

Journal of Materials Chemistry A

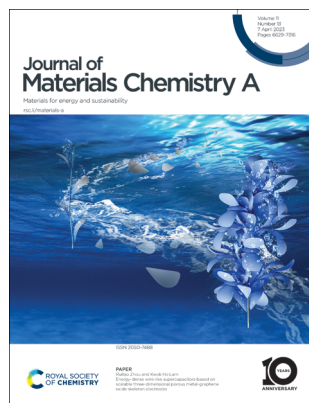
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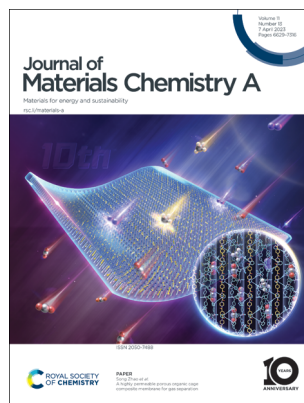
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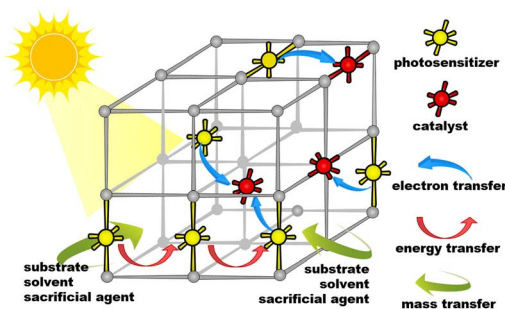
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Impacts of host–guest assembly on the photophysical and photocatalytic properties of heterogenized molecular photosensitizer and catalysts

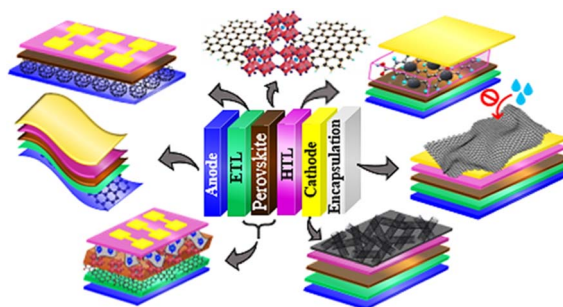
Jiaying Shi,* Zhifang Su, Xuan Li, Jianxin Feng and Chengzheng Men



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Zohreh Niazi, Anders Hagfeldt and Elaheh K. Goharshadi*



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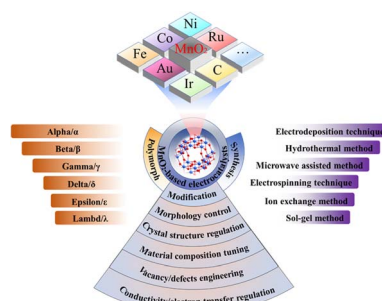
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Modification of micro/nanoscaled manganese dioxide-based materials and their electrocatalytic applications toward oxygen evolution reaction

Gaihua He* and Ye Liao*



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

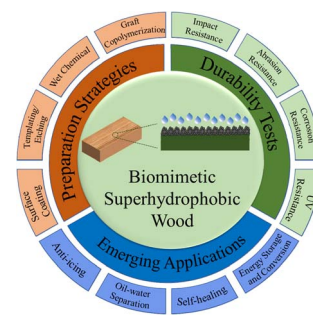
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Recent development and emerging applications of robust biomimetic superhydrophobic wood

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



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Various approaches to synthesize water-stable halide PeNCs

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



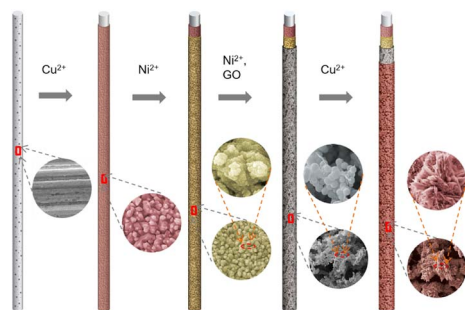
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Main-group indium single-atom catalysts for electrocatalytic NO reduction to NH₃

