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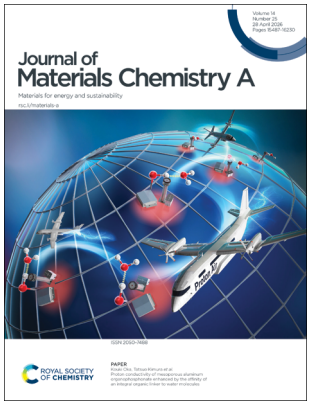

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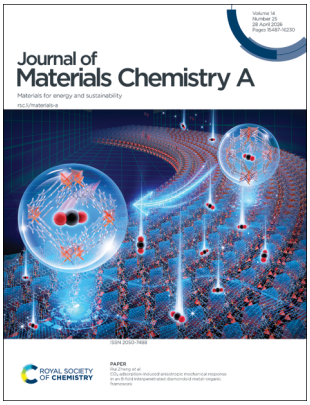

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See Rui Zheng *et al.*, pp. 15721–15734. Image reproduced by permission of Jianwen Jiang from *J. Mater. Chem. A*, 2026, **14**, 15721.

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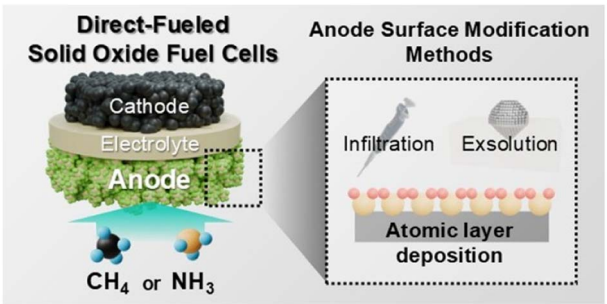
Surface modification strategies for direct methane and direct ammonia solid oxide fuel cell anodes: current approaches and future directions

Hao-Yang Li, Hyunseung Kim, Jeong Woo Shin, Jiyoon Shin and Pei-Chen Su*



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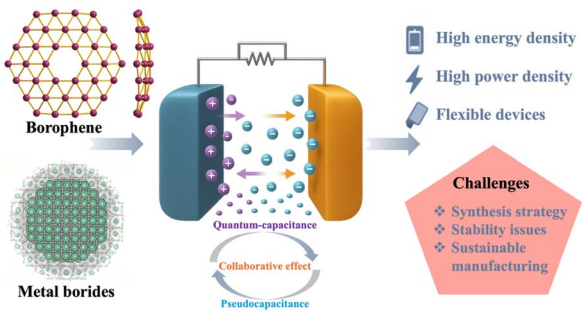
Boron-driven energy technologies: borophene and its derivatives in supercapacitors

Wei Shao, Chuang Hou,* Zitong Wu, Yi Liu and Guoan Tai*



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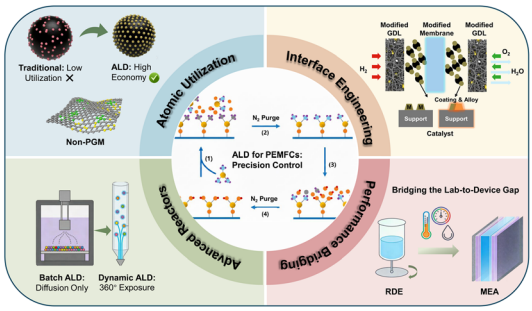
Atomic layer deposition in proton exchange membrane fuel cells: precision control from catalysts to membrane electrode assemblies

Shuzhen Li, Tao Peng, Ge Chen,* Liangfei Xu* and Jianqiu Li*



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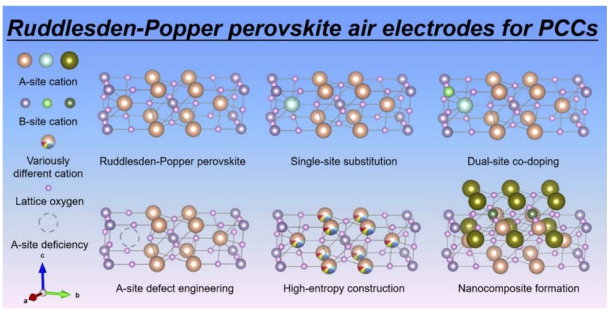
Ruddlesden–Popper perovskite oxides as emerging air electrodes for protonic ceramic cells

Yongning Yi, Yuanzhao Liu, Ran Ran, Guangming Yang, Wei Zhou, Wei Wang* and Zongping Shao



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MXenes as multifunctional mediators in lithium–sulfur batteries: a data-driven review

Sadegh Ghorbanzadeh, Zeinab Sanaee* and Somayeh Mohammadi

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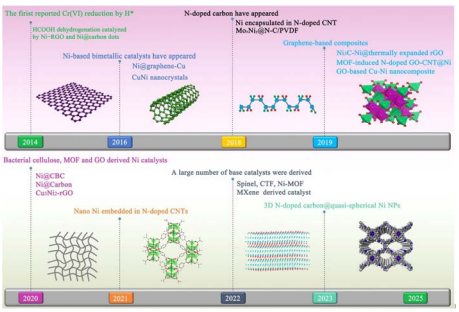
Cr(VI) reduction mediated by hydrogen radicals generated from formic acid dehydrogenation on tailored Ni-based catalysts: mechanisms, progress, and perspectives

