

Journal of Materials Chemistry A

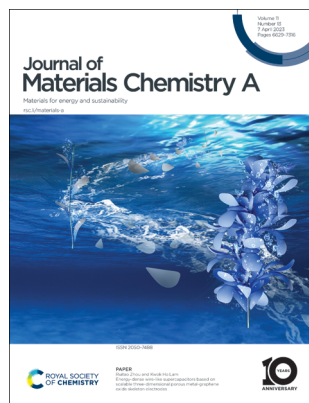
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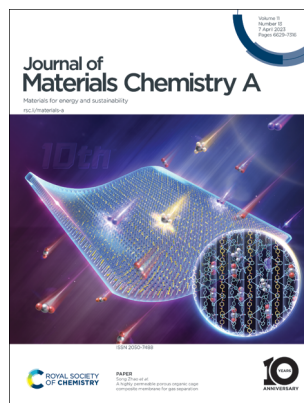
IN THIS ISSUE

ISSN 2050-7488 CODEN JMCAET 11(13) 6629–7316 (2023)



Cover

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Inside cover

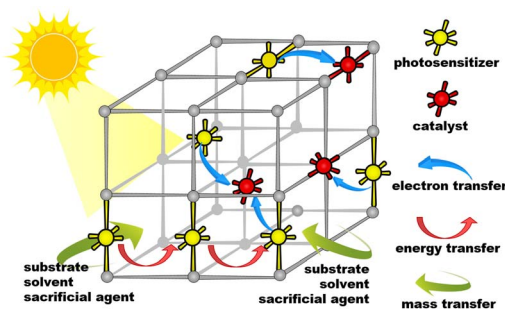
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REVIEWS

6646

Impacts of host–guest assembly on the photophysical and photocatalytic properties of heterogenized molecular photosensitizer and catalysts

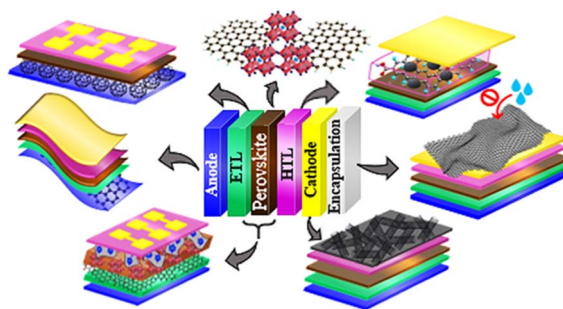
Jiaying Shi,* Zhifang Su, Xuan Li, Jianxin Feng and Chengzheng Men



6659

Recent progress on the use of graphene-based nanomaterials in perovskite solar cells

Zohreh Niazi, Anders Hagfeldt and Elaheh K. Goharshadi*



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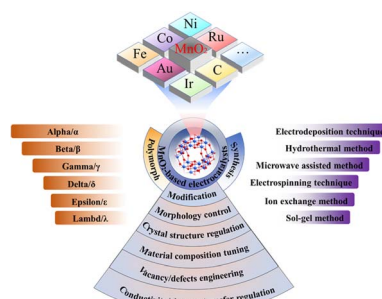


REVIEWS

6688

Modification of micro/nanoscaled manganese dioxide-based materials and their electrocatalytic applications toward oxygen evolution reaction

Gaihua He* and Ye Liao*



6747

Functional metal–organic frameworks as adsorbents used for water decontamination: design strategies and applications

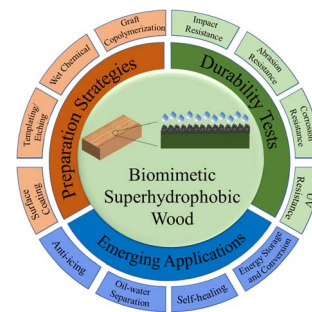
Gege Wu, Jiping Ma,* Shuang Li, Jinhua Li, Xiaoyan Wang, Zhiyang Zhang and Lingxin Chen*



6772

Recent development and emerging applications of robust biomimetic superhydrophobic wood

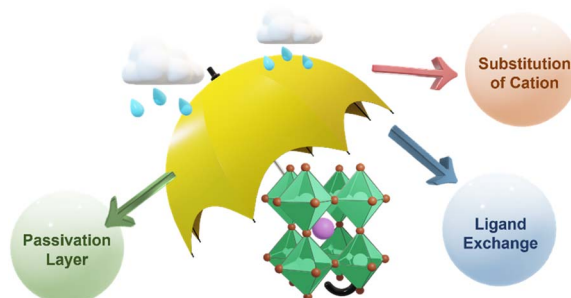
Xiaojun Li, Likun Gao,* Min Wang, Dong Lv, Peiyao He, Yanjun Xie, Xianxu Zhan,* Jian Li and Zhiqun Lin*



6796

Various approaches to synthesize water-stable halide PeNCs

Avijit Das, Arup Ghorai, Kundan Saha, Arka Chatterjee and Unyong Jeong*



COMMUNICATION

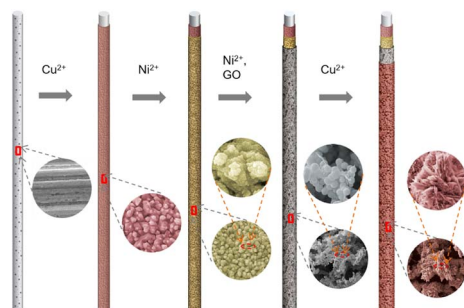
6814

Main-group indium single-atom catalysts for electrocatalytic NO reduction to NH_3