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

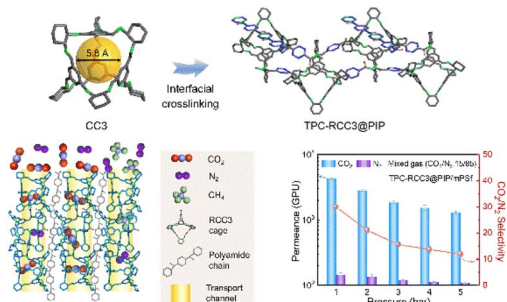
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Energy-dense wire-like supercapacitors based on scalable three-dimensional porous metal-graphene oxide skeleton electrodes

Ruitao Zhou and Kwok Ho Lam*

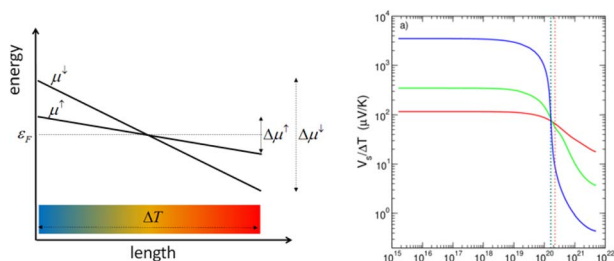
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A highly permeable porous organic cage composite membrane for gas separation

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

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Giant spin-dependent Seebeck effect from fully spin-polarized carriers in n-doped EuTiO₃: a prototype material for spin-caloritronic applications

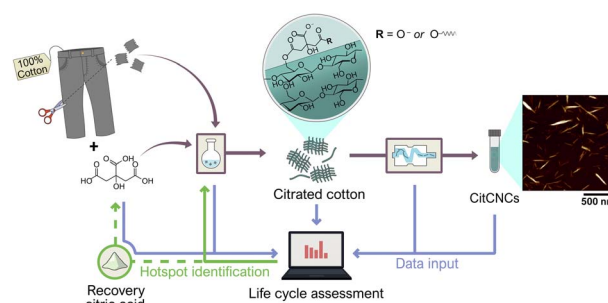
P. Wadhwa, A. Bosin and A. Filippetti*



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Citrated cellulose nanocrystals from post-consumer cotton textiles

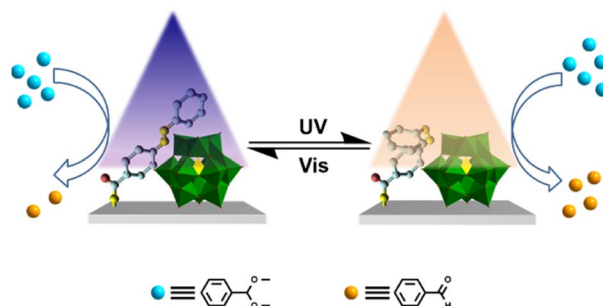
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Photo-switchable phosphotungstic acid active sites in metal-organic frameworks for a tailorable deacetalization reaction

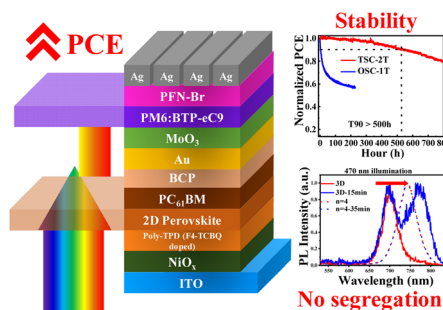
Hui Wen, Guoliang Liu, Shi-Chao Qi, Chen Gu, Tao Yang, Peng Tan and Lin-Bing Sun*



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

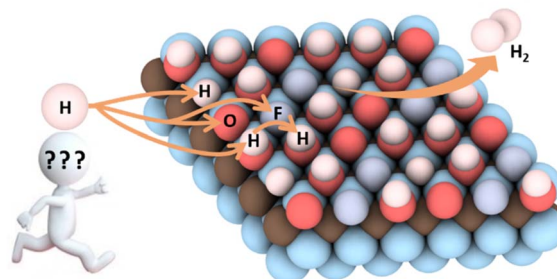
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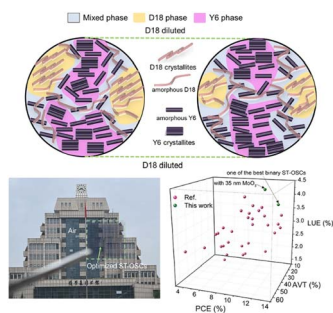
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Effect of terminations on the hydrogen evolution reaction mechanism on Ti_3C_2 MXene

