

IN THIS ISSUE

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Cover

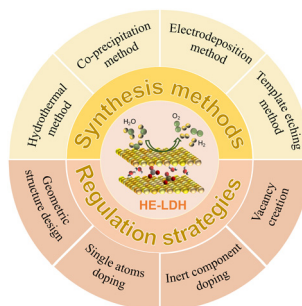
See Toshiki Tajima et al.,
pp. 7600–7603.
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Toshiki Tajima from
Chem. Commun.,
2025, 61, 7600.

HIGHLIGHTS

7532

High-entropy layered double hydroxide with advanced structural regulation for electrochemical water splitting

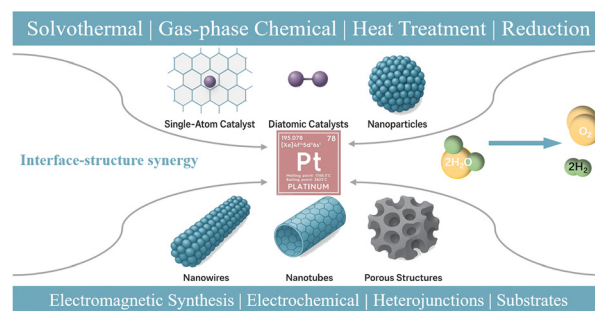
Wen Zhang, Xiyue Zhang, Yan Song, Fei Gao* and Yangping Zhang*



7543

Platinum compounds constructing interface structure strategies for electrolysis hydrogen production

Dezheng Guo, Qiwen Pan and Yuan Gao*



Environmental Science: Atmospheres

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Fundamental questions
Elemental answers

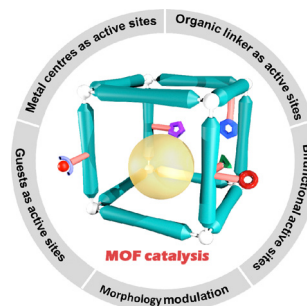


FEATURE ARTICLES

7563

Recent advances in metal–organic frameworks for catalysing organic transformation

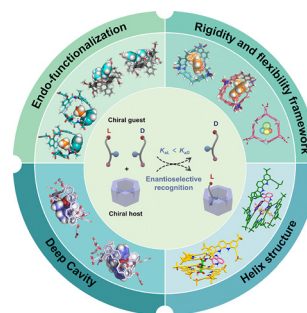
Yu-Mei Wang, Jia-Tong Lin, Guo-Hong Ning* and Dan Li



7573

Recent advances in chiral recognition using macrocyclic receptors

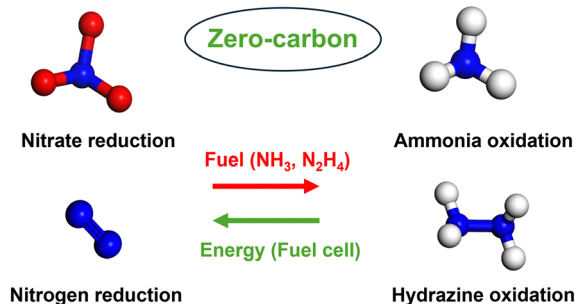
Xiaotong Liang, Wenting Liang, Wanhua Wu* and Cheng Yang*



7585

Electrocatalytic N–H bond transformations: a zero-carbon paradigm for sustainable energy storage and conversion

Kang Ji, Guixi Wang, Shiyu Wang, Shuyun Yao, Yingjie Ji, Bing-Jie Ni,* Zhiyu Yang* and Yi-Ming Yan*

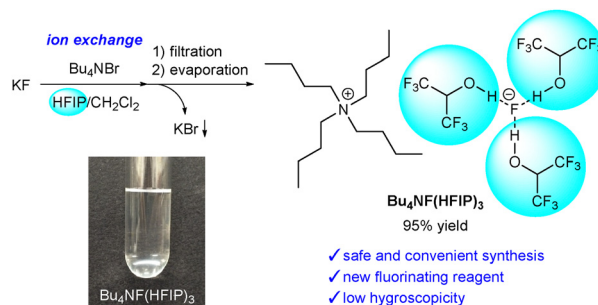


COMMUNICATIONS

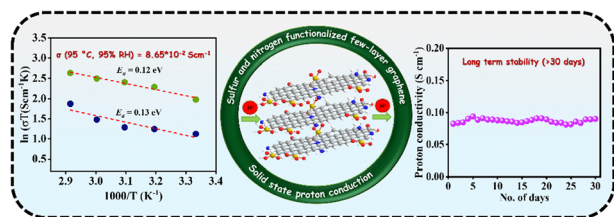
7600

Facile synthesis of $R_4NF(HFIP)_3$ complexes from KF and their application to electrochemical fluorination