Kai Chen, Nana Zhang, Fuzhou Wang, Jilong Kang and Ke Chu*

PAPERS

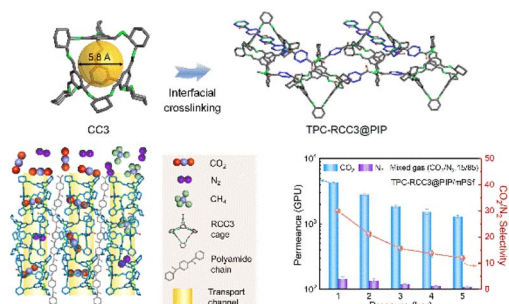
6820



Energy-dense wire-like supercapacitors based on scalable three-dimensional porous metal-graphene oxide skeleton electrodes

Ruitao Zhou and Kwok Ho Lam*

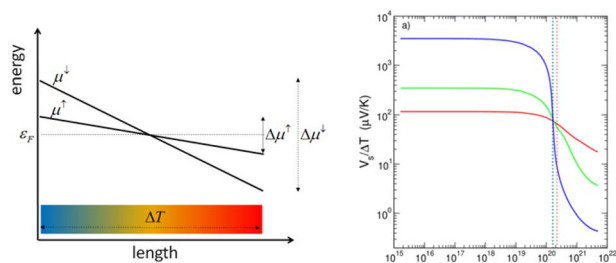
6831



A highly permeable porous organic cage composite membrane for gas separation

Zhihao Jiang, Ying Wang, Menglong Sheng, Zhiyuan Zha, Jixiao Wang, Zhi Wang and Song Zhao*

6842

Giant spin-dependent Seebeck effect from fully spin-polarized carriers in n-doped EuTiO_3 : a prototype material for spin-caloritronic applications

P. Wadhwa, A. Bosin and A. Filippetti*

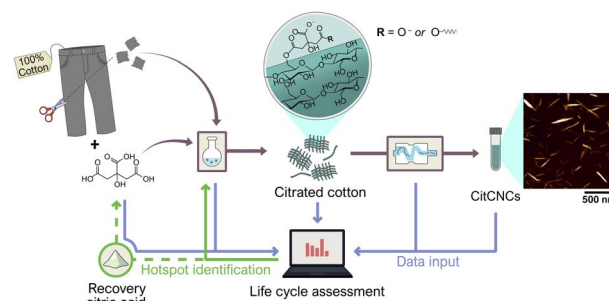


PAPERS

6854

Citrated cellulose nanocrystals from post-consumer cotton textiles

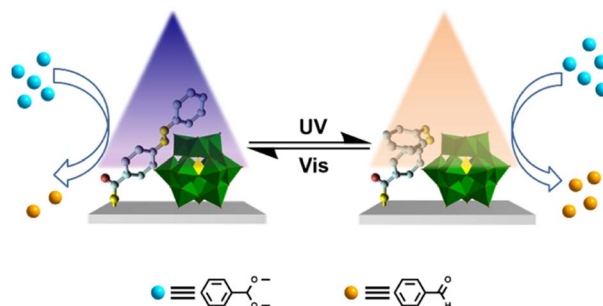
Maria-Ximena Ruiz-Caldas, Varvara Apostolopoulou-Kalkavoura, Anna-Karin Hellström, Jutta Hildenbrand, Mikael Larsson, Aleksander Jaworski, Joseph S. M. Samec, Panu Lahtinen, Tekla Tammelin and Aji P. Mathew*



6869

Photo-switchable phosphotungstic acid active sites in metal–organic frameworks for a tailorable deacetalization reaction

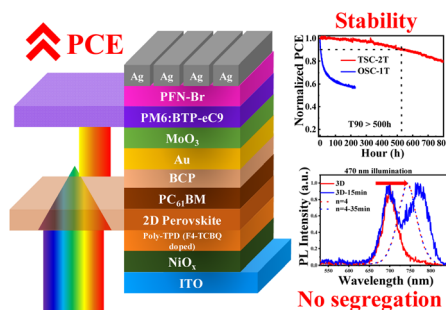
Hui Wen, Guoliang Liu, Shi-Chao Qi, Chen Gu, Tao Yang, Peng Tan and Lin-Bing Sun*



6877

Phase-segregation free quasi-2D perovskite/organic tandem solar cells with low V_{oc} loss and efficiency beyond 21%

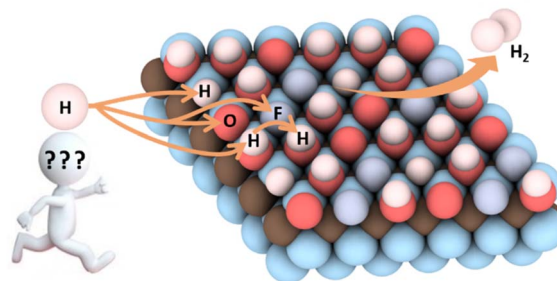
Haotian Wu, Tianyi Chen, Yaokai Li, Shitao Guan, Lin Zhang, Tingjun Chen, Yang Liu, Yizheng Jin, Lijian Zuo, Weifei Fu,* Gang Wu* and Hongzheng Chen*