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



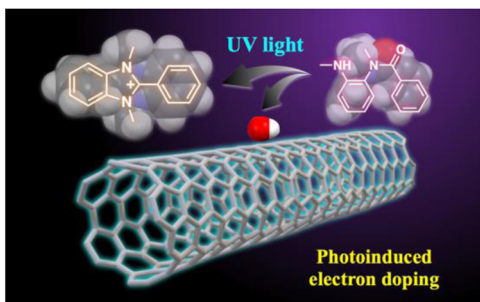
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A paradigm study of polymer donor diluted bulk heterojunction films for application in semitransparent organic photovoltaics

Zhenyu Chen, Wei Ma and Han Yan*

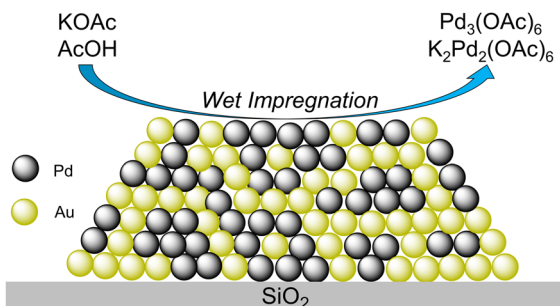
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Photoinduced electron doping of single-walled carbon nanotubes based on carboxamide photochemical reactions

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

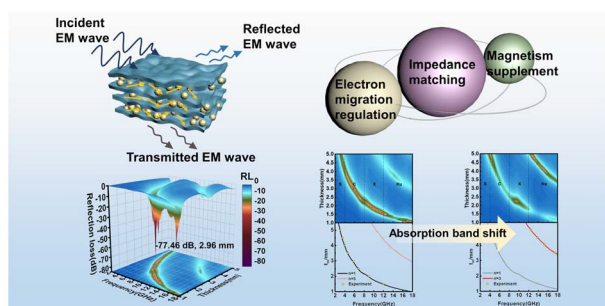
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Impregnation of KOAc on PdAu/SiO₂ causes Pd-acetate formation and metal restructuring

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

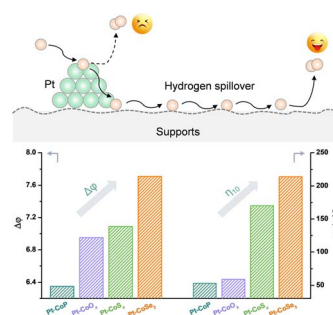
Yuxiao Yang, Jianyun Zhao, JiuHong Wang, Yinhuan Li, Wei Yu* and Shujiang Ding



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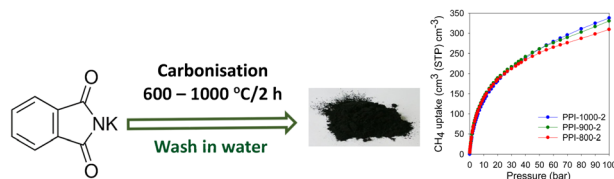
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Guan-Qun Han, Hai-Jun Liu, Ren-Qing Lv, Bin Liu
and Yong-Ming Chai*