Liuqian Yang, Zhimin Lv,* Yuru Wang, Yuxiang Jiang, Yuanjie Lu and Jingquan Liu*



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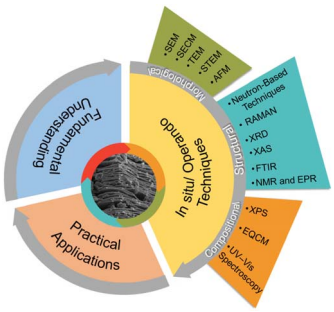

In situ/*operando* characterization of MXene electrodes for energy storage applications

Mallamma Jinagi,* Sayali Ashok Patil, Akshaya K. Samal* and Manav Saxena*

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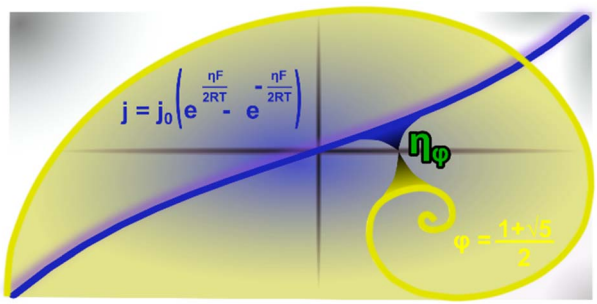

Revisiting the Butler–Volmer equation

Silvio Heinschke* and Jörg J. Schneider*

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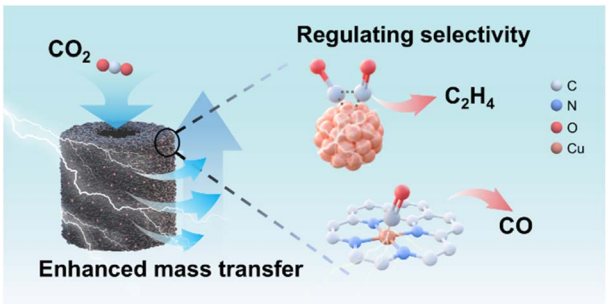

Boosting C_2H_4 electrosynthesis from CO_2 *via* Cu-nanoparticle-anchored carbon aerogels as tubular gas-flow-through electrodes

Yu Huang, Ruiquan Yu, Hua Zhong, Ming Gao, Hao Lin, Xiao-yan Li and Lin Lin*

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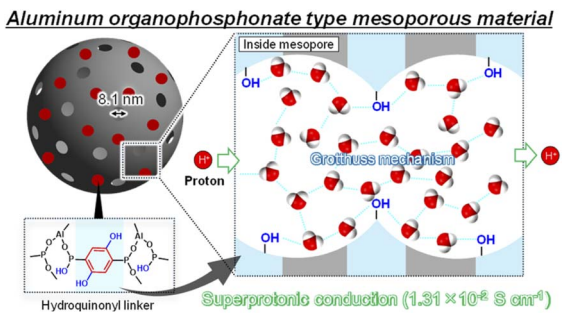

Proton conductivity of mesoporous aluminum organophosphonate enhanced by the affinity of an integral organic linker to water molecules

Takahiro Ami, Kouki Oka,* Hitoshi Kasai and Tatsuo Kimura*

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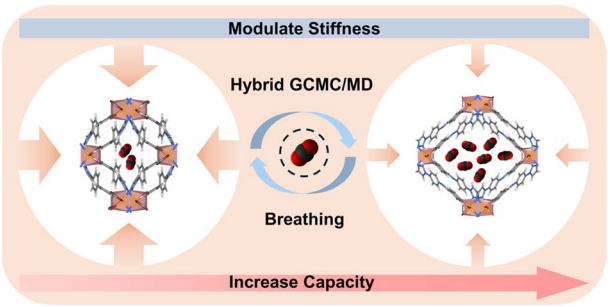
CO_2 adsorption-induced anisotropic mechanical response in an 8-fold interpenetrated diamondoid metal–organic framework

Rui Zheng, Saad Aldin Mohamed, Quan Liu, Xiaoyu Wu* and Jianwen Jiang*



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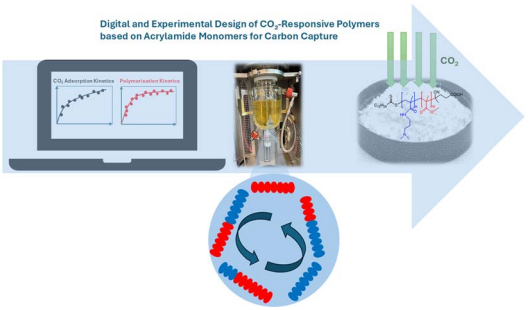
Digital and experimental design of CO_2-responsive polymers based on acrylamide monomers for carbon capture

Emil Pashayev and Prokopios Georgopanos*



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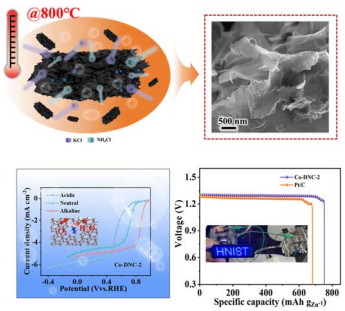
Porous carbon nanosheets supported Co single-atom catalysts *via* dual-molten-salt synergy for advanced zinc–air batteries

Qing Long, Xiaoyan Zhou, Jiaxuan Deng, Minghong Liu, Wu Xia,* Junlin Huang,* Liang Chen, Wenyuan Xu,* Hong Yin and Wei Wang*