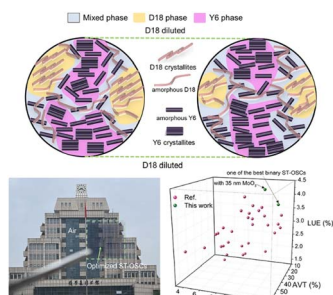
6886

Effect of terminations on the hydrogen evolution reaction mechanism on Ti_3C_2 MXene

Ling Meng, Li-Kai Yan,* Francesc Viñes* and Francesc Illas



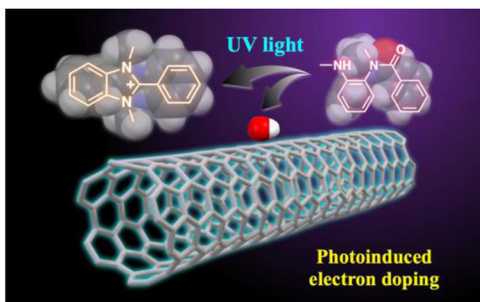
6901



A paradigm study of polymer donor diluted bulk heterojunction films for application in semitransparent organic photovoltaics

Zhenyu Chen, Wei Ma and Han Yan*

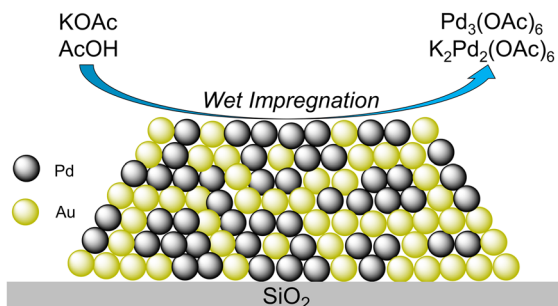
6909



Photoinduced electron doping of single-walled carbon nanotubes based on carboxamide photochemical reactions

Naoki Tanaka, Taiki Ishii, Itsuki Yamaguchi, Aoi Hamasuna and Tsuyohiko Fujigaya*

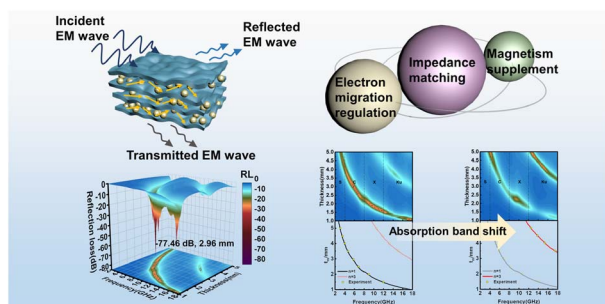
6918



Impregnation of KOAc on PdAu/SiO₂ causes Pd-acetate formation and metal restructuring

Hunter P. Jacobs, Welman C. Elias, Kimberly N. Heck, David P. Dean, Justin J. Dodson, Wenqing Zhang, Jacob H. Arredondo, Christian J. Breckner, Kiheon Hong, Christopher R. Botello, Laiyuan Chen, Sean G. Mueller, Steven R. Alexander, Jeffrey T. Miller and Michael S. Wong*

6934



Regulated electron migration in sandwich-like m-Ti₃C₂/Fe₃O₄ composites derived from electrostatic assembly boosted electromagnetic wave absorption

Yuxiao Yang, Jianyun Zhao, Jiuhong Wang, Yinhuan Li, Wei Yu* and Shujiang Ding

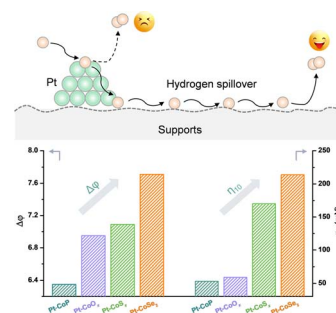


PAPERS

6945

Boosting hydrogen evolution through hydrogen spillover promoted by Co-based support effect

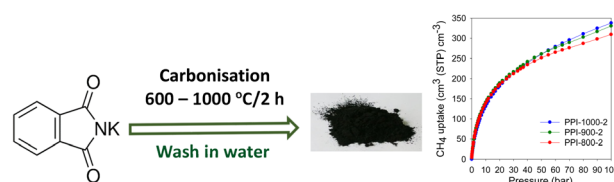
Ya-Nan Zhou, Xin Liu, Cheng-Jie Yu, Bin Dong,*
Guan-Qun Han, Hai-Jun Liu, Ren-Qing Lv, Bin Liu
and Yong-Ming Chai*



6952

Direct synthesis of organic salt-derived porous carbons for enhanced CO₂ and methane storage