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

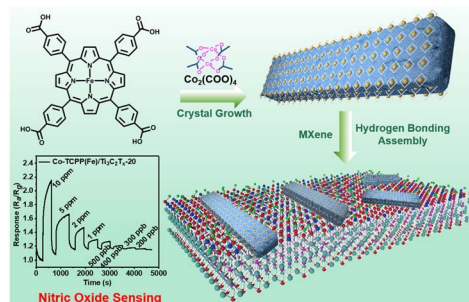
Ibtisam Alali and Robert Mokaya*



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

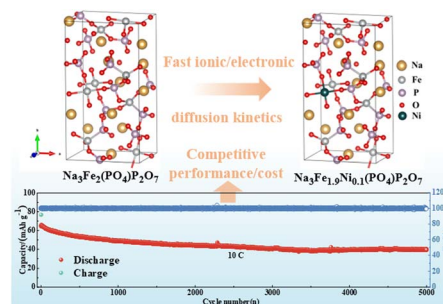
Yanwei Chang, Minyi Chen, Zijing Fu, Ruofei Lu,
Yixun Gao, Fengjia Chen, Hao Li, Nicolaas Frans de Rooij,
Yi-Kuen Lee, Yao Wang* and Guofu Zhou



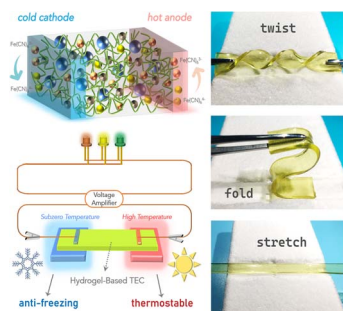
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Unlocking fast and highly reversible sodium storage in Fe-based mixed polyanion cathodes for low-cost and high-performance sodium-ion batteries

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*



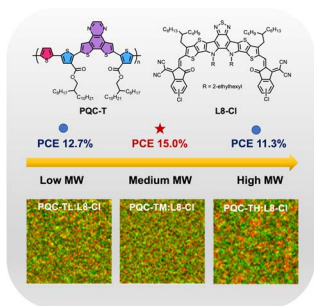
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Aqueous eutectic hydrogel electrolytes enable flexible thermocells with a wide operating temperature range

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

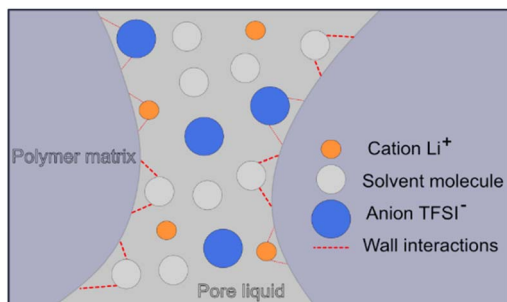
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Aggregation state tuning *via* controlling molecular weights of D–A₁–A₂ type polymer donors for efficient organic photovoltaics

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

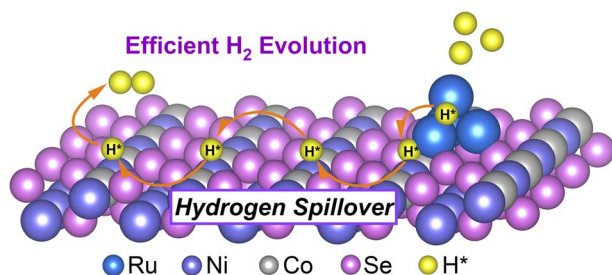
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Hybrid polymer–liquid lithium ion electrolytes: effect of porosity on the ionic and molecular mobility

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

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

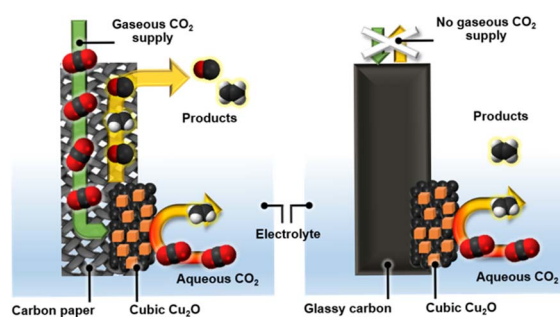
Ce Mu, Hongqiang Xin, Qiaomei Luo, Yan Li* and Fei Ma*



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Tailoring electrochemical CO₂ reduction via substrate-induced gas diffusion

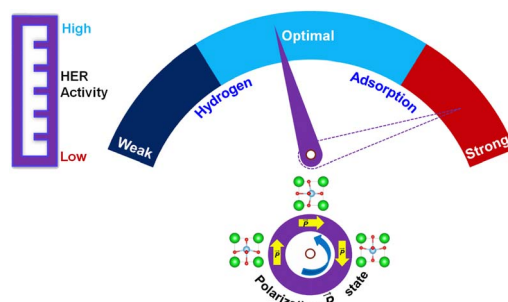
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Tunable hydrogen evolution activity by modulating polarization states of ferroelectric BaTiO₃

