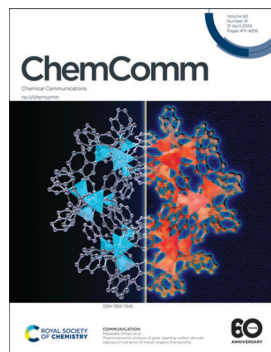


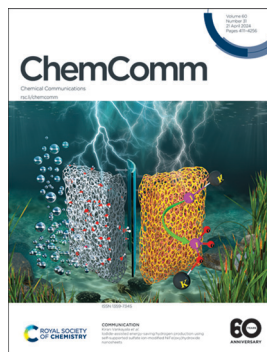
IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(31) 4111-4256 (2024)



Cover

See Masataka Ohtani *et al.*, pp. 4170–4173. Image reproduced by permission of Masataka Ohtani from *Chem. Commun.*, 2024, 60, 4170.



Inside cover

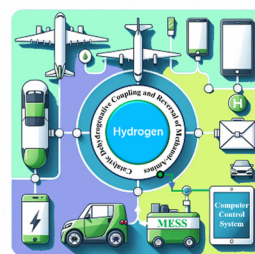
See Kiran Vankayala *et al.*, pp. 4174–4177. Image reproduced by permission of Kiran Vankayala from *Chem. Commun.*, 2024, 60, 4174.

HIGHLIGHTS

4121

Catalytic dehydrogenative coupling and reversal of methanol–amines: advances and prospects

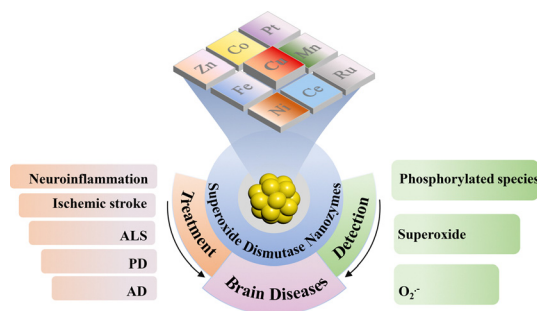
Yujing Zhang,* Xiaomei Yang, Shimin Liu, Jiacheng Liu and Shaofeng Pang*



4140

Superoxide dismutase nanozymes: current status and future perspectives on brain disease treatment and diagnosis

Ying Chen, Bo Li, Kai Li* and Yuqing Lin*



Environmental Science journals

One impactful portfolio for
every exceptional mind

Harnessing the power of interdisciplinary
science to preserve our environment

rsc.li/envsci

Fundamental questions
Elemental answers

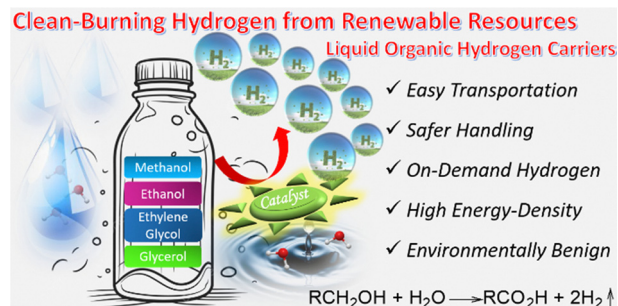


FEATURE ARTICLE

4148

Production of hydrogen from alcohols via homogeneous catalytic transformations mediated by molecular transition-metal complexes

Akshara Bisarya, Suhana Karim, Himani Narjinari, Anwesha Banerjee, Vinay Arora, Sunil Dhole, Arnab Dutta* and Akshai Kumar*

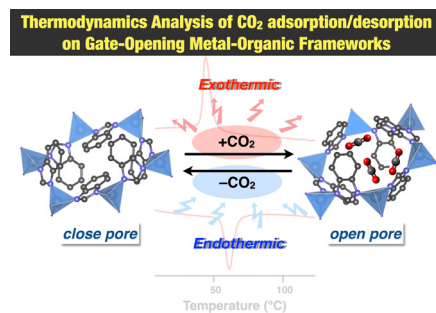


COMMUNICATIONS

4170

Thermodynamic analysis of gate-opening carbon dioxide adsorption behavior of metal-organic frameworks