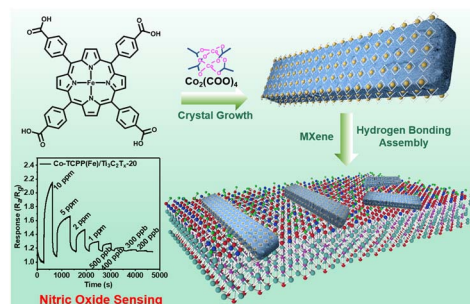
Ibtisam Alali and Robert Mokaya*



6966

Building porphyrin-based MOFs on MXenes for ppb-level NO sensing

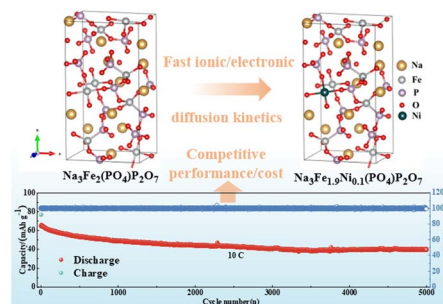
Yanwei Chang, Minyi Chen, Zijing Fu, Ruofei Lu,
Yixun Gao, Fengjia Chen, Hao Li, Nicolaas Frans de Rooij,
Yi-Kuen Lee, Yao Wang* and Guofu Zhou



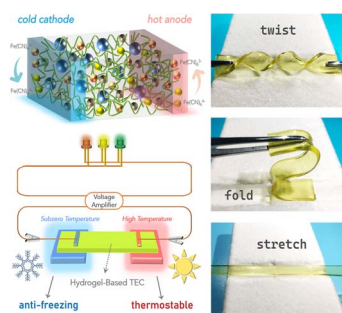
6978

Unlocking fast and highly reversible sodium storage in Fe-based mixed polyanion cathodes for low-cost and high-performance sodium-ion batteries

Xu Wang, Huangxu Li, Wei Zhang, Xiaochen Ge, Liang He,
Liuyun Zhang, Shihao Li, Naifeng Wen, Juanlang Guo,
Yanqing Lai, Simin Li and Zhian Zhang*



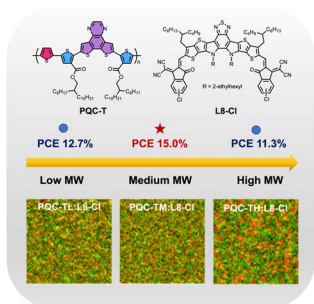
6986



Aqueous eutectic hydrogel electrolytes enable flexible thermocells with a wide operating temperature range

Peng Peng, Zhao Li, Daibin Xie, Kaihua Zhu, Chunyu Du, Lirong Liang, Zhuoxin Liu* and Guangming Chen*

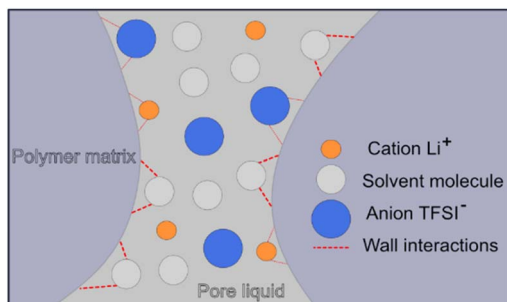
6997



Aggregation state tuning via controlling molecular weights of D-A₁-A₂ type polymer donors for efficient organic photovoltaics

Shanlu Wang, Tianyi Chen, Shuixing Li,* Lei Ye, Yuang Fu, Xinhui Lu, Haiming Zhu, Lijian Zuo, Minmin Shi and Hongzheng Chen*

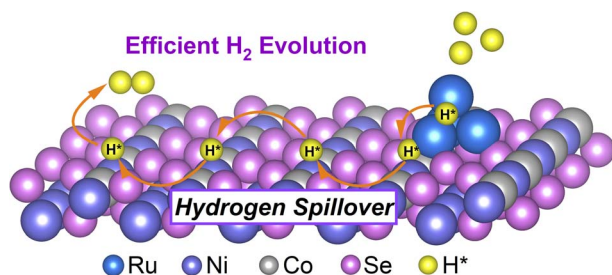
7006



Hybrid polymer-liquid lithium ion electrolytes: effect of porosity on the ionic and molecular mobility

Martina Cattaruzza, Yuan Fang, István Furó, Göran Lindbergh, Fang Liu and Mats Johansson*

7016



Fabrication of Ru nanoclusters on Co-doped NiSe nanorods with efficient electrocatalytic activity towards alkaline hydrogen evolution via hydrogen spillover effect

Ce Mu, Hongqiang Xin, Qiaomei Luo, Yan Li* and Fei Ma*



PAPERS

7025

Tailoring electrochemical CO₂ reduction via substrate-induced gas diffusion

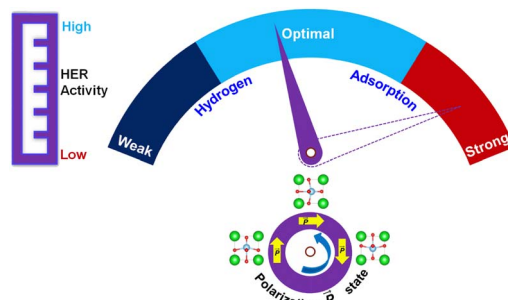
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7034

Tunable hydrogen evolution activity by modulating polarization states of ferroelectric BaTiO₃

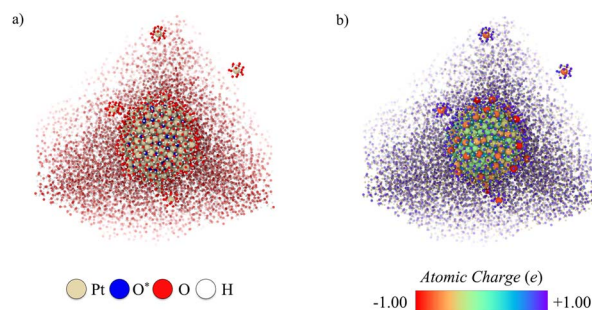
Haifa Qiu, Tong Yang, Jun Zhou, Ke Yang, Yiran Ying, Keda Ding, Ming Yang* and Haitao Huang*



