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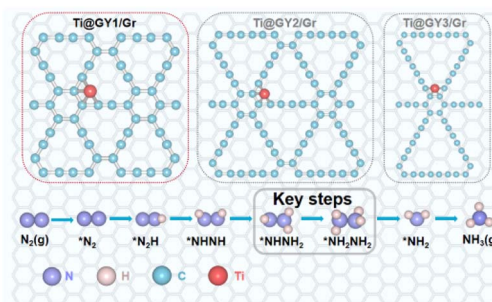
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9643

Regulation of nitrogen reduction reaction catalytic performance by varying the sp/sp^2 hybrid carbon ratio in graphyne/graphene heterojunction catalysts

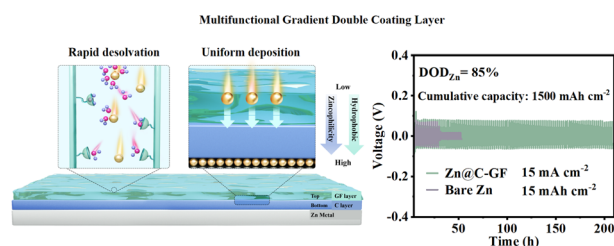
Zexiang Yin, Zijun Yang, Yingmei Bian, Heng Zhao, Beijia Chen, Yuan Liu, Yang Wang,* Yida Deng* and Haozhi Wang*



9651

Design of a multifunctional gradient double coating layer for a stable thin zinc anode with high depth of discharge

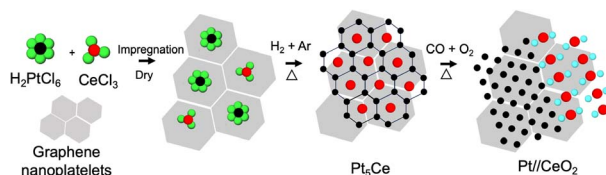
Wenduo Zhang, Meijia Chen, Chuang Sun, Chao Lai, Yuxuan Zhu* and Minman Tong*



9660

A heteroepitaxial interface of Pt//CeO₂ nanoparticles for enhanced catalysis of the oxygen reduction reaction (ORR)

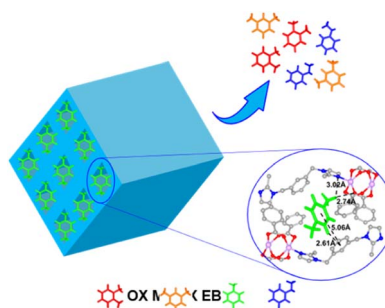
Nasrat Hannah Shudin, Ryuto Eguchi, Shigenori Ueda, Ankit Singh, Ayako Hashimoto* and Hideki Abe*



9665

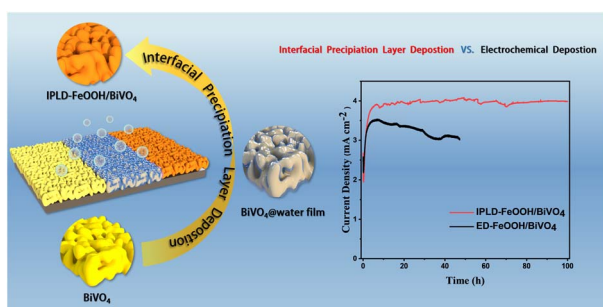
Discrimination of *p*-xylene from xylene isomers by precisely tuning the spacing of an interpenetrated metal–organic framework

Na Sun,* Xue Zhou, Jiawei Liu, Han Yu, Xiuwen Si, Fu Ding and Yaguang Sun*



COMMUNICATIONS

9673

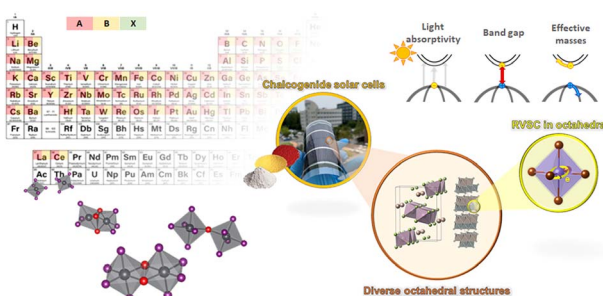


Scalable conformal FeOOH cocatalyst deposition by interfacial precipitation layer deposition for photoelectrochemical water splitting

Shuqi Wu, Qitao Liu, Weilong Qing, Yu Zhu, Hao Zhang, Jing Gao, Hao Wang, Jiabo Le, Zihao Yao and Yongbo Kuang*

PAPERS

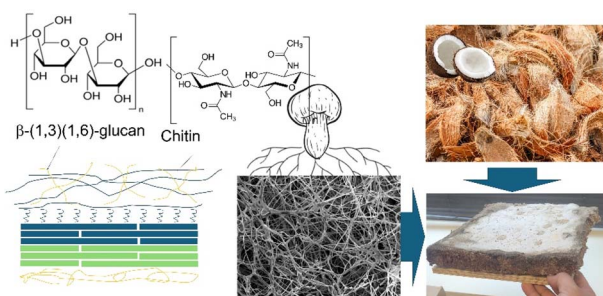
9680



A novel strategy for discovering inorganic solar-cell absorbers: leveraging octahedral features in ABX_3 structures

Wonze Jung, Suim Lim, Yong Youn, Jiho Lee, Awet Mana Amare, Shah Syed Fawad Ali, Inyoung Jeong, Donghyeop Shin, Joo Hyung Park, Kihwan Kim and Kanghoon Yim*