Haruka Homma, Aika Mochizuki, Misaki Aketo, Nao Takahashi, Nobutaka Kitajima and Toshiki Tajima*



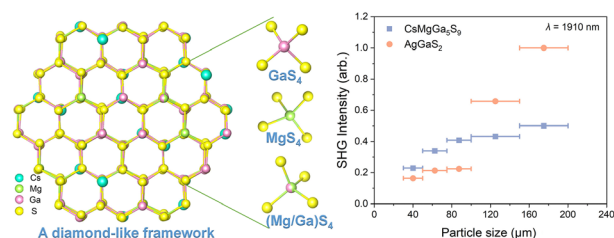
7604



Remarkable solid-state proton conduction in sulfur- and nitrogen-functionalized few-layer graphene

Sweety Gupta and Amit Paul*

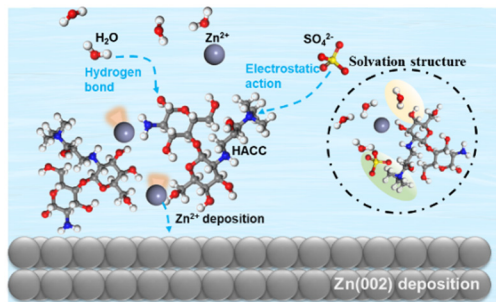
7608



CsMgGa₅S₉: a diamond-like network made of mixed tetrahedral units for excellent nonlinear optical properties

Yi-Bing Huang, Bin-Wen Liu* and Guo-Cong Guo*

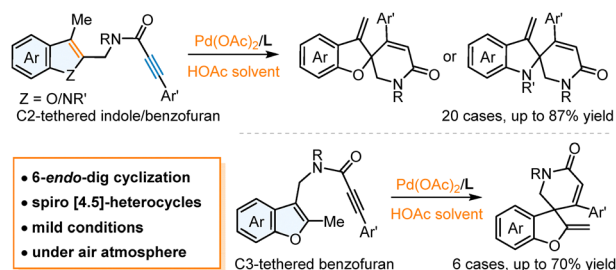
7612



Bio-derived chitosan additive enables anion anchoring and Zn(002) deposition for high-performance Zn anodes

Guanglu Jiang, Luoyuan Guo, Mingbo Shao, Najun Liu, Zhongchao Bai, Nana Wang,* Huili Peng* and Xiaolei Jiang*

7616



Dearomative 1,6-enyne cycloisomerization of alkyne-tethered benzofurans and indoles via a 6-endo-dig cyclization

Jin-Bo Lu, Yi-Fan Wang, Xue-Ting Xu, Bing-Xia Wang, Ren-Xiao Liang* and Yi-Xia Jia*

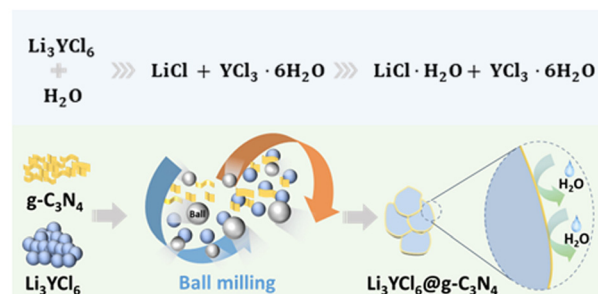


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7620

Enhancing the moisture stability of halide solid-state electrolytes *via* graphitic carbon nitride coating: a case study on Li_3YCl_6

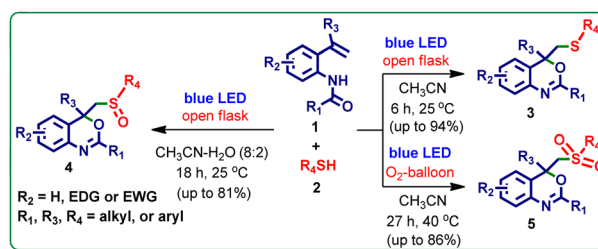
Zuxin Long, Jichang Sun, Yijie Zhang, Kewei Hu, Zhouwei Tan, Liansheng Li* and Qinghua Liang*



7624

Visible-light-initiated selective synthesis of thiolated-, sulfoxinated-, and sulfonated benzoxazines from *N*-(2-vinylaryl)amides and thiols