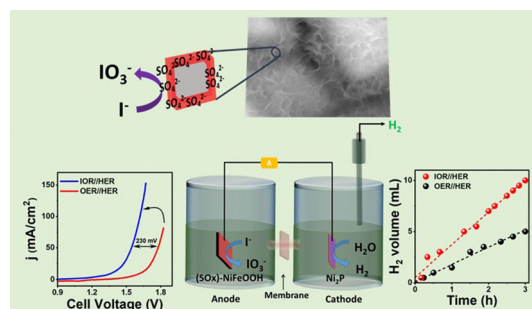
Shino Kannaka, Ayumi Ohmiya, Chiho Ozaki and Masataka Ohtani*



4174

Iodide-assisted energy-saving hydrogen production using self-supported sulfate ion-modified NiFe(oxy)hydroxide nanosheets

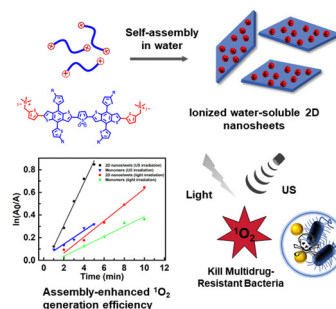
Shraddha Paniya, Asmita Dileep Gaonkar and Kiran Vankayala*



4178

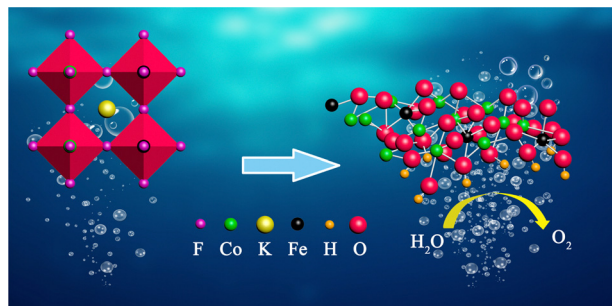
Ionized water-soluble organic nanosheets with light/ultrasound dual excitation channels for efficient killing of multidrug-resistant bacteria

Yufan Gu, Dayong Jiang, Luoyi Wang,* Guangpeng Gao* and Xu-Hui Jin*



COMMUNICATIONS

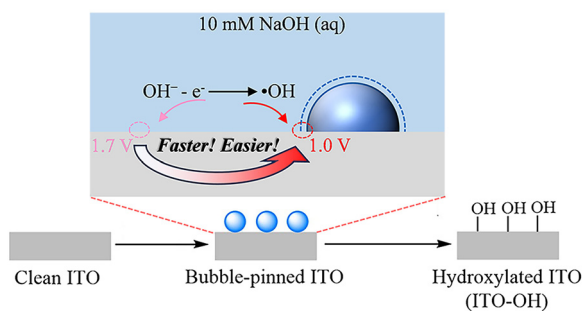
4182



Easy conversion perovskite fluorides $\text{KCo}_{1-x}\text{Fe}_x\text{F}_3$ for efficient oxygen evolution reaction

Yilei Du, Genyan Hao, Tao Zhao, Dandan Li, Guang Liu, Dazhong Zhong,* Jinping Li and Qiang Zhao*

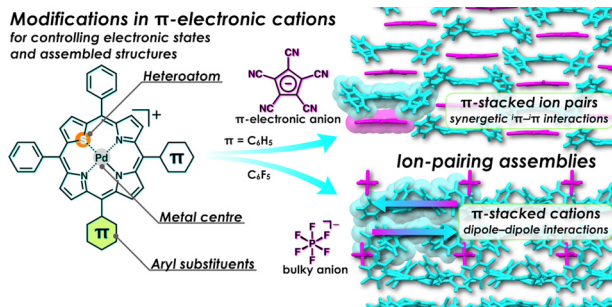
4186



Hydroxylation of the indium tin oxide electrode promoted by surface bubbles

Xiaoxue Song, Hui Yan, Yuqiao Zhang, Weiqiang Zhou, Shun Li, Jianming Zhang, Simone Ciampi* and Long Zhang*