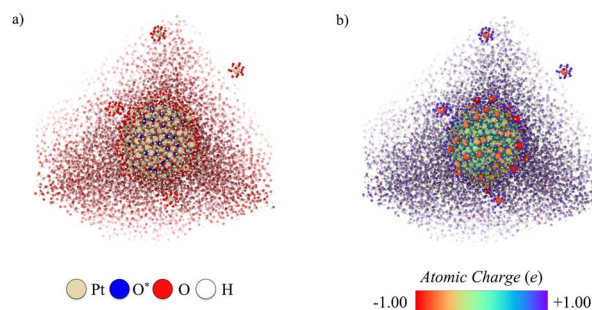
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Atomic-scale modeling of the dissolution of oxidized platinum nanoparticles in an explicit water environment

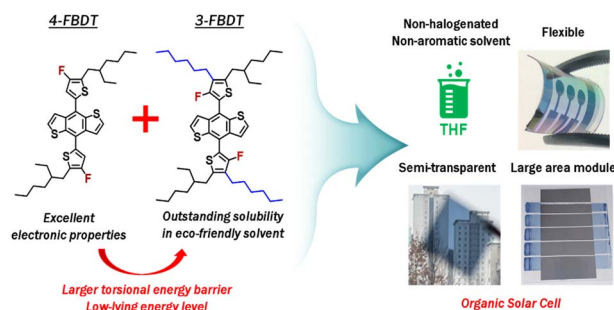
Robert E. Slapikas, Ismaila Dabo and Susan B. Sinnott*



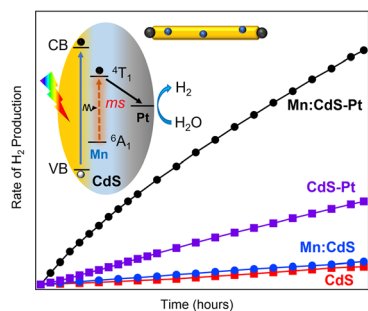
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A newly designed benzodithiophene building block: tuning of the torsional barrier for non-halogenated and non-aromatic solvent-processible photovoltaic polymers

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*



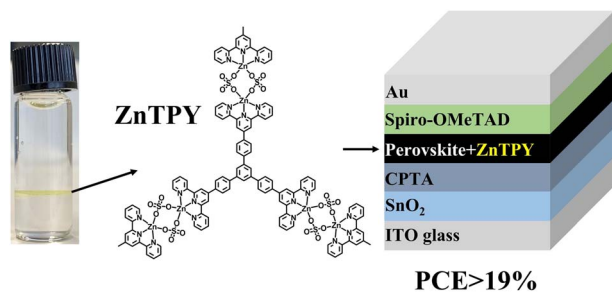
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Facilitated electron transfer by Mn dopants in 1-dimensional CdS nanorods for enhanced photocatalytic hydrogen generation

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

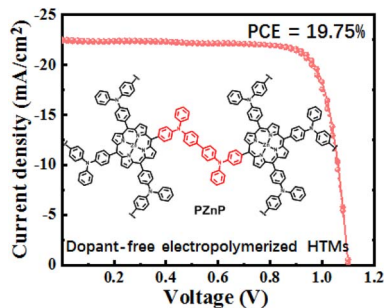
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Terpyridine-zinc(II) coordination nanosheets as modulators of perovskite crystallization to enhance solar cell efficiency

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*

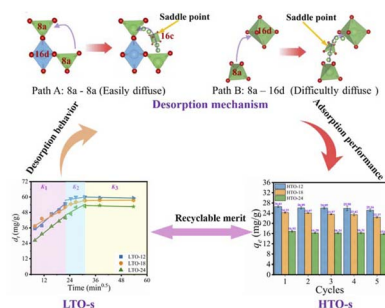
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Thermally stable inverted perovskite solar cells using an electropolymerized Zn-porphyrin film as a dopant-free hole-transporting layer