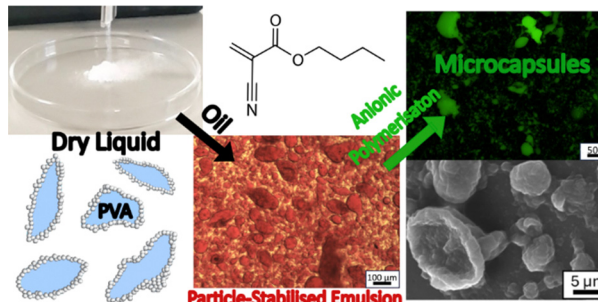
Palani Natarajan,* Meena, Palak Banga, Aastha and Anshika Sharma



7628

Dry liquid to Pickering-type emulsion: fabrication of non-spherical environmentally friendly microcapsules

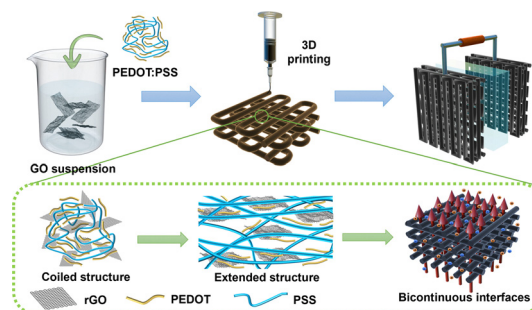
Benjamin T. Lobel,* Shota Sugiyama, Oisín Owens, Olivier J. Cayre* and Syuji Fujii*



7632

A conformation-driven percolative interface architecture in phase-engineered 3D printed graphene/PEDOT:PSS supercapacitors enabling ultra-high energy density and superior ion transport

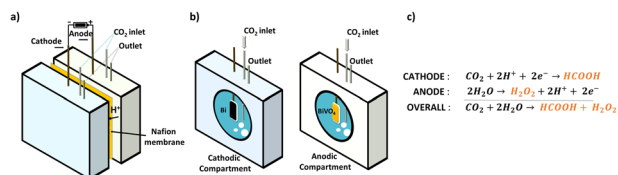
Yawen Wang, Qiaoqiao Zheng, Zhilin Wu, Haojie Zuo, Wenbin Kang,* Lixian Song* and Yingze Song*



7636

Coupling CO₂ reduction with 2e[−] water oxidation for simultaneous production of formate and H₂O₂

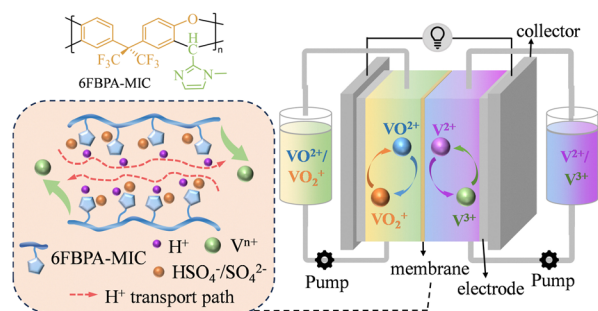
Payal Allawadhi and Deepa Khushalani*



7640

A twisted imidazole-tethered aromatic polymer for high-performance membranes in vanadium-based redox flow batteries

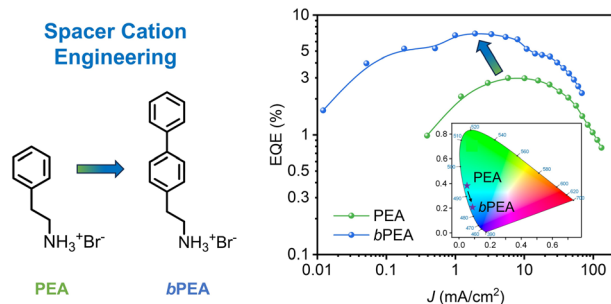
Peiru Lv, Zhili Cai, Beijia Zhao, Ruixuan Lv, Lei Li, Hui Chen,* Patric Jannasch* and Jingshuai Yang*



7644

Spacer cation enabled dimension control for efficient and wavelength-tunable blue perovskite light-emitting diodes

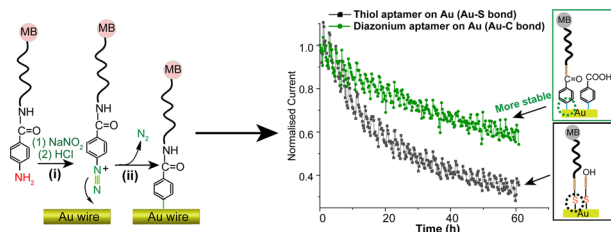
Qingxiang Liu, Xinan Wu, Aidan H. Coffey, Hanjun Yang, Jee Yung Park, Qixuan Hu, Ke Ma, Chenhui Zhu, Yong Sheng Zhao, Letian Dou* and Kang Wang*



