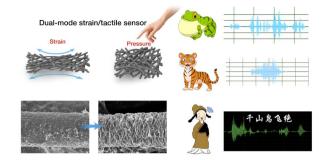
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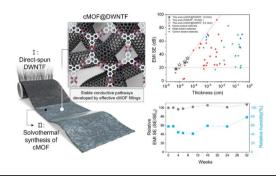
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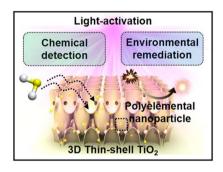
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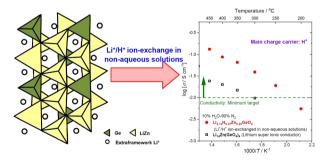
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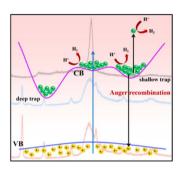
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Sodium ion doped graphitic carbon nitride with high crystallinity for superior photocatalytic hydrogen evolution efficiency

Xue Han, Yuna Kang, Shuang Song, Rong Lu* and Anchi Yu*

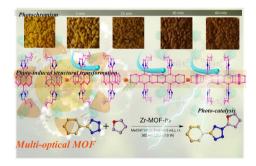
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Achieving a dendrite-free Zn anode at high current densities *via in situ* polymeric interface design

Zhipei Zhong, Wenhao Ren and Suqing Wang*

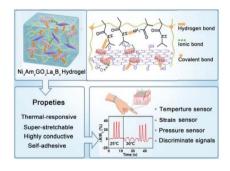
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Enhancing energy transfer through visible-lightdriven polymerization in a metal—organic framework

Yuan Chen, Ao-Gang Liu, Peng-Da Liu, Zi-Tong Chen, Shi-Yu Liu and Bao Li*

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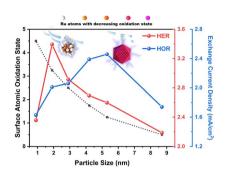
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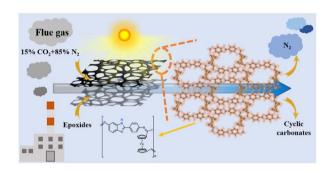
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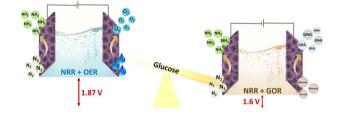
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Akansha Chaturvedi, Divyani Gupta, Sukhjot Kaur, Kalpana Garg and Tharamani C. Nagaiah^{*}



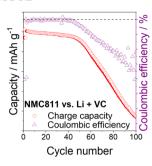
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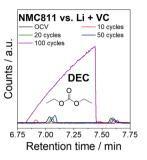
Exploring the anisotropic properties of chiral nematic cellulose nanocrystal aerogels: outstanding directional mechanical strength and unexpected surface-dependent thermal conductivity

Zongzhe Li, Karl Tsang, Yi-Tao Xu, James G. Drummond, D. Mark Martinez and Mark J. MacLachlan*

Chiral Nematic CNC Aerogels 43.0 MPa Surface-dependent thermal conductivities Directional mechanical properties

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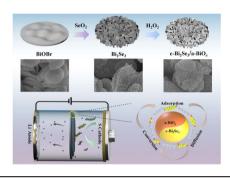




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Rory C. McNulty, Elizabeth Hampson, Lewis N. Cutler, Clare P. Grey, Wesley M. Dose and Lee R. Johnson*

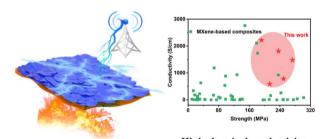
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Amorphous/crystalline heterostructure design enables highly efficient adsorption—diffusion—conversion of polysulfides for lithium—sulfur batteries

Xiangpeng Wu, Zewei Shen, Daoping Cai,* Ban Fei, Mincai Zhao, Junjie Fu, Qidi Chen and Hongbing Zhan*

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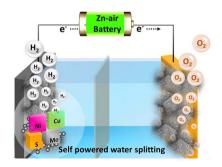


EMI protection & Fire resistance High electrical conductivity & mechanical strength

Fireproof ultrastrong all-natural cellulose nanofiber/ montmorillonite-supported MXene nanocomposites with electromagnetic interference shielding and thermal management multifunctional applications

Rui Cheng, Ying Wu, Bin Wang,* Jinsong Zeng, Jinpeng Li,* Jun Xu, Wenhua Gao and Kefu Chen

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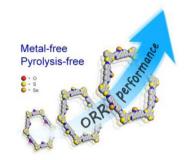
A NiCu-MoS₂ electrocatalyst for pH-universal hydrogen evolution reaction and Zn-air batteries driven self-power water splitting