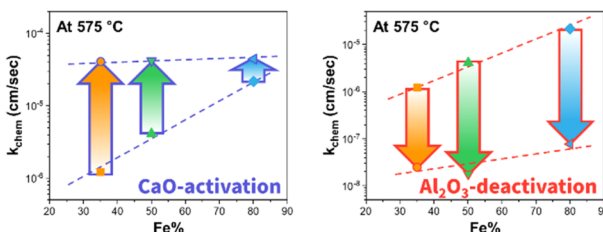
9694



Mycelium-coir-based composites for sustainable building insulation

Gargi De, Libin Yang, Jaejun Lee, Yu-Han Wu, Zhiting Tian and Zhao Qin*

9708



Unveiling critical role of metal oxide infiltration in controlling the surface oxygen exchange activity and polarization of $SrTi_{1-x}Fe_xO_{3-\delta}$ perovskite oxide electrodes

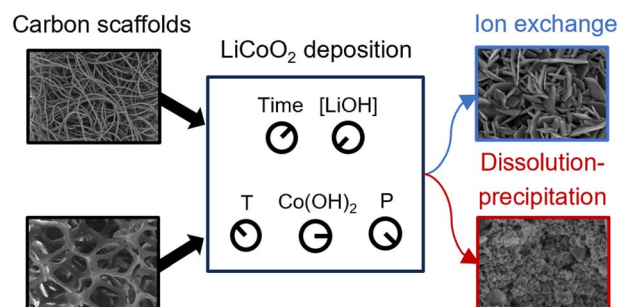
Hyunseung Kim, Han Gil Seo, Sejong Ahn, Harry L. Tuller* and WooChul Jung*



9715

Competition between dissolution and ion exchange during low temperature synthesis of LiCoO_2 on porous carbon scaffolds

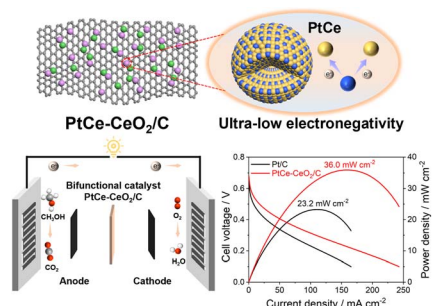
Ishita Kamboj, Seongbak Moon, Hannah Denhartog and Veronica Augustyn*



9729

Electronic structure engineering of heterogeneous ceria-incorporated Pt/C as an efficient catalyst for boosting DMFC performance

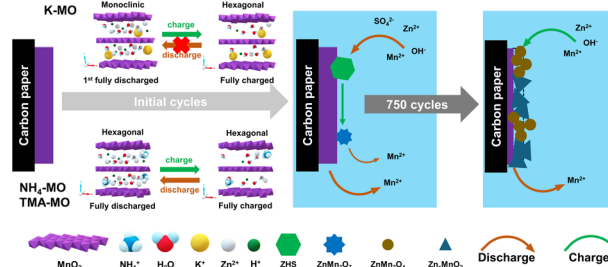
Ziqi Wan, Jianqi Ye, Jinyuan Zhang, Jie Gao, Lei Liu,* Dan Wen* and Wei Gao*



9737

Ammonium-preintercalated layered manganese oxide with single-phase intercalation chemistry and enhanced two-electron reaction in aqueous zinc-ion batteries

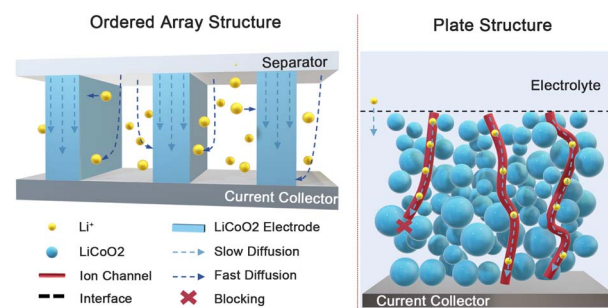
Tzu-Ho Wu,* Jian-Xue Huang and Syu-Jin Liao



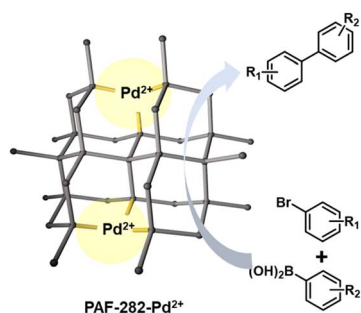
9747

Optimization of LiCoO_2 thick electrodes with low tortuosity for lithium-ion batteries by 3D printing

Shu Xu, Shaopeng Li, Lingtong Zhu, Yining Zhao, Hui Dou* and Xiaogang Zhang*



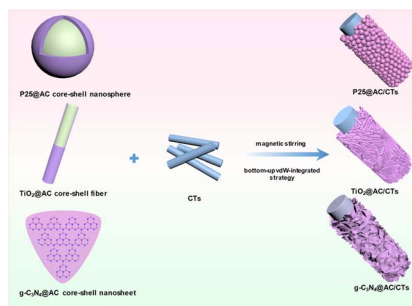
9757



Construction of ionic cavities in porous aromatic frameworks for palladium immobilization and effective catalysis

Yuhui Zhai, Zhaofu Zhang, Hengtao Lei, Tingting Ma, Mengnan Gu, Yuyang Tian* and XiaoYu Cao*

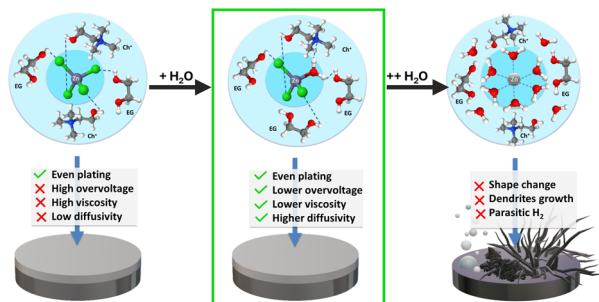
9764



Bottom-up assembly of recyclable van der Waals-integrated photocatalysts towards efficient photoelectrocatalytic degradation