7648

Preparation of electrochemical aptamer-based sensors: a direct aryl diazonium grafting approach

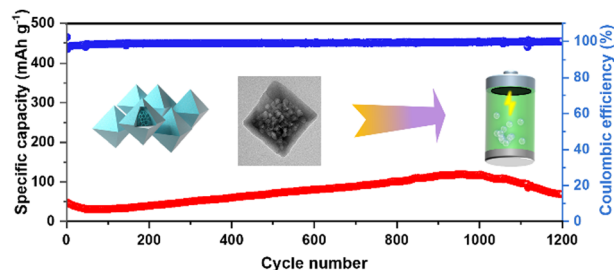
Essam M. Dief, Wenxian Tang, Liam R. Carroll, Tony Breton* and J. Justin Gooding*



7652

Mn-MOF with a microporous structure as a cathode material for aqueous zinc-ion batteries

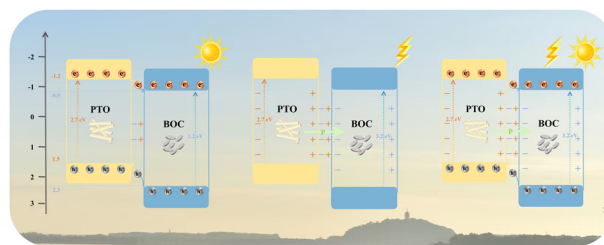
Wentao Liu, Guoqiang Yuan, Yuxin Shi, Biao Yang, Shu Jiang, Yan Yan and Huan Pang*



7656

Constructing a 1D/2D piezoelectric Bi₂O₂CO₃/PbTiO₃ heterostructure for improving carrier separation and photocatalytic activity

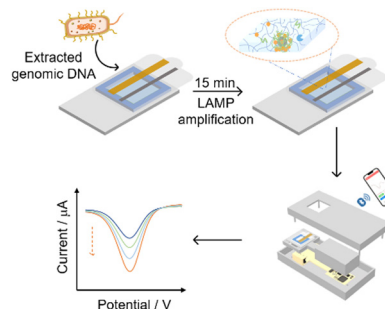
Yukai Chen, Yiyi Ji, Ruizhe Wang, Dan Wang, Jiaojiao Fang, Rulin Dong* and Baoying Dai*



7660

Hydrogel-based electrochemical LAMP sensor for rapid, contamination-free and ultrasensitive point-of-care detection of *Vibrio parahaemolyticus*

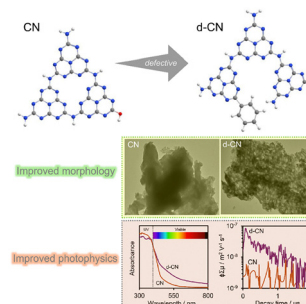
Jing Zhang, Tengyu Li, Ping Zhou, Lihang Zhu, Xingyu Lin and Bin Su*



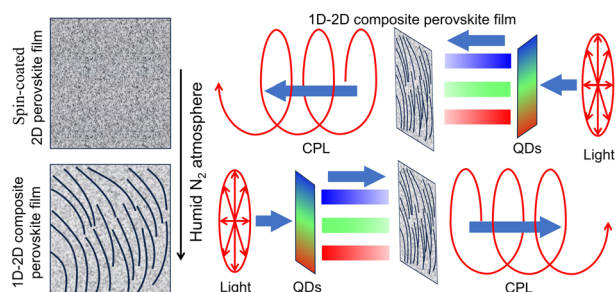
7664

Simple defect engineering of carbon nitride using mixed precursors for enhanced photocatalysis

Hanggara Sudrajat*, Jakkapon Phanthuwongpakdee and Juan Carlos Colmenares*



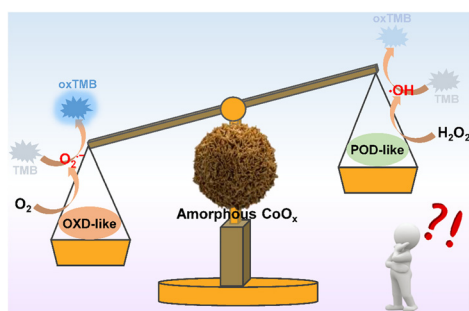
7668



1D–2D composite perovskite films with self-assembled chiral structure for non-reciprocal circularly polarized emission modulation