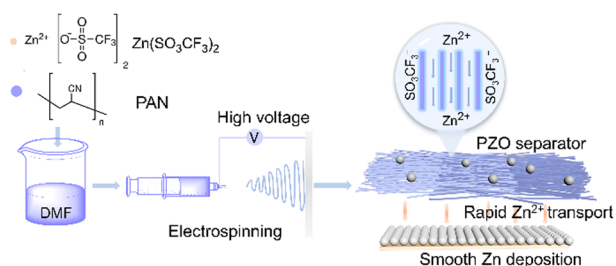
4190



Substitution-pattern- and counteranion-dependent ion-pairing assemblies of heteroporphyrin-based π-electronic cations

Masaki Fujita, Yohei Haketa, Shu Seki and Hiromitsu Maeda*

4194



A zincophilic separator with directional alignment and pore hydrophilicity towards stable aqueous zinc metal batteries

Jing Fu, Dongyang Huang, Ying Mei and Qiao Ni*

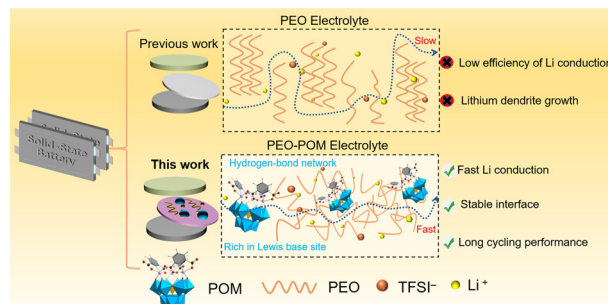


COMMUNICATIONS

4198

Functionalized polyoxometalates enable fast ion transport in solid-state batteries at room temperature

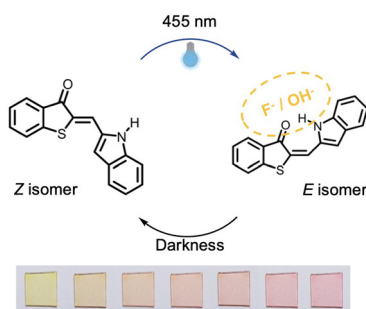
Fangcheng Liu, Shicheng Han, Liwei Dong and Xikui Fang*



4202

Ion-selective response of visible light photoswitchable indole-hemithioindigo: toward chemical sensing of fluoride and hydroxide

Weian Zhang, Yi Lu, Yu Cheng, Yifu Wang, Zeying Wu, Jingying Zhai and Xiaojiang Xie*



4206

Radical cascade silylation/cyclization of 1,7-dienes to access silyl-substituted benzo[*b*]azepin-2-ones

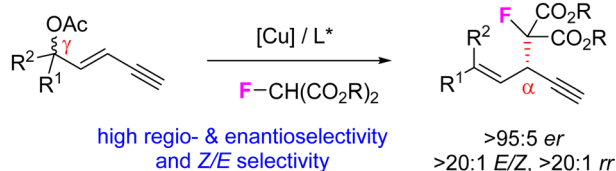
Zhen Zhang,* Lichao Lu, Guiling Li, Xiaoyu Sheng, Yijia Zhang, Lin Yang, Jiaqi Zhao, Lei Xie, Jiazhu Li* and Kai Sun*