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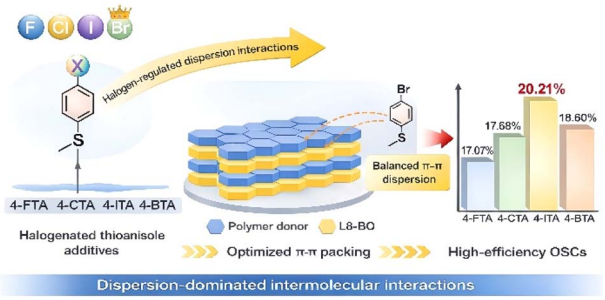
Dispersion-mediated active-layer interfacial regulation using halogenated thioanisole additives achieves high-efficiency organic solar cells

Yanqi Shi, Kun Li, Yuan Yao, Jingyue Guo, Hui Chen,* Yishi Wu, Qing Liao, Cunbin An* and Hongbing Fu



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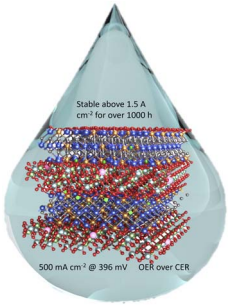

Optimising an electron-rich 2D Fe,B-$Ti_3C_2T_x$/N-doped mixed metal oxide interface for industrial-scale oxygen evolution in seawater

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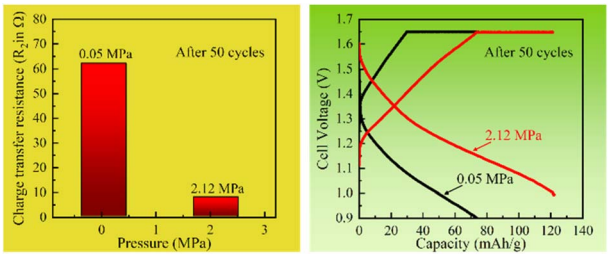

Effect of externally applied pressure on rechargeable alkaline zinc batteries at limited depth of discharge

Deepak Kharel, Calvin D. Quilty, Igor I. Bezsonov, Ciara N. Wright, Timothy N. Lambert* and Yang-Tse Cheng*

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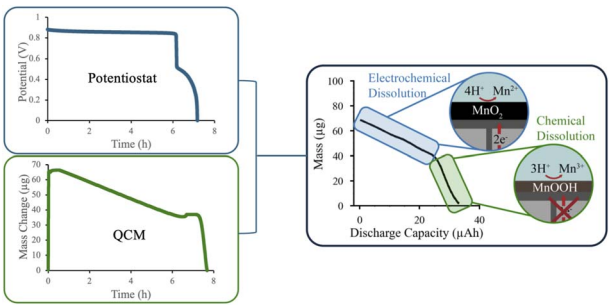

Characterizing the MnO_2 dissolution process *via* EQCM for rechargeable aqueous batteries

Minseok Choi, Aaron Reed, Cyrus Mirsafian, Sang Ha Baek, Randy Chen and Bruce Dunn*

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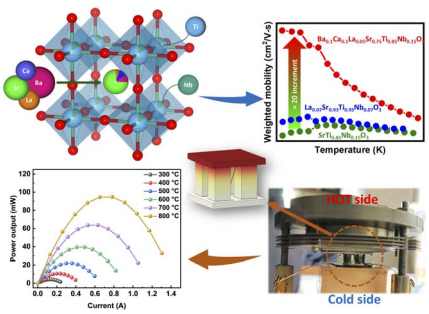

Entropy-stabilized perovskite oxide $Ba_{0.1}Ca_{0.1}La_{0.05}Sr_{0.75}Ti_{0.85}Nb_{0.15}O_3$ with improved thermoelectric performance for high-temperature waste heat recovery

Tathagata Bhattacharya, Vivek Kumar, Shivam Aggarwal, Pragya Dixit, Sayar Das and Tanmoy Maiti*

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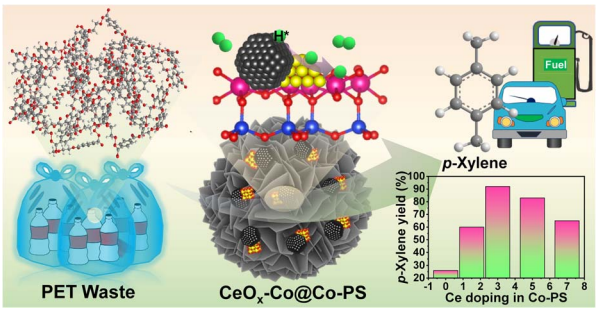
Intermetallic synergy between CeO_x–Co accelerates the selective production of *p*-xylene from PET plastic waste over core–shell type cobalt phyllosilicate catalysts

Arjun K. Manal and Rajendra Srivastava*



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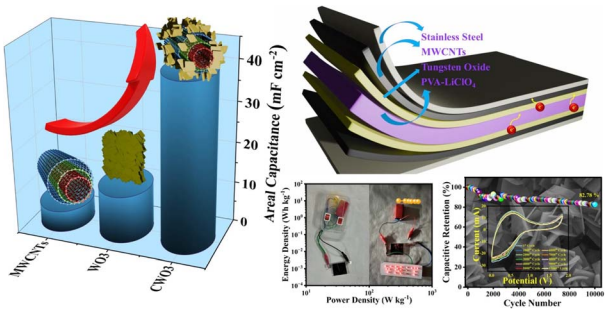
Hierarchical micro-tile growth of monoclinic tungsten oxide nucleated on MWCNTs hexagonal skeletons: wide-potential solid-state supercapacitor with a mechanical bendable design