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

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

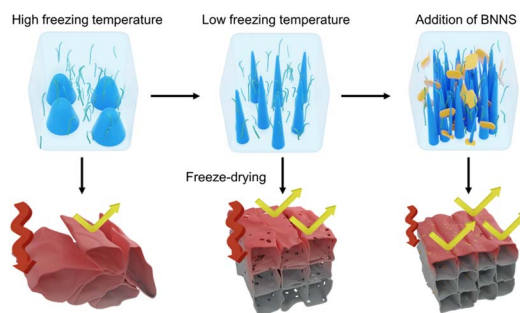
Bing Zhao, Yingjun Qiao, Zhiqiang Qian, Wenfei Wei,* Jun Li, Zhijian Wu and Zhong Liu*



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

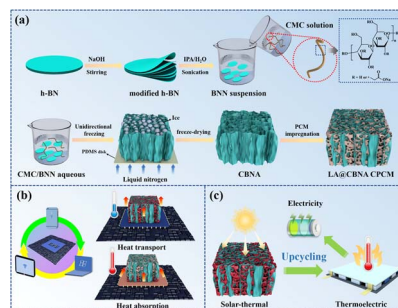
Eunyoung Kim, Kit-Ying Chan, Jie Yang, Harun Venkatesan, Miracle Hope Adegun, Heng Zhang, Jeng-Hun Lee, Xi Shen* and Jang-Kyo Kim*



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

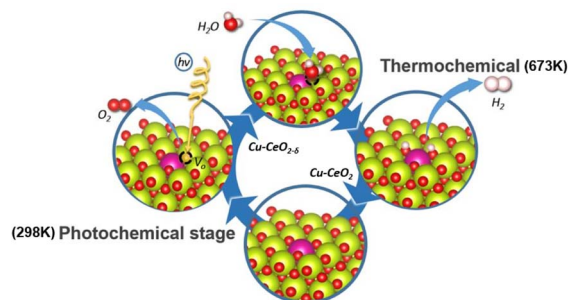
Linda Lv, Hong Ai, Taorui Chen, Wanting Zhu, Yi Guo, Lijie Dong* and Shaokun Song*



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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

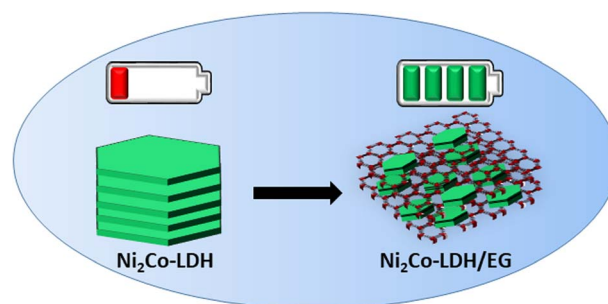
Rui Li, Chang Wen,* Kai Yan, Tianyu Liu, Bohan Zhang, Mingtao Xu and Zijian Zhou