7043

Atomic-scale modeling of the dissolution of oxidized platinum nanoparticles in an explicit water environment

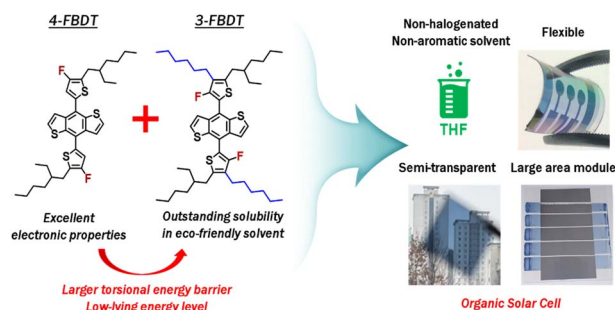
Robert E. Slapikas, Ismaila Dabo and Susan B. Sinnott*



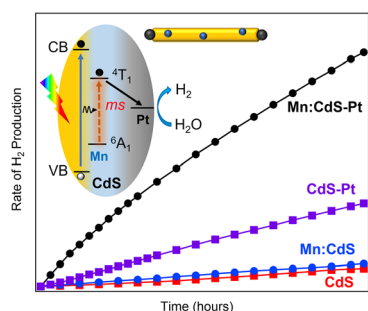
7053

A newly designed benzodithiophene building block: tuning of the torsional barrier for non-halogenated and non-aromatic solvent-processible photovoltaic polymers

Hye Won Cho, Sang Young Jeong, Ziang Wu, Hyojin Lim, Won-Woo Park, Woojin Lee, Jonnadula Venkata Suman Krishna, Oh-Hoon Kwon, Jin Young Kim* and Han Young Woo*



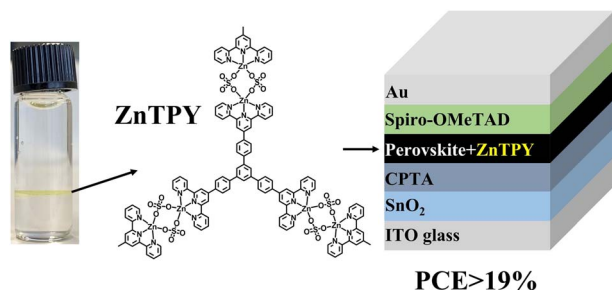
7066



Facilitated electron transfer by Mn dopants in 1-dimensional CdS nanorods for enhanced photocatalytic hydrogen generation

Walker MacSwain, Hanjie Lin, Zhi-Jun Li, Shuya Li, Chun Chu, Lacie Dube, Ou Chen, Gyu Leem and Weiwei Zheng*

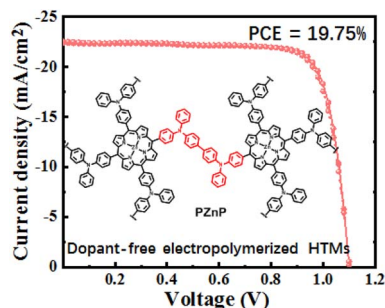
7077



Terpyridine-zinc(II) coordination nanosheets as modulators of perovskite crystallization to enhance solar cell efficiency

Ying-Chiao Wang, Chun-Hao Chiang, Chun-Jen Su, Je-Wei Chang, Chi-Ying Lin, Chia-Chun Wei, Shao-Ku Huang, Hiroaki Maeda, Wen-Bin Jian, U-Ser Jeng,* Kazuhito Tsukagoshi,* Chun-Wei Chen* and Hiroshi Nishihara*

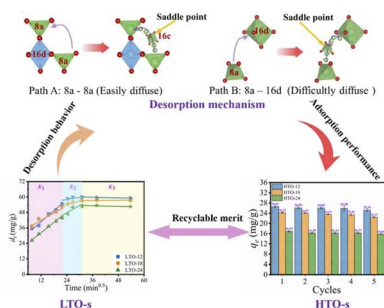
7085



Thermally stable inverted perovskite solar cells using an electropolymerized Zn-porphyrin film as a dopant-free hole-transporting layer

Yangjie Lan, Yu-Duan Wang, Zhong-Rui Lan, Yang Wang, Bin-Bin Cui,* Jiang-Yang Shao* and Yu-Wu Zhong*

7094



Unraveling the Li⁺ desorption behavior and mechanism of Li₄Ti₅O₁₂ with different facets to enhance lithium extraction

Bing Zhao, Yingjun Qiao, Zhiqiang Qian, Wenfei Wei,* Jun Li, Zhijian Wu and Zhong Liu*

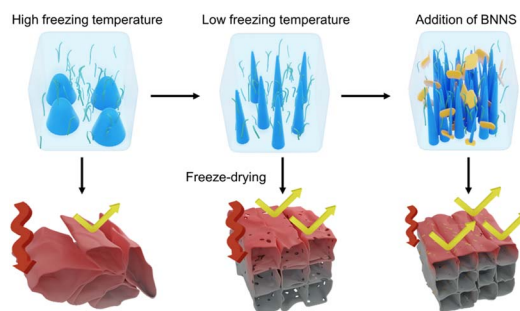


PAPERS

7105

Engineering anisotropic structures of thermally insulating aerogels with high solar reflectance for energy-efficient cooling applications