T. Kedara Shivasharma and Babasaheb R. Sankapal*



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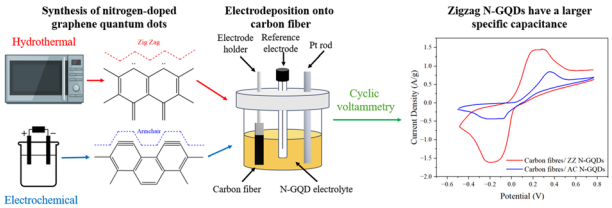
Impact of graphene quantum dot edge shapes on high-performance energy storage devices

Grainne Gilleece,* Natasha Shirshova,* Ensieh Hosseini, Karl Coleman, Marcos Perez-Pucheta and Dagou Zeze



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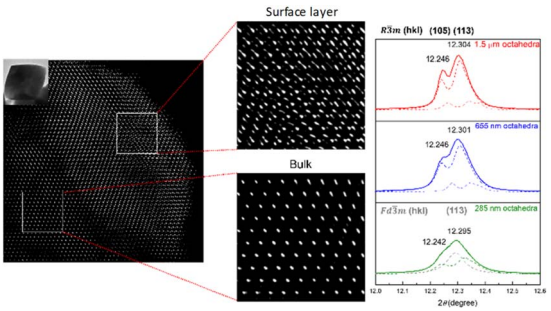
Size-tunable Zn_2SnO_4 octahedra possessing two lattice phases for the thiol–ene reaction

Yu-Shun Su, Bo-Hao Chen and Michael H. Huang*



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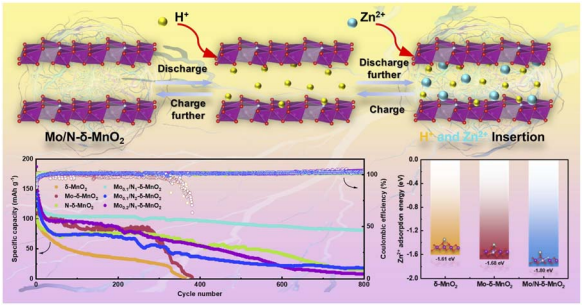

Role of Mo and N doping ratios in regulating the zinc storage performance of δ-MnO_2: a systematic study from single to co-doping

Shaoyan Huang, Shuling Liu,* Sha Fan, Rui Su, Libo Liu, Deliang Tian, Jinbao Li* and Jianbo Tong*

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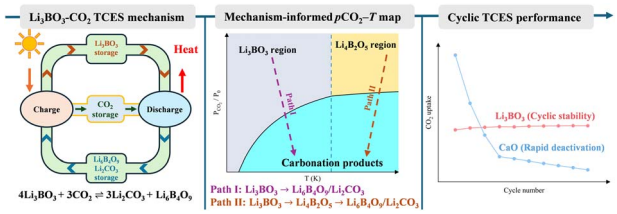

Understanding the reversible charging/discharging mechanism of Li_3BO_3 for thermochemical energy storage: an experimental and computational study

Yang Yang, Yuanqiang Duan, Wenhao Jiang, Xiangqian Du, Yushuang Jiang, Hongjian Tang* and Lunbo Duan*

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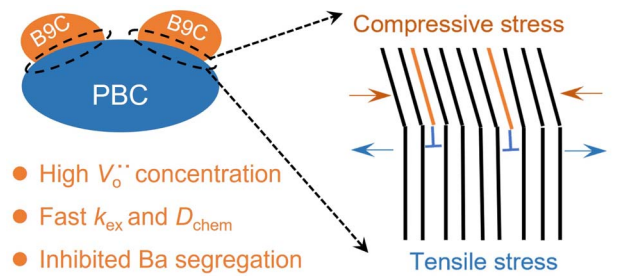

Self-assembled $PrBaCo_2O_{5+\delta}$–$Ba_{0.9}CoO_{3-\delta}$ composite as a highly active and durable oxygen electrode for reversible solid oxide cells

Min Zhang, Jiayue Liu, Xinyang Yu, Yang He, Zhihong Du, Xianyu Wang, Boyang Fu, Konrad Świerczek, Jianrong Zeng, Ligang Wang and Hailei Zhao*

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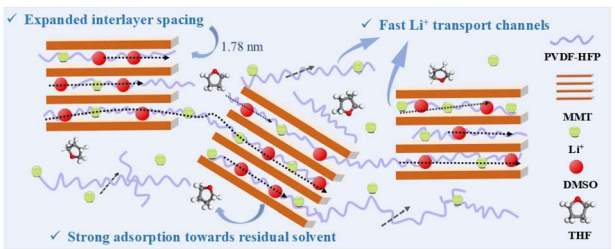

Intercalated montmorillonite for fabricating a highly conductive and overall-stable solid composite electrolyte for advanced lithium metal batteries

Yan Yuan,* Xinyi Dong, Yaxin Kong, Wenzhi Liang, Jiaxin Luo, Zeyu Li and Hai Lu*

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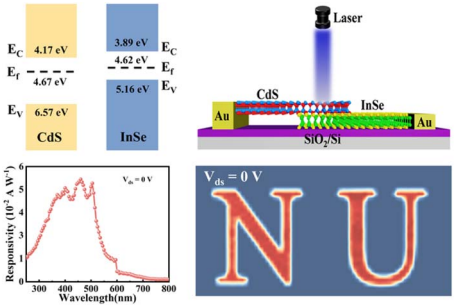
Superior-performance InSe/CdS van der Waals heterojunction photodetector for self-powered imaging