Yongze Xiao, Ruxi Zhang, Hongxu Li, Qiang Zhang* and Yin Xiao*

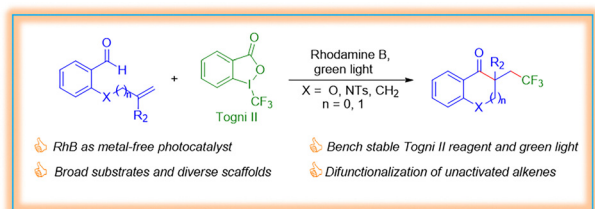
7672



Unusual oxidase-mimetic catalytic performance surpassing peroxidase in amorphous CoO_x: underlying mechanism and toward a novel H₂O₂-related detection paradigm

Zhijian Bu, Jinjin Liu,* Zheng Tang, Hao Liang, Qinqin Bai, Shuangquan Liu and Xiangheng Niu*

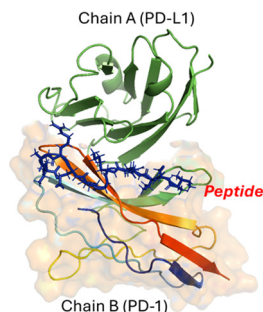
7676



Harnessing visible light for metal-free trifluoromethylation/cyclization of unactivated alkenes

Xiaowen Qin, Chenwei Liu, Weiheng Yuan, Heng Li, Shuhui Sun, Tiefeng Xu and Zhiping Yin*

7680



A novel peptide targeting PD-1: implications for protein–protein interaction studies and immunotherapy

Satya Prakash Arya, Hari Timilsina, Siddhartha Kalpa Samadhi Thennakoon, Rick Mason Postema, Raunak Jahan, Andrew Michael Reynolds and Xiaohong Tan*

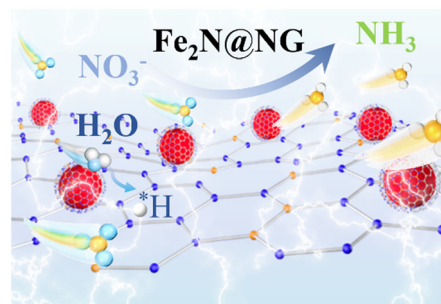


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7684

Nitrogen-doped graphene encapsulating Fe₂N for enhanced electrocatalytic conversion of nitrate to ammonia

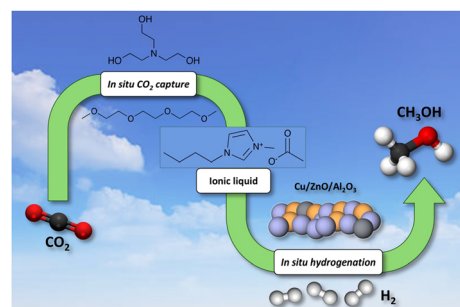
Yating Chen, Taiquan Rao, Jiayu Zhan, Lu-Hua Zhang* and Fengshou Yu*



7688

Improved CO₂ conversion to methanol promoted by ionic liquid additives using a Cu/ZnO/Al₂O₃ heterogeneous catalyst

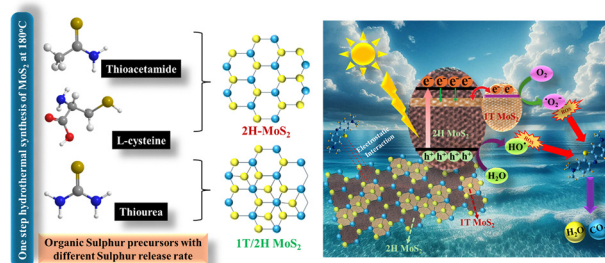
Zohaib Suhail, Christopher J. Koch, Alain Goeppert and G. K. Surya Prakash*



7692

Facile synthesis of mixed phase 1T/2H-MoS₂ heterostructured nanosheets with a highly efficient solar light-driven photocatalyst and recyclable adsorbent

Sahil Thakur, Ayush Badoni, Samriti, A. Savoyant, Hendrik Christoffel Swart, Mikhael Bechelany, Andrej Kuznetsov and Jai Prakash*



CORRECTION

7696

Correction: Protocols for degradation assessment and stability enhancement in perovskite solar cells

Seok Joo Yang,* Sungwon Song, Chaneui Park, Jinhyeok Choi, Eunho Lee and Min Kim*