Hua-Jun Chen, Zhao-Ming Lu, Yan-Ling Yang,* Xiao-Lei Shi, Jin-Geng Chen, Ze-Nan Hu, Bi-Ying Zhang, Yue-Feng Chen, Yu Sun and Zhi-Gang Chen*

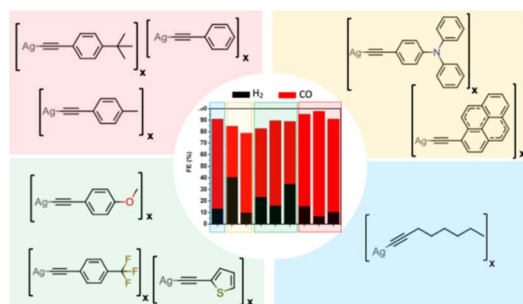
9778



Solving ZIB challenges: the dynamic role of water in deep eutectic solvents electrolyte

E. Emanuele,* G. Batignani, G. Cerullo, G. Leita, N. Madathiparambil Mohanan, E. Mai, M. Martinati, C. Mele, T. Scopigno and B. Bozzini

9791



Structure–property relationship of atomically-precise silver acetylide clusters in the electroreduction of CO₂

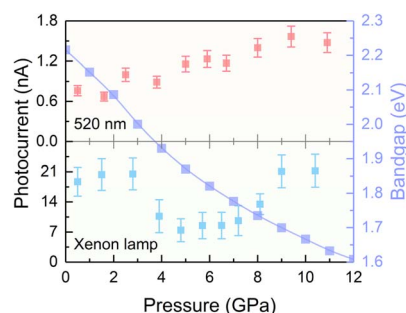
Leonard Curet, Dominique Foix, Stephane Ducos, Laurent Billon, Emilio Palomares and Aurelien Viterisi*



9801

Low compressibility of photoelectric properties of layered molecular non-metal halide AsI_3

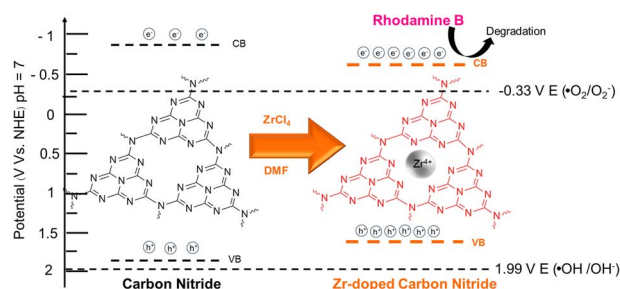
Zonglun Li, Dexiang Gao, Shuxin Chen, Lei Yue, Bao Yuan, Xudong Shen, Le Kang,* Quanjun Li* and Bingbing Liu



9811

Band gap and photo charge carrier tailoring in zirconium doped carbon nitride using ZrCl_4 -DMF-melamine for photocatalytic degradation of rhodamine B

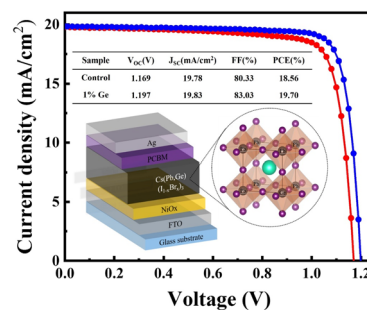
Chinathun Pinming, Qingshan Yang, Navaphun Kayunkid, Visittapong Yordsri, Winadda Wongwiriyan* and Young Jae Song*



9822

Enhanced stability of Ge-doped $\text{CsPb}(\text{I}_{1-x}\text{Br}_x)_3$ perovskite solar cells

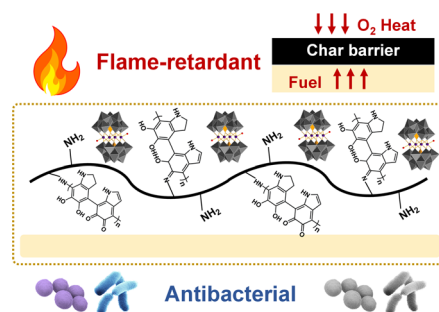
Ruiping Chen, Yan Wang,* Saqib Nawaz Khan, Feifei Xing, Simiao Li, Yiheng Rao, Hao Wang and Zengxia Mei*



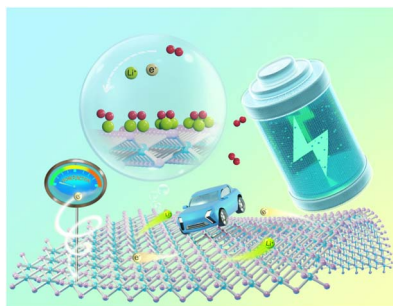
9830

Dual-functional composite coating with flame-retardant and antibacterial properties for flexible polyurethane foams

Ying Zeng, Zheng Li, Yeqin Feng, Manzhou Chi, Hongjin Lv* and Guo-Yu Yang



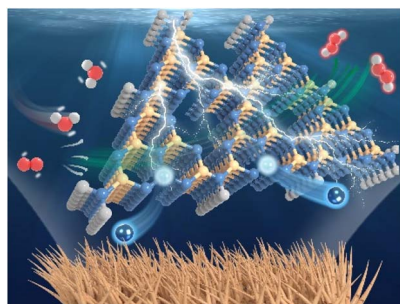
9841



Identifying efficient two-dimensional transition metal oxide cathodes for non-aqueous lithium–oxygen batteries using the work function as a simple descriptor