Haiqiang Huang, Yan Yang, Lei Liu, Fan Mu, Weibin Zhang,* Yifei Huang, Lujun Yang, Feng Song* and Yingkai Liu*



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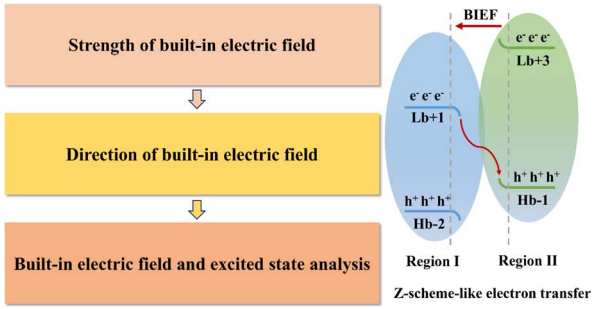
Fragments of polymers with a Z-scheme-like electron transfer mechanism driven by multiple built-in electric fields for photocatalytic H_2O_2 production

Huijie Wang, Yani Liu, Yitian Peng, Yaqi Hao, Hao Yang, Shenao Wang, Jinming Ye and Jun Luo*



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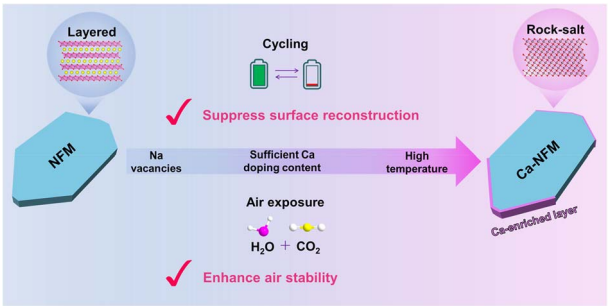
Bulk Ca-doping-induced surface modification enabling high-performance O3-type layered cathodes for sodium-ion batteries

Guoliang Liu, Xuejiao Zhao, Lihan Zhang, Xiaoqi Wang,* Manling Sui* and Pengfei Yan*



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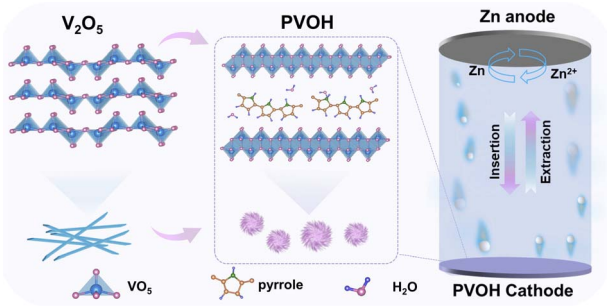
Polypyrrole-bridged vanadium oxide hierarchical microspheres for high-rate and durable aqueous Zn-ion storage

Mingjiao Shao, Yaxiong Zhang, Fengfeng Li, Hongwei Sheng, Qing Yue, Xinyi Zhu, Huasheng Bi, Yafang Li, Qing Su and Wei Lan*



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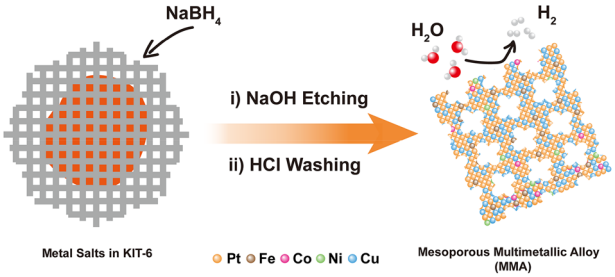

One-pot nanocasting of 3D ordered bicontinuous mesoporous Pt-based multimetallic alloys for efficient hydrogen evolution

Chonghan Xia, Junhao Ma, Qihang Chen, Yee Yan Tay, Lydia H. Wong and Kwan W. Tan*

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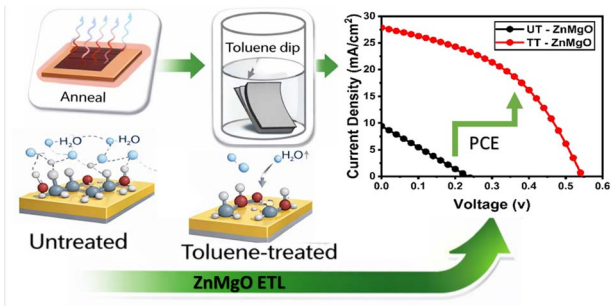

Solvent-mediated surface modification of electron transport layers for efficient PbS quantum dot solar cells

Noor Zaman, Yiqun Li, Tongjun Zheng, Jing Zhou,* Abdul Basit, Haider Ali Tauqeer, Biniyam Zemene Taye, Muhammad Salman Yousaf, Shizi Luo, Zheng Liang, Xiaoli Chen, Lavrenty G. Gutsev,* Ritabrata Sarkar, Andrey S. Vasenko, Gennady L. Gutsev and Xueqing Xu*