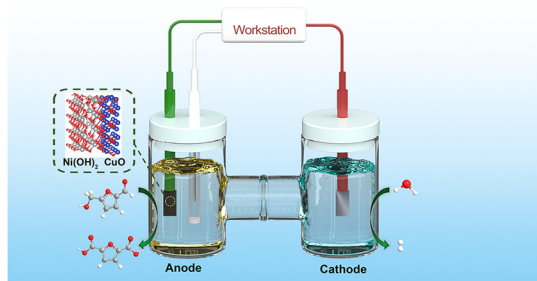
4210

Asymmetric copper-catalyzed alkynylallylic monofluoroalkylations with fluorinated malonates

Han-Yu Lu, Zi-Han Li, Guo-Qiang Lin and Zhi-Tao He*



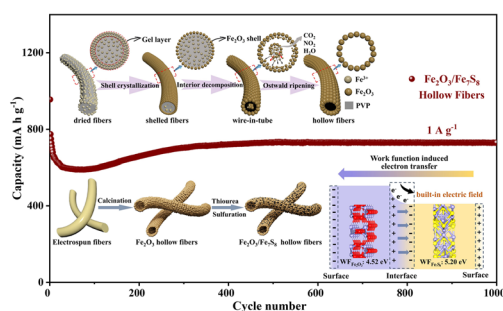
4214



CuO–Ni(OH)₂ heterostructure nanosheets: a high-performance electrocatalyst for 5-hydroxymethylfurfural oxidation

Wenke Wang, Hui Xu, Ting Sang, Dongfang Ji, Jingcheng Hao and Zhonghao Li*

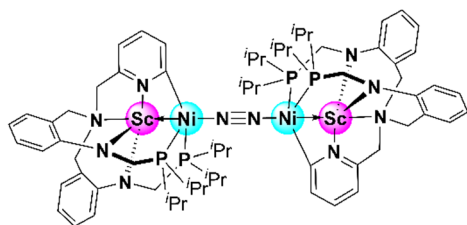
4218



Construction of heterostructured Fe₂O₃/Fe₇S₈ hollow fibers to boost the electrochemical kinetics of lithium storage

Kaitao Liu, Qiaoling Li, Yingying Song, Yifei Song, Zhiming Yan, Junzhe Wang, Xueda Li, Hongqiang Wang* and Jiao Li*

4222

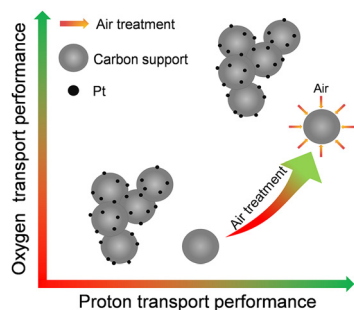


- Sc(III) Metalloligand • [Sc-N-C-Ni] Heterobimetallocycle
- Versatile reactivity with unsaturated bonds

A scandium metalloligand supported Ni(0) complex with a heterobimetallocycle: versatile reactivity with unsaturated bonds

Lei Ma, Xiaowei Pan, Dongjing Hong, Huayi Fang* and Peng Cui*

4226



Air oxidation of carbon supports boosts the low-humidity fuel cell performance

Ang Li, Le-Le Zhang, Ru-Yang Shao, Jun-Jie Li, Cong Xu, Shuai Li, Lei Tong* and Hai-Wei Liang*

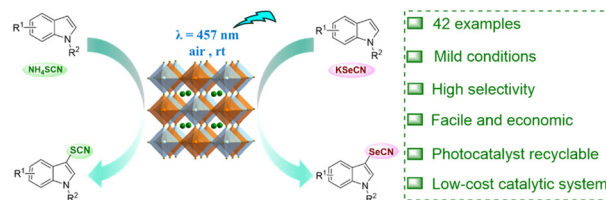


COMMUNICATIONS

4230

Lead-free $\text{Cs}_2\text{AgBiBr}_6$ double perovskite microcrystals for effective visible-light photocatalytic thio/selenocyanation