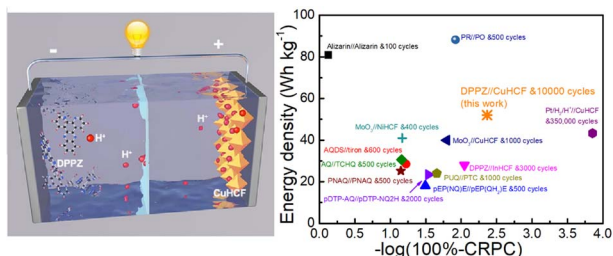
7142

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*



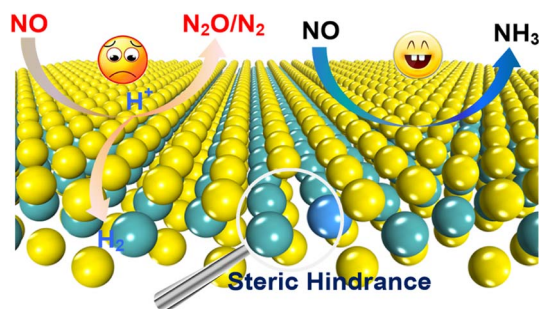
7152



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^{*}

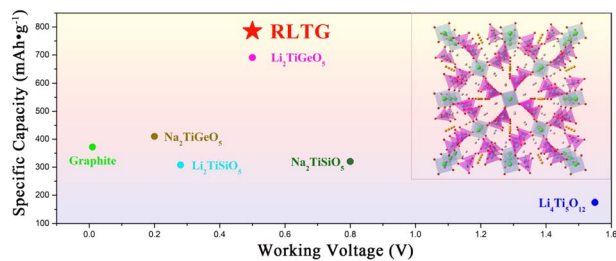
7159



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^{*}

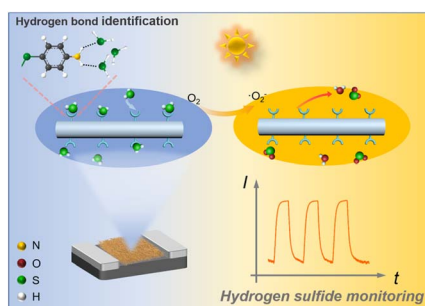
7170



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

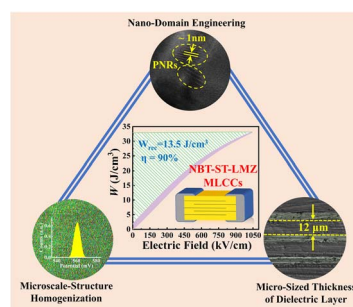
Ying-Xue Jin, Jie Chen, Yong-Jun Chen, Wei-Hua Deng, Xiao-Liang Ye, Guan-E Wang^{*} and Gang Xu^{*}



7184

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

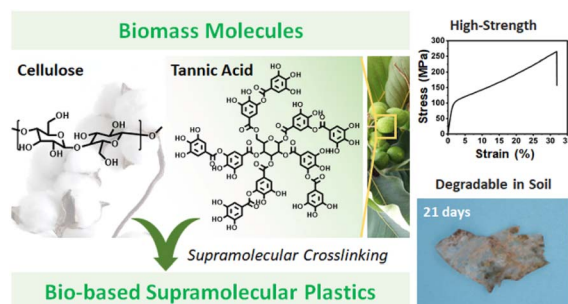
Ziyue Ma, Yong Li,* Ye Zhao, Ningning Sun, Chunxiao Lu, Pei Han, Dawei Wang,* Yanhua Hu, Xiaojie Lou and Xihong Hao*



7193

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

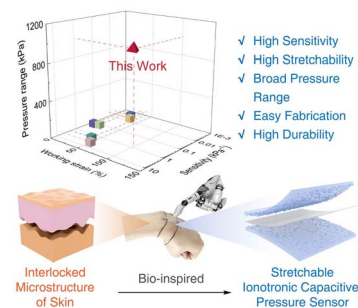
Haoxiang Sun, Xu Fang, Youliang Zhu, Zhuochen Yu, Xingyuan Lu and Junqi Sun*



7201

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

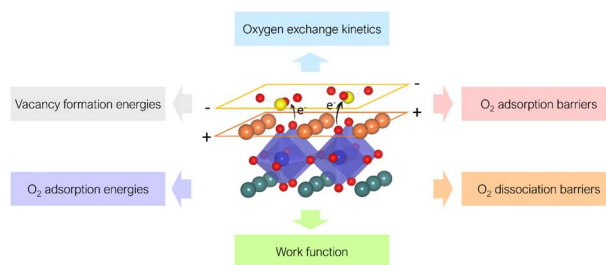
Zhenkai Huang, Yutong Chen, Jianping Peng, Tianrui Huang, Faqi Hu, Xiang Liu, Liguo Xu and Kan Yue*