Silan Chen, Lujie Jin, Yujin Ji* and Youyong Li*

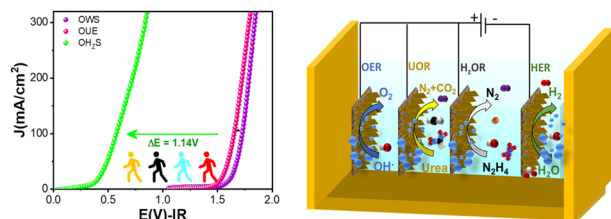
9849



Engineering vacancy-defective carbon nitride nanowire clusters for dramatically enhanced visible-light-driven photocatalytic H₂O₂ production

Ziyi Liao, Huilin Hou,* Jingjing Du, Lin Wang, Shuhua Wang, Shuo Wang, Xiaoqiang Zhan, Hongli Yang, Dongjiang Yang and Weiyu Yang*

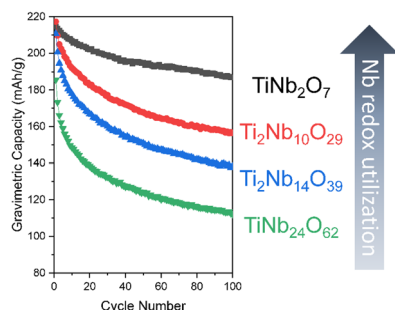
9865



Functional nickel iron sulphide/hydroxide catalysts for hydrazine oxidation and energy saving hydrogen production

Pooja J. Sharma, Kinjal K. Joshi, Parikshit Sahatiya, C. K. Sumesh and Pratik M. Pataniya*

9878



Compositional study of Ti–Nb oxide (TiNb₂O₇, Ti₂Nb₁₀O₂₉, Ti₂Nb₁₄O₃₉, and TiNb₂₄O₆₂) anodes for high power Li ion batteries

Yeonguk Son, Haeseong Jang, Bo Wen, Changshin Jo, Alexander S. Groombridge, Adam Boies, Min Gyu Kim* and Michael De Volder*

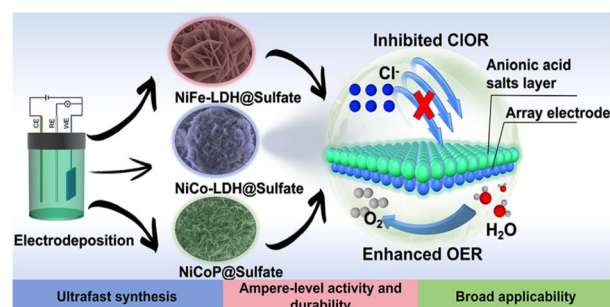


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9886

Electrodeposition of oxyanion films as universal chloride ion-repelling layers for efficient and stable seawater oxidation at ampere-level current density

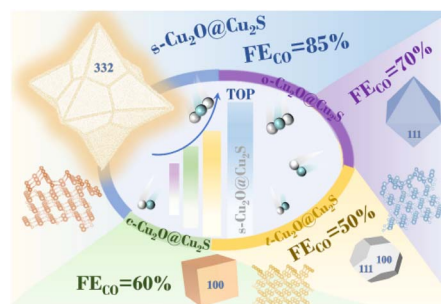
Meng Zhang, Yuzhuo Sun, Chenchen Meng, Qijun Xu, Yang Zhang, Xiaohong Li, Louzhen Fan, Tengfei Li* and Yunchao Li*



9899

Impact of heterogeneous construction on the low- and high-index facets of Cu_2O on the catalytic performance and reconstruction in the electrochemical CO_2 reduction reaction

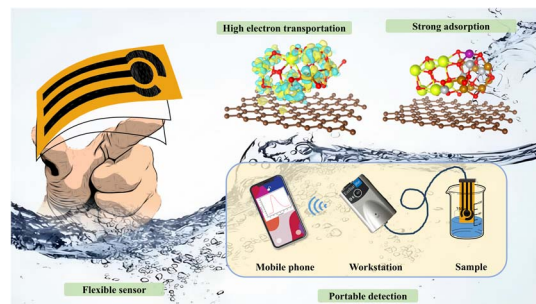
Jiaxing Guo, Haiqiang Mu, Zhenli Lv, Guorui Ma, Zhiyu Zheng, Jin Zhang, Feng Li* and Jing Li*



9910

Determination of Mn^{2+} using a paper-based flexible electrochemical sensor modified by NiFe_2O_4 and CeO_2 nanoparticles

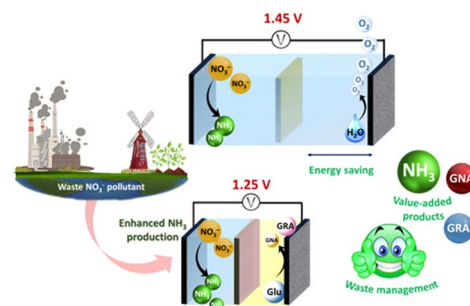
Haonan Zhan, Jingxia Wang, Qiang Xue,* Yao Liu, Zeyu Liu, Haijiao Xie, Long Xiao, Renzhe Bi and Malini Olivo



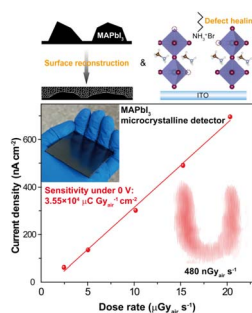
9923

High yield ammonia production via glucose oxidation assisted electrochemical nitrate reduction