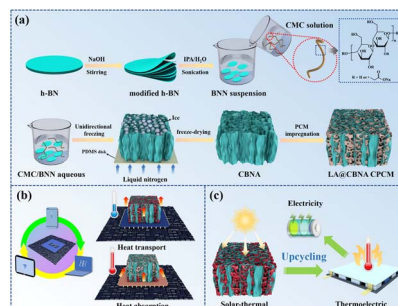
Eunyoung Kim, Kit-Ying Chan, Jie Yang, Harun Venkatesan, Miracle Hope Adegun, Heng Zhang, Jeng-Hun Lee, Xi Shen* and Jang-Kyo Kim*



7115

A green, robust, and versatile BN nanosheet unidirectional aerogel encapsulated phase change material for effective thermal management of electronics and solar-thermoelectric conversion

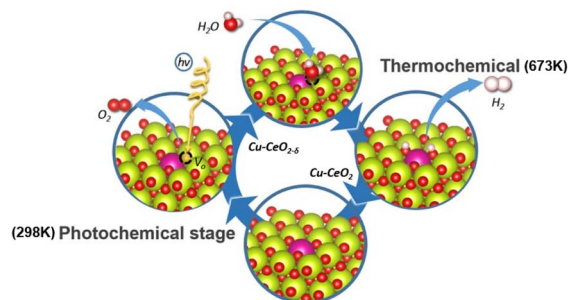
Linda Lv, Hong Ai, Taorui Chen, Wanting Zhu, Yi Guo, Lijie Dong* and Shaokun Song*



7128

The water splitting cycle for hydrogen production at photo-induced oxygen vacancies using solar energy: experiments and DFT calculation on pure and metal-doped CeO_2

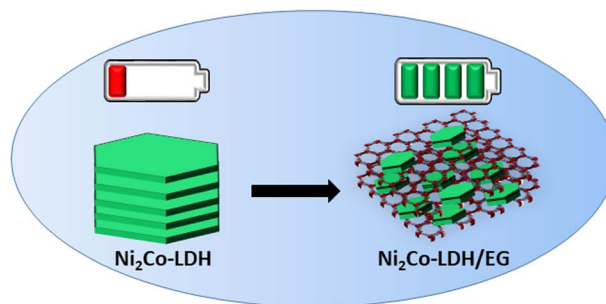
Rui Li, Chang Wen,* Kai Yan, Tianyu Liu, Bohan Zhang, Mingtao Xu and Zijian Zhou



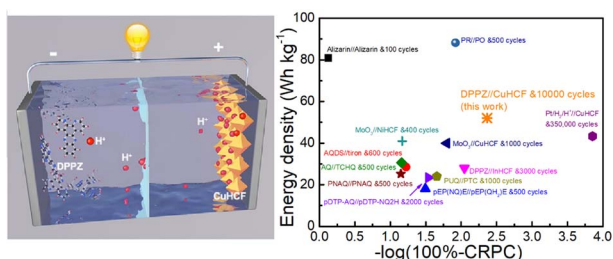
7142

Enhanced charge storage capacity and high rate capabilities of Ni_2Co -layered double hydroxides/expanded-graphite composites as anodes for Li-ion batteries

Ramesh Chandra Sahoo, Sreejesh Moolayadukkam, Jun Ho Seok, Sang Uck Lee* and H. S. S. Ramakrishna Matte*



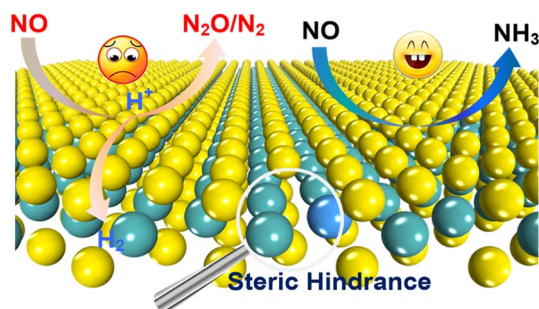
7152



A rechargeable aqueous phenazine-Prussian blue proton battery with long cycle life

Xiaoqing Zhang, Xin Zhang, Yao Miao, Qinghong Huang, Zhidong Chen, Dengfeng Guo, Juan Xu,^{*} Yong-Miao Shen and Jianyu Cao^{*}

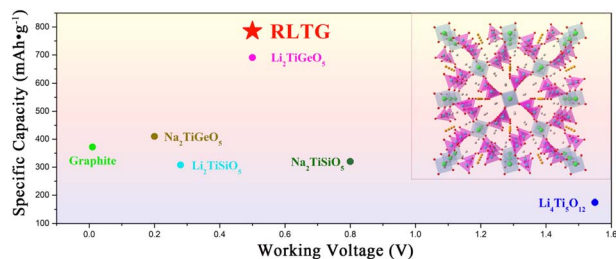
7159



Using ternary steric hindrance synergy of a defective MoS₂ monolayer to manipulate the electrocatalytic mechanism toward nitric oxide reduction: a first-principles and machine learning study