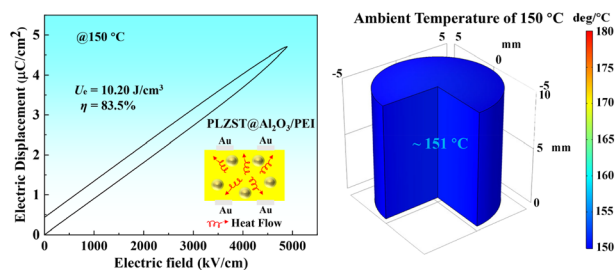
7213

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



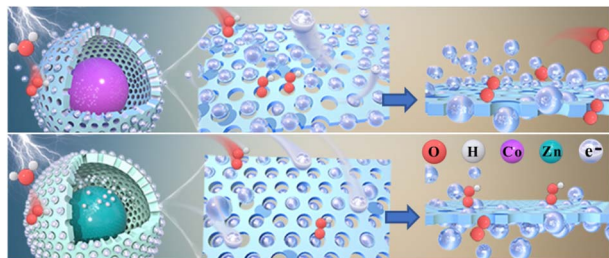
7227



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*

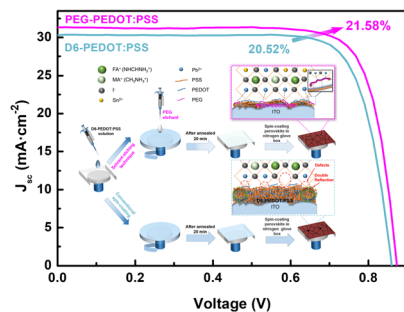
7239



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*

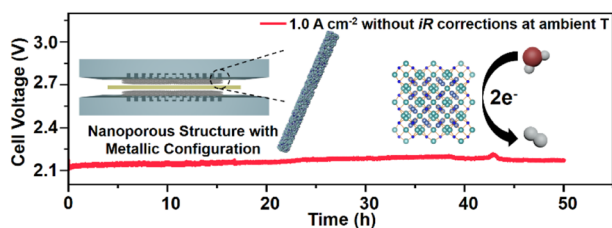
7246



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

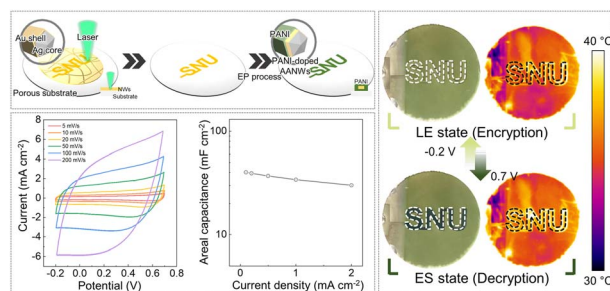
Jia Yue Zhao, Zhen Xin Lou, Liang Yao Xue, Yeliang Ding,
Xiaoxia Li, Xuefeng Wu, Yuanwei Liu, Hai Yang Yuan, Hai
Feng Wang, Peng Fei Liu,* Sheng Dai* and Hua Gui Yang*



7264

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

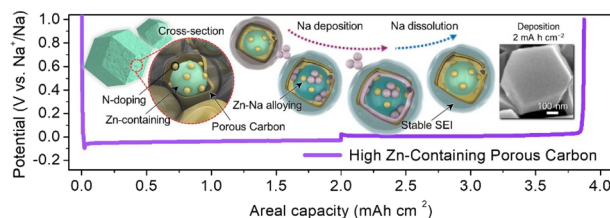
Yeongju Jung, Kyung Rok Pyun, JinKi Min, Hyeokjun Yoon, Minjae Lee, Byung-Wook Kim, Jinwoo Lee* and Seung Hwan Ko*



7276

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

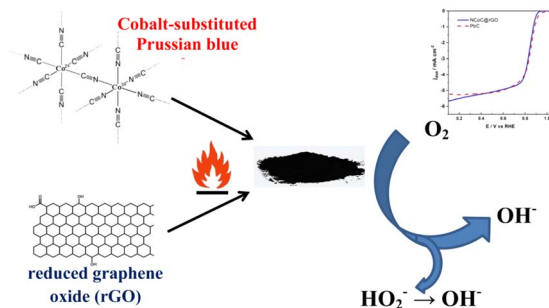
Kyungbae Kim, Seunghwan Jeon, Han-Seul Kim, Hyungeun Seo, Hyun-seung Kim, Marca M. Doeff, Sang-Gil Woo* and Jae-Hun Kim*



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*