Akansha Chaturvedi, Sukhjot Kaur, Kalpana Garg and Tharamani C. Nagaiah*



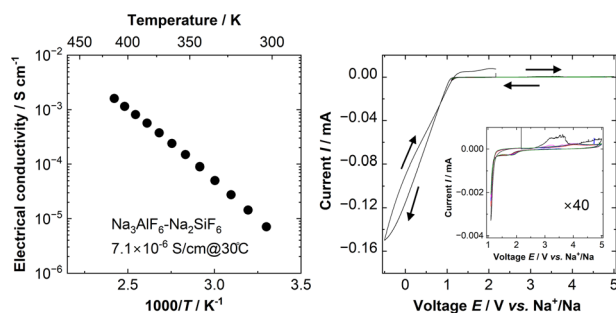
9933



Surface reconstruction and defect healing of MAPbI₃ perovskite microcrystalline thick films for sensitive and self-powered X-ray detectors

Nianqiao Liu, Hui Liu, Xuezhou Li,* Ning Li, Xiangzhou Zhang,* Yanjun Fang* and Zhaolai Chen*

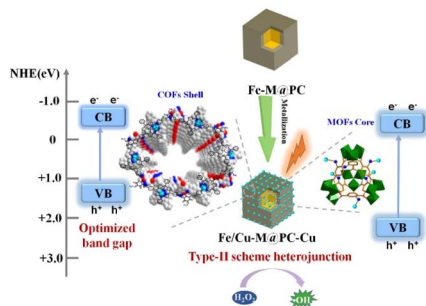
9942



Potential of Na₃AlF₆ as solid electrolyte for all-solid-state Na batteries

Reona Miyazaki,* En Yagi, Yusuke Harazono, Natsuki Ito, Toshihiro Yoshida and Takahiro Tomita

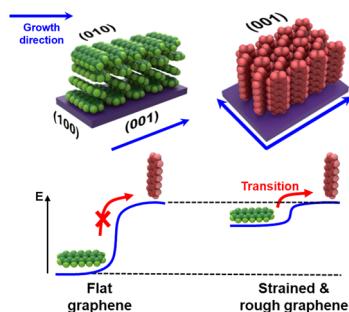
9952



Enhanced photo-Fenton catalysis via bandgap engineering of metalloporphyrin-based covalent organic framework shells on bimetallic metal-organic frameworks: accelerating Fe(III)/Fe(II) loop activation

Hui Wang, Xuefeng Zhang, Xiangfeng Wu,* Yewei Kang, Yirui Huang, Zhaoye Zhao, Ziyang Li, Tingting Zhou, Junchuan Wang, Wei Zhu and Chengsi Pan

9963



Unraveling the standing-up orientation transition of π -conjugated molecules on graphene templates

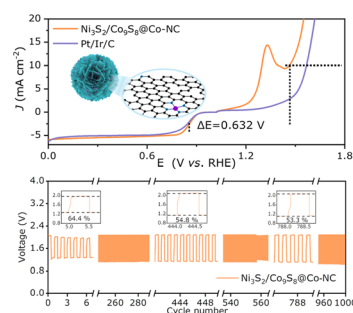
Jisang Park, Jinhyun Hwang, Byeongchan Park, Hyunji Lee, Wi Hyoung Lee, Hyo Chan Lee* and Kilwon Cho*



9974

Regulating coordination environment of Co single-atom through Ni/Co sulphides synergistic heterointerfaces towards efficient bifunctional oxygen electrocatalysts

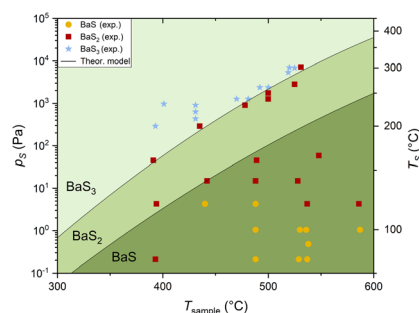
Zhida Wang, Peitao Liu,* Chongyang Yang, Zihan Zhang, Yu Qian, Yanqing Zu, Xiaodong Li and Ailing Feng*



9983

Thermodynamic insights into the Ba–S system for the formation of BaZrS₃ perovskites and other Ba sulfides

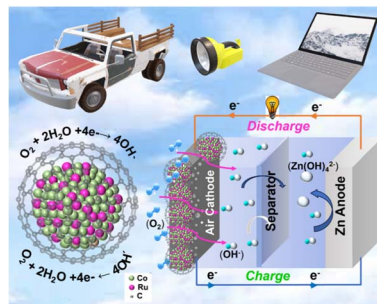
Corrado Comparotto,* Lucy Whalley, Kostiantyn Sopiha, Robert J. W. Frost, Tomas Kubart and Jonathan J. S. Scragg



9992

Carbon nanostructures embedded with bimetallic CoRu alloy nanoparticles as oxygen reduction electrode for zinc–air batteries

Sarvesh Kumar, Rajeev Kumar, Naveen Goyal, Sanjit Kumar Parida, Ashwini Anshu, Ankit Yadav, Fei Yan and Balaram Sahoo*



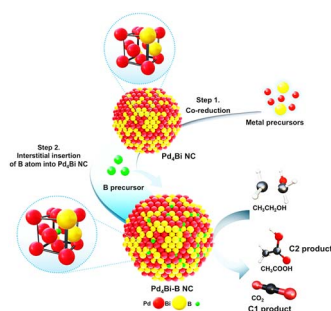
10006

Anchoring Fe–Cu bimetallic oxides on MWCNTs for low-temperature H₂S removal under high CO₂ concentration