Lei Yang, Jiake Fan and Weihua Zhu^{*}

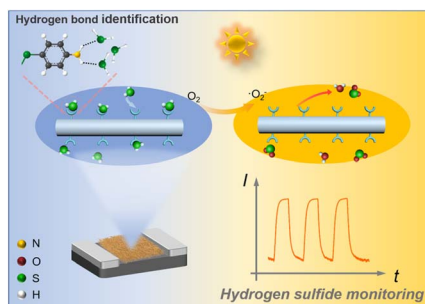
7170



Rb₄Li₂TiOGe₄O₁₂: a novel high-performance titanyl germanate anode for Li-ion batteries

Chuan Tang, Siliang Chang, Qian Wu,^{*} Lei Kang, Kai Feng,^{*} Xianghe Meng, Shengqi Chu, Hongwei Huang and Mingjun Xia^{*}

7179



Surface fully functionalized metal chalcogenide nanowires for highly sensitive H₂S sensing

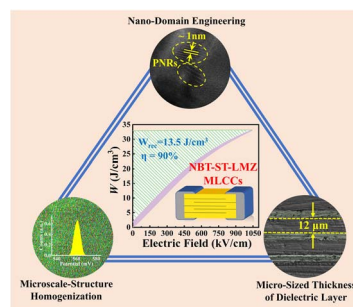
Ying-Xue Jin, Jie Chen, Yong-Jun Chen, Wei-Hua Deng, Xiao-Liang Ye, Guan-E Wang^{*} and Gang Xu^{*}



7184

High-performance energy-storage ferroelectric multilayer ceramic capacitors *via* nano-micro engineering

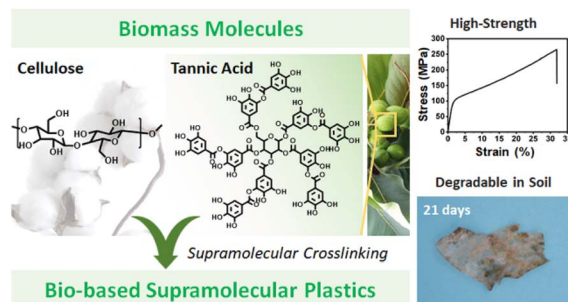
Ziyue Ma, Yong Li,* Ye Zhao, Ningning Sun, Chunxiao Lu, Pei Han, Dawei Wang,* Yanhua Hu, Xiaojie Lou and Xihong Hao*



7193

Highly tough, degradable, and water-resistant bio-based supramolecular plastics comprised of cellulose and tannic acid

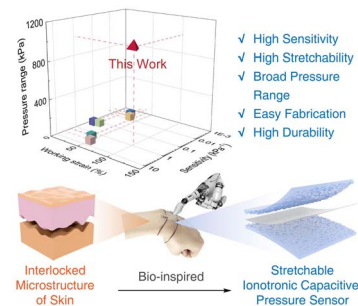
Haoxiang Sun, Xu Fang, Youliang Zhu, Zhuochen Yu, Xingyuan Lu and Junqi Sun*



7201

Highly stretchable ionotronic pressure sensors with broad response range enabled by microstructured ionogel electrodes

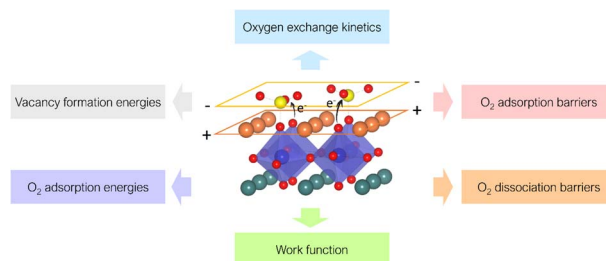
Zhenkai Huang, Yutong Chen, Jianping Peng, Tianrui Huang, Faqi Hu, Xiang Liu, Liguo Xu and Kan Yue*



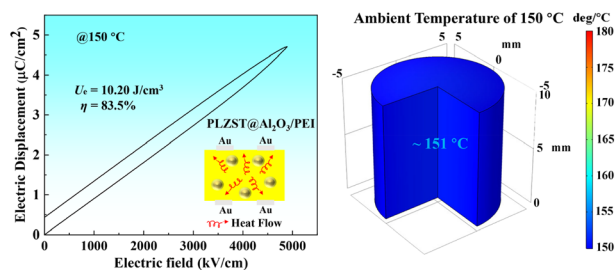
7213

Electronic and ionic effects of sulphur and other acidic adsorbates on the surface of an SOFC cathode material

Matthäus Siebenhofer,* Andreas Nenning, George E. Wilson, John A. Kilner, Christoph Rameshan, Markus Kubicek, Jürgen Fleig and Peter Blaha



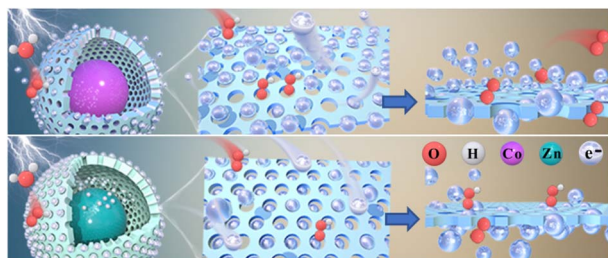
7227



Ultra-superior high-temperature energy storage properties in polymer nanocomposites via rational design of core-shell structured inorganic antiferroelectric fillers