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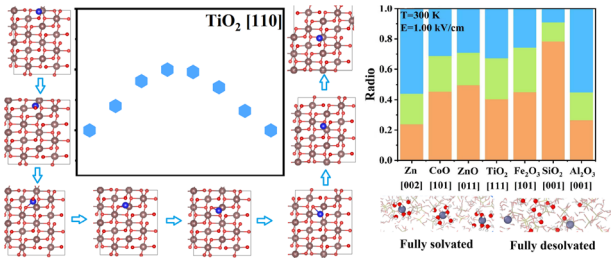

Theoretical investigation on the dendrite suppression and desolvation promotion effect of the coating material on the Zn metal anode for aqueous zinc-ion batteries: case study of oxide coating

Kai Jin, Wangsheng Yuan, Mengyu Hu, Peng Han,* Xinlei Wang, Xinke Wang, Yan Zhang and Lijun Fu*

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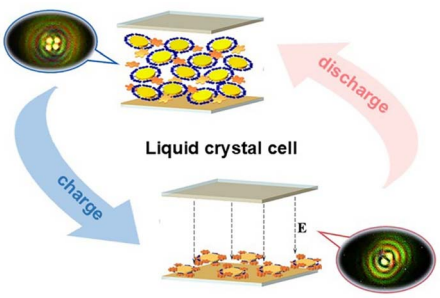

Hexabenzocoronene@LAPONITE® ionic cage: a secondary nanoassembly as an efficient elastic ion platform

Wenhao Wang, Yongrui Li, Jiamin Cheng, Yao Wang, Jingxing Zhang,* Zhenyu Xing,* Hao Li* and Guofu Zhou

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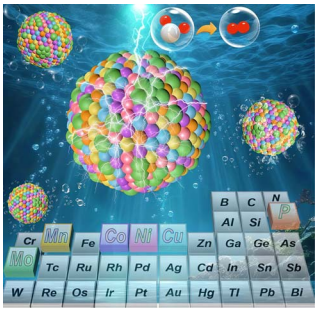
A single-phase high-entropy metal phosphide for efficient hydrogen evolution reaction

Xinyi Cai, Yujin Huang, Junfeng Ruan, Xing Li, Gangsheng Zhang, Zhijie Chen and Jinliang Zhu*



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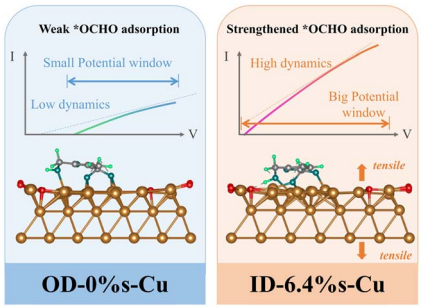
Tensile strain engineering on Cu nano-dots for high efficiency HMFOR at low potential

Honglei Chen, Yanming Li, Wenbin Ma, Qi Chen, Xupeng Qin, Yitao Liu, Lan Wang, Qinghua Liu, Chunzhen Yang,* Changli Li* and Jingfu He*



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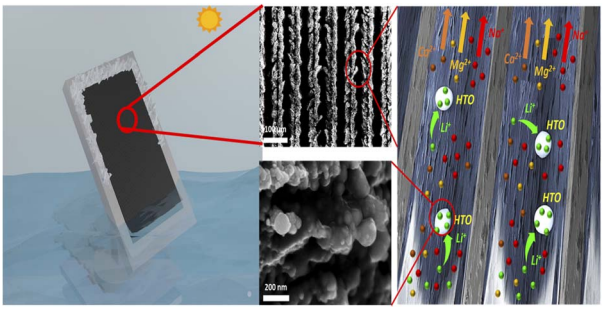
Rapid lithium extraction *via* solar-thermal interfacial evaporation with zero liquid discharge

Luheng Tang, Subhash C. Singh,* Mingjiang Ma and Chunlei Guo*



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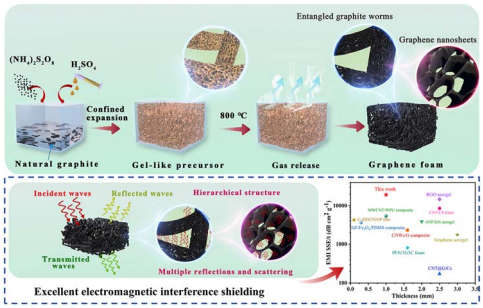
Entanglement assembly of graphite worms: a direct strategy to achieve highly crystalline graphene foam for superior electromagnetic interference shielding

Wenyu Wu,* Man Qi, Ling Wang, Nan Gao, Pengtao Yan,* Wenwen Liu, Jianzhi Sun, Zhigang Wang, Longlong Geng and Ruijun Zhang*



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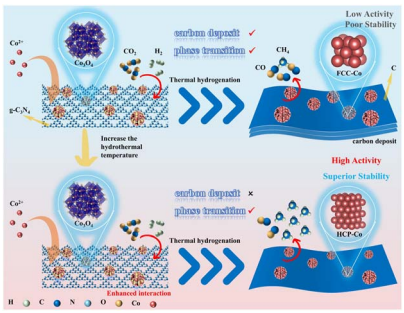
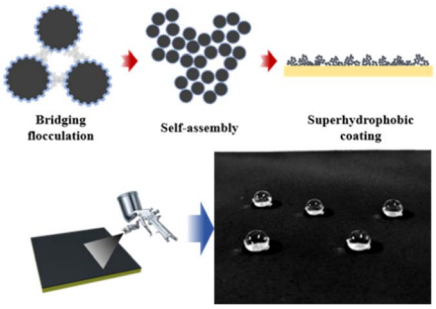