Shuai Liu, Dicka Ar Rahim, Yan Zhang, Dan Wang, Ekkachai Kanchanatip, Yi He and Mi Yan*



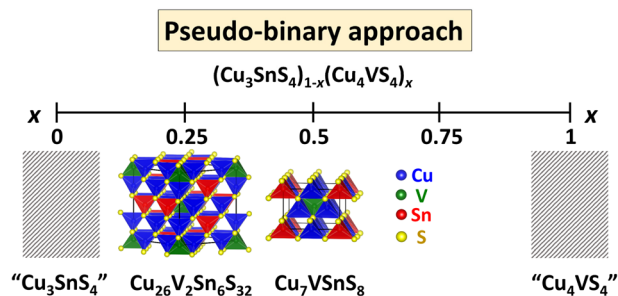
10019



Synergistic function of Bi and B in interstitial ternary Pd–Bi–B alloy nanocrystals for highly active and durable electrochemical ethanol oxidation

Poliraju Kalluru, Ghufran Aulia Bin Azizar, Respati K. Pramadewandaru, Tae Gyun Kim, Jieun Yu, Dong Il Kang, Jaehoon Jung, Young Wook Lee* and Jong Wook Hong*

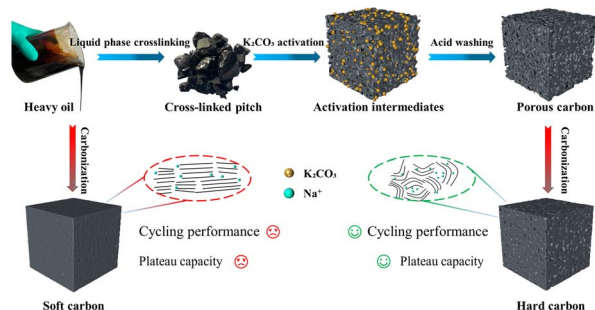
10028



A new quaternary sphalerite-derivative compound for thermoelectric applications: Cu₇VSnS₈

Shuya Kozai, Koichiro Suekuni,* Seiya Takahashi, Eiji Nishibori, Hidetaka Kasai, Ilaria Siloi, Marco Fornari, Hikaru Saito, Philipp Sauerschnig, Michihiro Ohta, Pierrick Lemoine, Emmanuel Guilmeau, Bernard Raveau and Michitaka Ohtaki

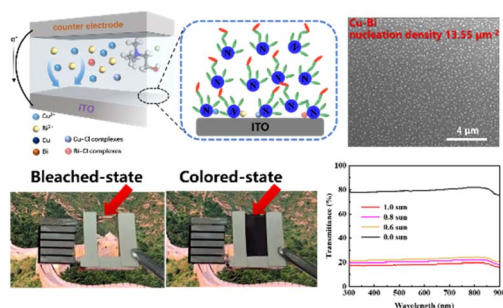
10037



Regulation of microcrystalline and pore structures in pitch-based hard carbon *via* liquid-phase crosslinking-assisted grain boundary etching to enhance sodium storage performance

Zenghao Wang, Bin Lou,* Jun Li, Nan Shi, Xiujie Yang, Jichang Zhang, Jing Wu, Fushan Wen, Yifan Wang and Dong Liu*

10049



Electrolyte additive strategy for uniform nucleation of Cu–Bi toward low-voltage self-powered dynamic windows

Xi Wang, Yiming Bai,* Fei Han, Yichen Jiao, Yuzhe Guan, Jinjing Bai, Fuzhi Wang, Meicheng Li and Guicheng Liu*

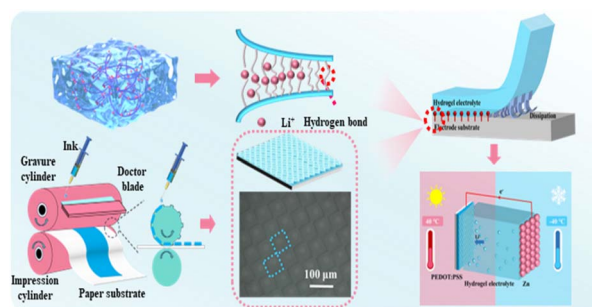


PAPERS

10060

Coupling of high ion transport efficiency in hydrogel electrolytes and interfacial fusion for performance enhancement in all-solid-state paper-based self-powered electrochromic devices with low-temperature tolerance

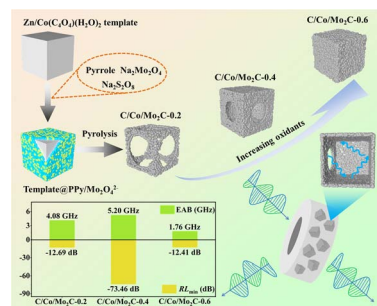
Guodong Liu,* Shuyue Chen, Xiaohong Jiang, Zhuoqing Zhang, Yaoli Wang, Hanbin Liu, Zhijian Li and Patrick Gane



10077

Hollow but perforated C/Co/Mo₂C cubes enhance electromagnetic absorption

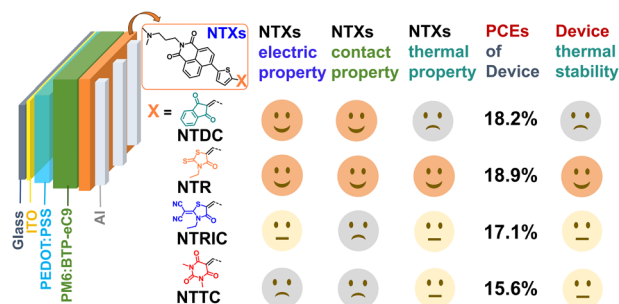
Xinghang Duan, Qiaolin Li, Tiantian Cao, Shengxiang Xiong, Gang Chen, Chengjun Dong,* Hongtao Guan and Zongyou Yin*