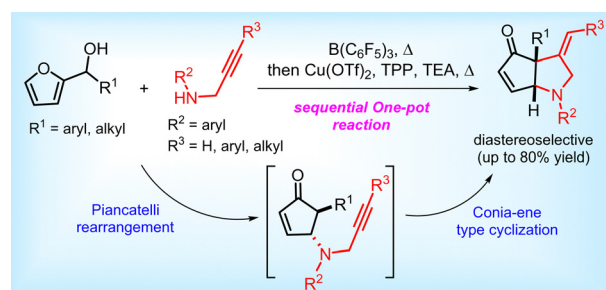
Ting Zhong, Haibo Zhu,* Yeye Zheng, Gaowen Ren, Xinmei Xie, Qiangwen Fan,* Zongbo Xie and Zhang-Gao Le*



4234

Synthesis of *cis*-fused cyclopentenone-pyrrolidine scaffolds via sequential aza-Piancatelli and Conia-ene type reactions in one pot

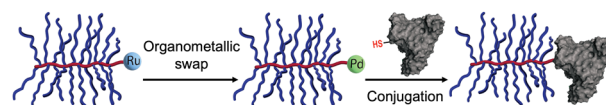
Pooja R. Solanke, Prakash Kumar, Prathama S. Mainkar, Kiranmai Nayani* and Srivari Chandrasekhar*



4238

An organometallic swap strategy for bottlebrush polymer–protein conjugate synthesis

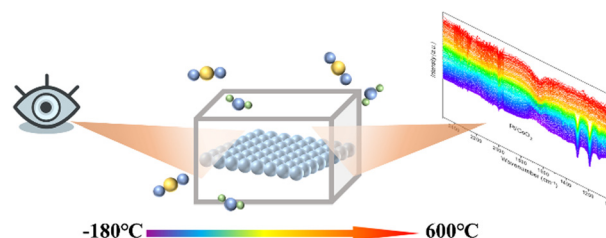
Bin Liu, Jacob Rodriguez, Landon J. Kilgallon, Wencong Wang, Yuyan Wang, Aiden Wang, Yutong Dai, Hung V.-T. Nguyen, Bradley L. Pentelute and Jeremiah A. Johnson*



4242

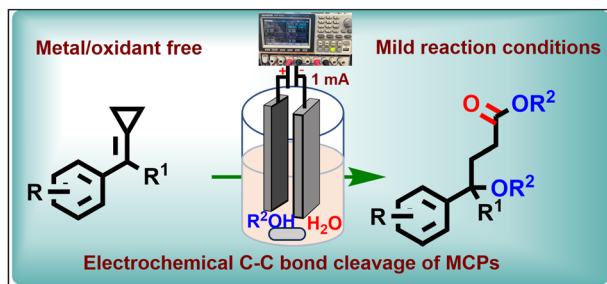
A temperature-adjustable *in situ* infrared diffuse reflectance spectroscopy system for catalysts

Weifeng Huang, Tao Chen, Jun Luo, Geer Su and Hang Wei*



COMMUNICATIONS

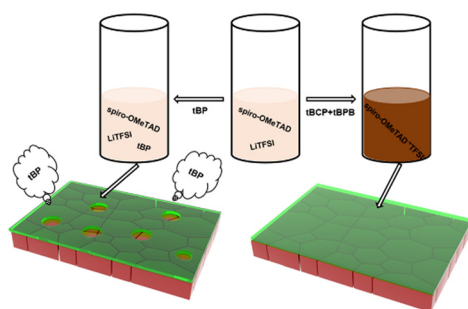
4246



Electrochemical oxidative C–C bond cleavage of methylenecyclopropanes with alcohols

Rakesh Kumar, Shiv Dutt and Prabal Banerjee*

4250



Instant p-doping and pore elimination of the spiro-OMeTAD hole-transport layer in perovskite solar cells

Zhipeng Fu, Tian Hou, Xin Wang, Kaipeng Chen, Guangmian Jiang, Xiaoshan Li, Linhu Xiang, Xiaoran Sun, Hua Yu,* Xu Liu* and Meng Zhang*