Zhenhao Fan, Shuaibing Gao, Yunfei Chang,*
Dawei Wang, Xin Zhang, Haitao Huang,* Yunbin He*
and Qingfeng Zhang*

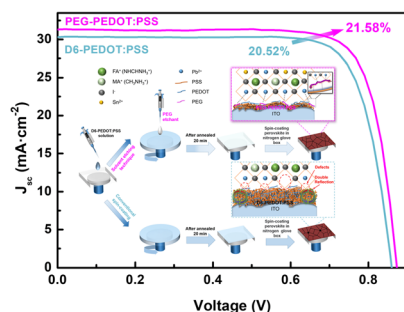
7239



Ligand-based modulation of the electronic structure at metal nodes in MOFs to promote the oxygen evolution reaction

Hao Wang, Mingzheng Gu, Xiaomin Huang, An Gao,
Xudong Liu, Ping Sun and Xiaojun Zhang*

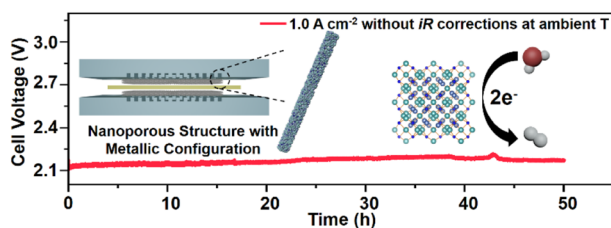
7246



Fabrication of an ultrathin PEG-modified PEDOT:PSS HTL for high-efficiency Sn-Pb perovskite solar cells by an eco-friendly solvent etching technique

Pengju Guo, Jun Dong, Cunyun Xu, Yanqing Yao,
Jiayu You, Hongyu Bian, Wenqi Zeng, Guangdong Zhou,
Xiaofeng He, Meng Wang, Xianju Zhou, Min Wang*
and Qunliang Song*

7256



Rational nitrogen alloying in nickel-molybdenum nitride can mediate efficient and durable alkaline hydrogen evolution

Jia Yue Zhao, Zhen Xin Lou, Liang Yao Xue, Yeliang Ding,
Xiaoxia Li, Xuefeng Wu, Yuanwei Liu, Hai Yang Yuan, Hai
Feng Wang, Peng Fei Liu,* Sheng Dai* and Hua Gui Yang*

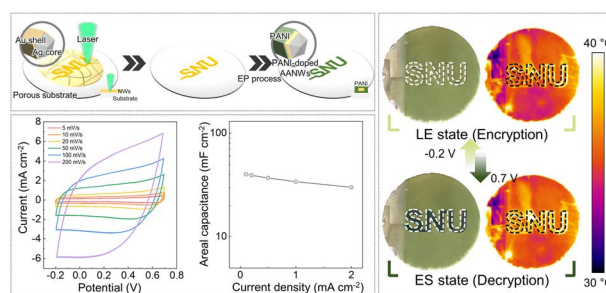


PAPERS

7264

An Ag–Au-PANI core–shell nanowire network for visible-to-infrared data encryption and supercapacitor applications

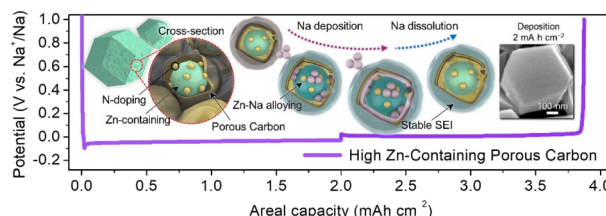
Yeongju Jung, Kyung Rok Pyun, JinKi Min, Hyeokjun Yoon, Minjae Lee, Byung-Wook Kim, Jinwoo Lee* and Seung Hwan Ko*



7276

Superior metal storage behavior of Zn-containing porous carbon nanostructures for Na and Li metal batteries

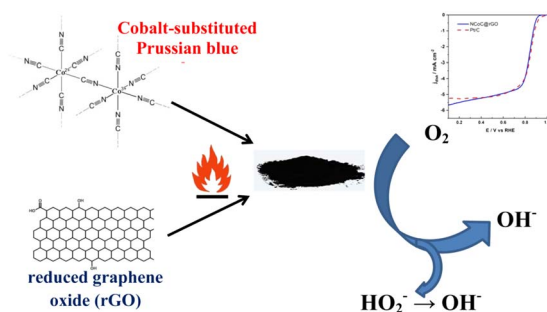
Kyungbae Kim, Seunghwan Jeon, Han-Seul Kim, Hyungeun Seo, Hyun-seung Kim, Marca M. Doeff, Sang-Gil Woo* and Jae-Hun Kim*



7286

Pyrolyzed cobalt hexacyanocobaltate dispersed on reduced-graphene-oxide as an electrocatalyst of the oxygen reduction reaction in an alkaline medium

B. Zakrzewska, A. Jabłońska, L. Adamczyk, B. Dembińska, A. Kostuch, M. Strawski, I. A. Rutkowska, P. J. Kulesza, M. Marcinek, J. A. Cox and K. Miecznikowski*



7299

Cation deficiency enables reversal of dopant segregation at perovskite oxide surfaces under anodic potential

Dongha Kim, Adrian Hunt, Iradwikanari Waluyo and Bilge Yildiz*