10088

Heteroaromatic ring-modified naphthalimide interlayer materials for efficient polymer solar cells

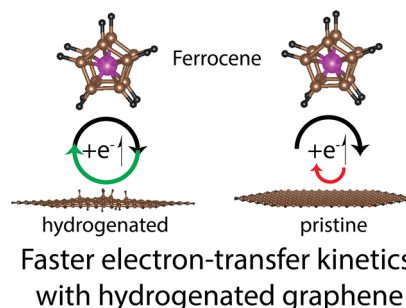
Shuixing Dai,* Jilei Jiang, Liangmin Yu, Lunxiu Cui, Xu Zhang, Canhui Zhang, Ke Gao, Heqing Jiang and Minghua Huang*



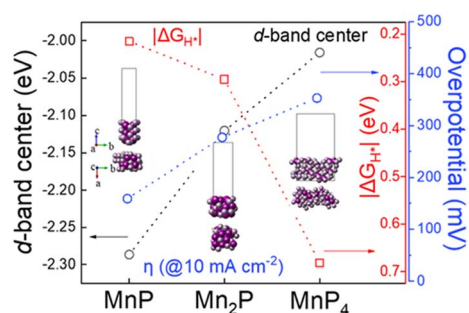
10097

A comparative computational and scanning electrochemical microscopy study of factors influencing electron transfer at the hydrogenated and pristine graphite – propylene carbonate electrochemical interface

Jason Howard, Dipobrato Sarbapalli, Abhiroop Mishra, Nannan Shan, Garvit Agarwal, Jingjing Zhang, Michael J. Counihan, Lu Zhang, Rajeev S. Assary,* Larry A. Curtiss* and Joaquín Rodríguez-López*



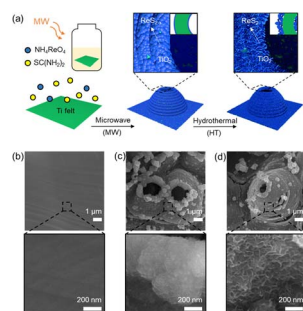
10111



Evaluating the phase-dependent electrocatalytic activity of manganese phosphides for the hydrogen evolution reaction

Kyeong-Ho Kim, Yoo Sei Park, Jong Min Lee, Min Ho Seo,* Seong-Hyeon Hong* and Sung Mook Choi*

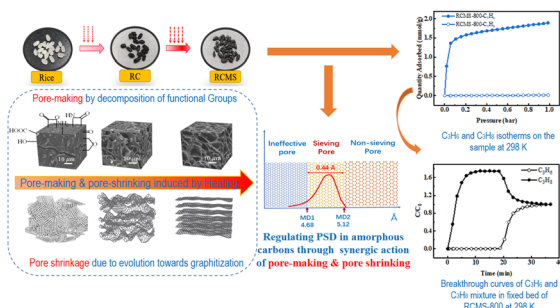
10126



High-performance hydrogen evolution reaction by ReS₂/TiO₂ hollow microcones created through microwave-hydrothermal consecutive synthesis

Yoonsun Choi, Geonwoo Kim, Dongbeom Kim, Kyu-Su Kim, Junhyeok No, In-Ho Baek, Sang-Mun Jung,* Yong-Tae Kim* and Unyong Jeong*

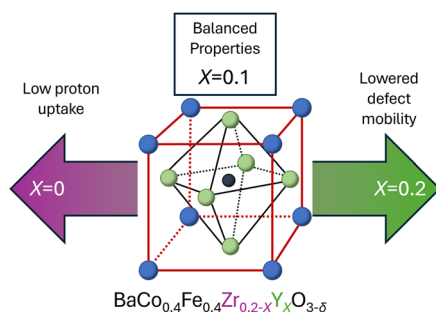
10135



Precise tuning of pore size distribution in amorphous carbon molecular sieves at the sub-angstrom scale via a synergistic mechanism of pore-making and shrinking for separating similar gases

Daohao Zhou, Haoyuan Luo, Yi Yu, Xin Zhou,* Qibin Xia,* Ying Wu and Zhong Li*

10147



Structural and thermodynamic analysis of triple conducting ceramic materials

$\text{BaCo}_{0.4}\text{Fe}_{0.4}\text{Zr}_{0.2-x}\text{Y}_x\text{O}_{3-\delta}$

Jack H. Duffy, Nancy Birkner, Chiyong Kim, Ryan Jacobs, Dane Morgan, Shivani Sharma, Scott T. Misture, Erik M. Kelder, Harry W. Abernathy and Kyle S. Brinkman*

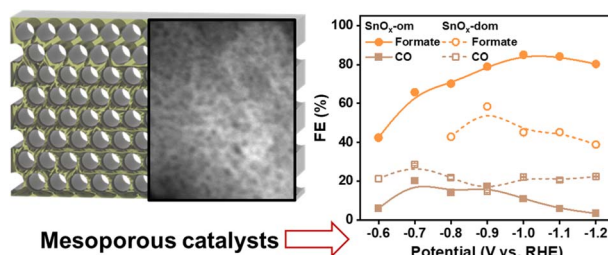


PAPERS

10160

Ordered mesoporous electrocatalysts for highly selective formate production from electrocatalytic CO₂ reduction