Unraveling the deactivation mechanism and stability enhancement of cobalt-based heterogeneous Co_3O_4/g-C_3N_4 catalysts in CO_2 hydrogenation

Junchao Duan, Wanyin Xu, Tianhe Gao, Xiaolian Li, YaXuan Sun, Wenkang Miao,* Dongling Jia,* Heguang Liu* and Qianqian Li*

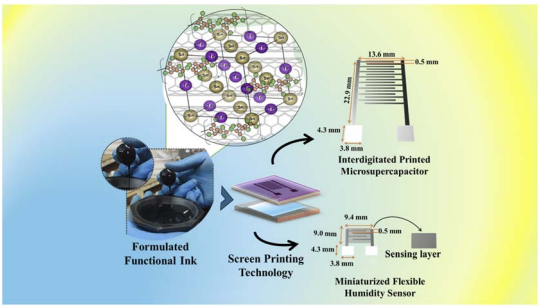
16061



Sprayable superhydrophobic photothermal/electrothermal anti-icing coating based on evaporation-induced surfactant flocculation self-assembly

Xi Zhang, Xixun Shen,* Gaofei Liang, Wang Tang, Jianping Tao and Qunjie Xu*

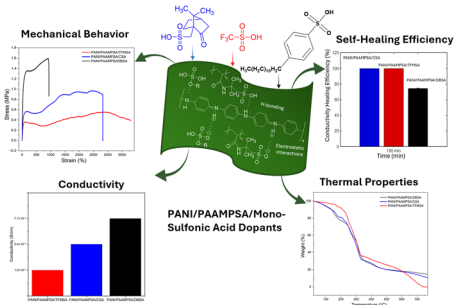
16077



A multifunctional flexible SnTe/MWCNT crystalline hybrid for energy storage and humidity sensing with 3D-printed device integration

Mohammad Saquib, Shilpa Shetty, Manasa R. Shankar, A. N. Prabhu, Ramakrishna Nayak, M. S. Santosh and M. Selvakumar*

16104



Transient behavior of self-healable ultra-stretchable carboxylic acid-doped polyaniline films for sustainable and re-processable polymer electronics

Arya Ajeev, Theodore Warfle, Colton Duprey and Evan K. Wujcik*

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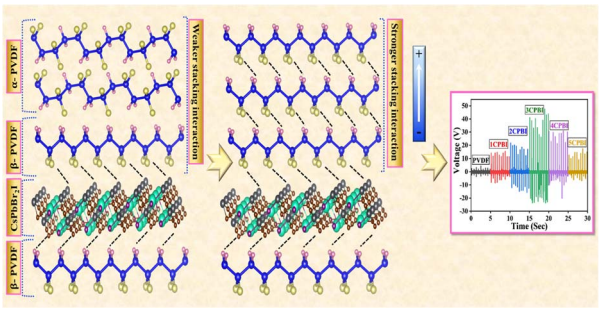
16114

Flexible and lightweight PVDF–$CsPbBr_2I$ piezoelectric nanogenerator with enhanced interfacial coupling for versatile high-output sensing applications

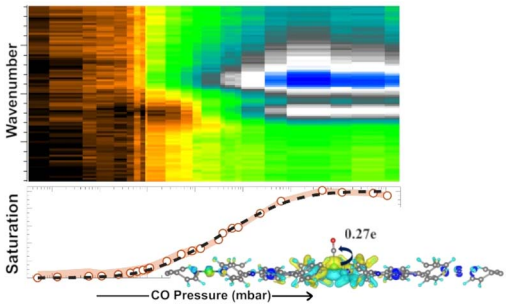
Snigdha Patra, Karabi Kanchan Borgohain, Pranab Kumar Sarkar, Subhasis Panda, Snehasish Nandy, Shanti Gopal Patra and Asim Roy*



16132

Carbon monoxide ligation at single metal atom sites in a 2D manganese-cobalt coordination network: equilibrium at room temperature

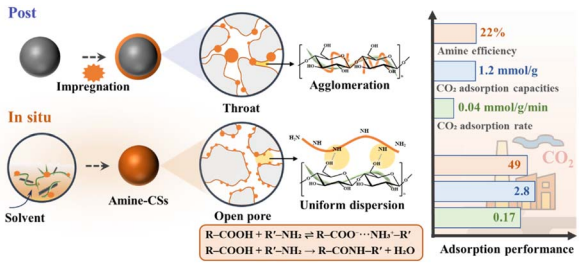
Michela De Col, Danilo Comini, Stefania Baronio, Basant Roondhe, Alessandro Namar, Davide Bidoggia, Mattia Scardamaglia, Paolo Giannozzi* and Erik Vesselli*



16143

***In situ* self-assembly of amine-rich carbon supraparticles for rapid CO_2 capture**

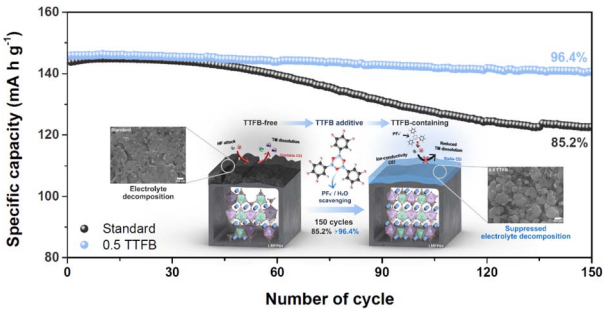
Jinglin He, Ziheng Jin, Rui Zhou, Zhongde Dai, Hui Su, Yiqiao Zhang, Bangda Wang and Xia Jiang*