Mukesh Kumar and Tharamani C. Nagaiah*

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Metal-free covalent organic frameworks containing precise heteroatoms for electrocatalytic oxygen reduction reaction

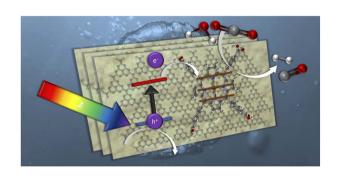
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Band structure engineering of carbon nitride hybrid photocatalysts for CO₂ reduction in aqueous solutions

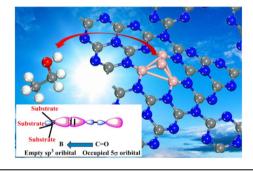
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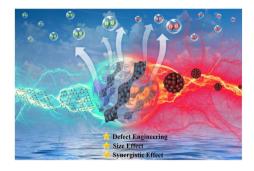
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Jiayang Zhao, Haoran Guo, Yanyan Li, Lirong Zheng, Hao Ren, Liyun Zhao and Rui Song*



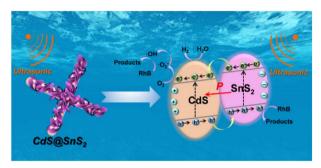
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Boosting the oxygen reduction reaction using high surface area graphitic-N dominant nitrogen doped carbon

Rizwan Haider, Shengqi Ding, Wenrui Wei, Yi Wan, Yu Huang, Renhuan Li,* Liang Wu, Ayaz Muzammil, Yi Fan and Xianxia Yuan*

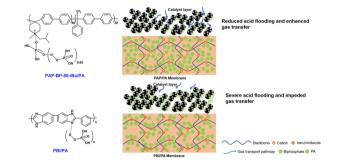
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A novel 1D/2D core/shell CdS@SnS₂ heterostructure for efficient piezocatalytic hydrogen evolution and pollutant degradation

Renzhi Xiong, Yanjie Song, Kunjiao Li, Yanhe Xiao, Baochang Cheng and Shuijin Lei*

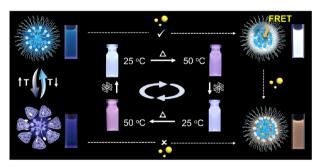
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Alkyl-substituted poly(arylene piperidinium) membranes enhancing the performance of high-temperature polymer electrolyte membrane fuel cells

Jinyuan Li, Congrong Yang, Xiaoming Zhang, Zhangxun Xia, Suli Wang,* Shansheng Yu and Gongquan Sun*

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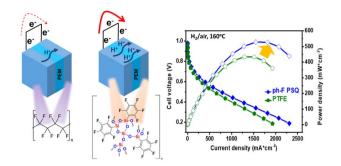
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18426

Mitigating phosphoric acid migration in high temperature polymer electrolyte membrane fuel cells with hydrophobic polysilsesquioxane-based binders

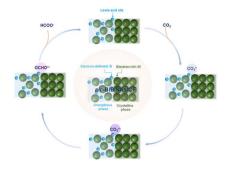
Dong-Yeop Yoo, Jiyoon Jung, Young Sang Park, Gwan Hyun Choi, Ho Gyu Yoon, Seung Sang Hwang and Albert S. Lee*



18434

Controlled boron incorporation tuned two-phase interfaces and Lewis acid sites in bismuth nanosheets for driving CO₂ electroreduction to formate

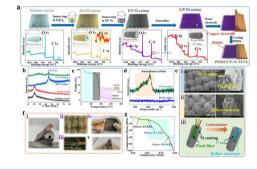
You Xu, Yiyi Guo, Youwei Sheng, Qingsong Zhou, Hongjie Yu, Kai Deng, Ziqiang Wang, Hongjing Wang* and Liang Wang*



18441

Fabrication of triboelectric nanogenerators with multiple strain mechanisms for high-accuracy material and gesture recognition

Junjun Huang, Wenqing Zhang, Xin Chen, Sanlong Wang, Zhenming Chen, Peng Li,* Honglin Li* and Chengmei Gui*



CORRECTIONS

18454

Correction: Large-scalable, ultrastable thin films for electromagnetic interference shielding

Jae Seo Park, Ji Yong Park, Kyunbae Lee, Young Shik Cho, Hyunji Shin, Yeonsu Jung, Chong Rae Park, Taehoon Kim,* Jae Ho Kim* and Seung Jae Yang*

CORRECTIONS

18455

Correction: Constructing a rhenium complex supported on $g-C_3N_4$ 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