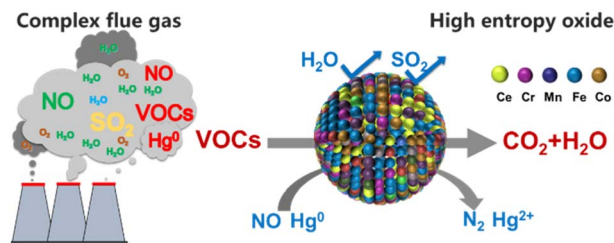
Ashfaq Ahamd, Chaoran Zhang, Yichuan Gu, Qu Jiang, Ziyang Sheng, Ruohan Feng, Sihong Wang, Haoyue Zhang, Qianqing Xu, Zijian Yuan and Fang Song*



10173

Cerium-optimized high-entropy spinel oxide for efficient and anti-interference removal of VOC from complex flue gas

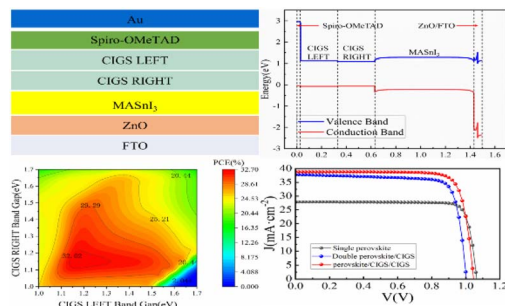
Yunyi Ge, Xiao Zhang,* Feng Shen, Shuhao Li and Boxiong Shen*



10187

Boosting the efficiency of lead-free MASnI₃ perovskite solar cells through a bilayer CIGS structure approximating a gradient bandgap distribution

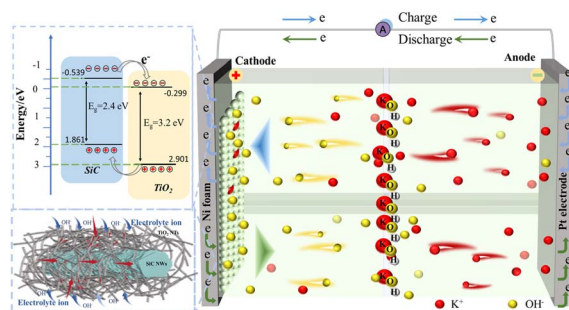
Ganqi Cao, Xueyao Gu, Jiangbin Su,* Zuming He and Bin Tang



10197

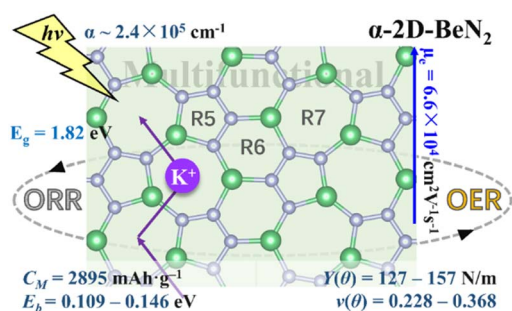
TiO₂ nanotube-coated hierarchical SiC nanowires as novel electrode materials with enhanced electrochemical performances for supercapacitors

Yuxia Qiao, Geping He,* Zhong Huang, Huijun HuangFu, Zhilei Li, Lang Ju, Zongmo Shi and Hudie Yuan



PAPERS

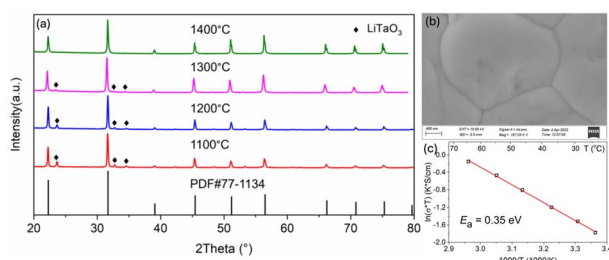
10214



Beryllium dinitride monolayer: a multifunctional direct bandgap anisotropic semiconductor containing polymeric nitrogen with oxygen reduction catalysis and potassium-ion storage capability

Shuang Ni, Jiaxin Jiang, Weiye Wang, Xiaojun Wu, Zhiwen Zhuo* and Zhuo Wang*

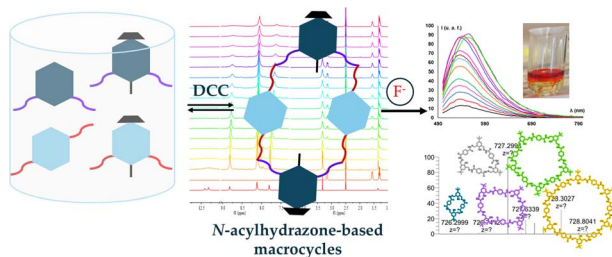
10224



Understanding ionic transport in perovskite lithium-ion conductor $\text{Li}_{3/8}\text{Sr}_{7/16}\text{Ta}_{3/4}\text{Hf}_{1/4}\text{O}_3$: a neutron diffraction and molecular dynamics simulation study

Danyi Sun, Nan Wu, Yeting Wen, Shichen Sun, Yufang He, Ke Huang, Cheng Li, Bin Ouyang,* Ralph White and Kevin Huang*

10232



Synthesis of dynamic *N*-acylhydrazone-based macrocycles

Nicoleta Sandu, Anamaria Hanganu, Codruța Popescu, Alexandra M. Demeter, Anca G. Mirea, Andrei Kuncser, Cristina Tăbălet, Niculina D. Hădăde, Mihaela Florea, Daniel P. Funeriu* and Mihaela Matache*

CORRECTION

10243

Correction: Accelerating discovery of glass materials in electronic devices through topology-guided machine learning

Huang Ming, Li Yahao, Hu Yongxing, Mao Haijun, Liu Zhuofeng, Li Wei, Wang Fenglin, Ye Yicong, Zhang Weijun* and Chen Xingyu*