16156

Regulation of interfacial stability and lithium-ion transport in $LiMn_{0.6}Fe_{0.4}PO_4$ cathodes *via* a boroxine-based electrolyte additive

Jaehyeon Lee and Taeeun Yim*



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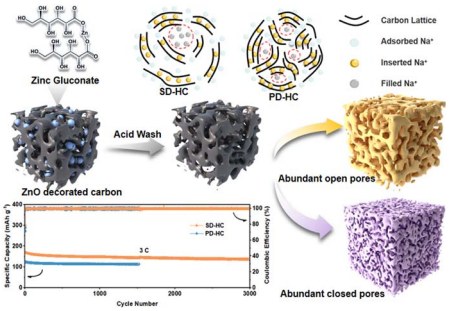
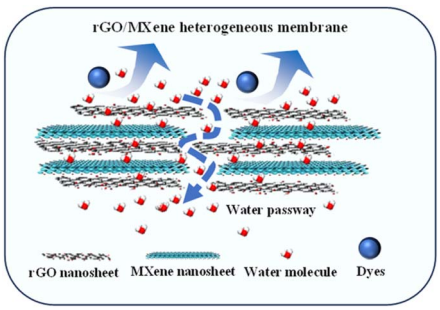
16164



Decoupling structure–performance relationships in hard carbon anodes: a comparative study of slope- and plateau-dominated sodium storage mechanisms

Xinyu Zhang, Zhaolin Gou, Feiyang Yang, Yuefeng Su, Cunzhong Zhang, Feng Wu, Ning Li* and Ying Yao*

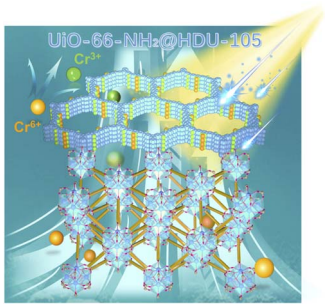
16173



Highly robust and efficient dye rejection enabled by rGO/MXene heterogeneous membranes

Rujie Yang, Pengxu Wang, Liuyuan Zhu, Yingjie Di, Yingying Huang,* Binjie Zhou, Shujin Wu, Haiping Fang and Shanshan Liang*

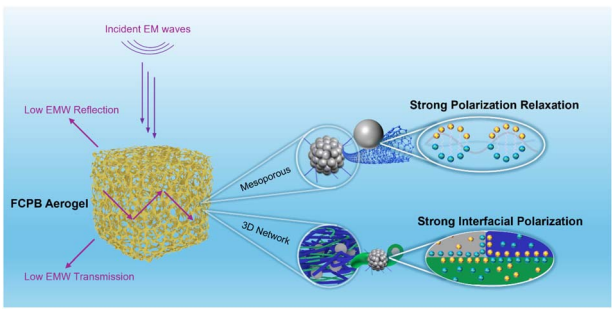
16184



Scavenger-free and high-efficiency photoreduction of concentrated Cr(VI) *via* MOF@COF heterojunctions: the role of interfacial charge transfer

Chen Wang,* Maoning Xu, Quanqi Yang, Ye Li, Wanjing Jia, Zhengwen Han and Jianjun Wang*

16195



Carboxylated MWCNT-induced mesoporous Fe_3O_4 constructs hierarchical heterointerface aerogels for ultra-high-efficiency microwave–terahertz broadband absorption

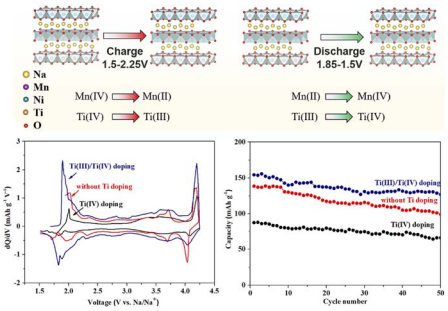
Xi Lin, Chenchen Wang, Chaoqun Zhang,* Chuanshuang Hu,* Yi Yang, Yonghui Zhou, Xiuyi Lin and Jiangtao Xu*

PAPERS

16207

Novel Ti(III)/Ti(IV) mixed-valence doping for enhancing the structural stability and specific capacity of a P2-layered $Na_{0.67}Ni_{0.2}Mn_{0.8}O_2$ cathode for sodium-ion batteries

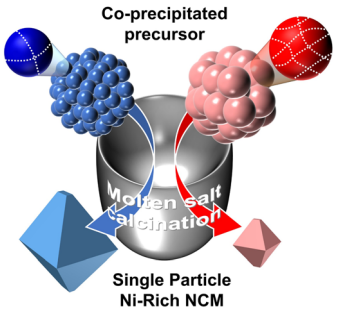
Wenjian Tang, Yan Wang, Aiqun Gu and Zili Yu*



16218

Elucidating the structure–performance relationship in single-particle NCM cathodes *via* controlled precursor synthesis

Soonhyun Hong, Heesang Lee, Jahun Koo, Wonchan Hwang, Ji Hwan Kim, Yung-Eun Sung, Jungjin Park,* Young-Sang Yu* and Chunjoong Kim*



RETRACTION

16227

Retraction: Convolutional neural network prediction of the photocurrent–voltage curve directly from scanning electron microscopy images

Yuta Hayashi, Yuya Nagai, Zhenhua Pan and Kenji Katayama*