

IN THIS ISSUE

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Cover

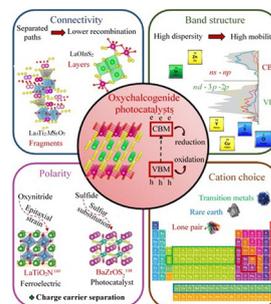
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HIGHLIGHTS

11510

Advances in oxychalcogenide materials for hydrogen evolution photocatalysis in aqueous media

Sandy Al Bacha,* Emma E. McCabe* and Houria Kabbour*



11529

Five key concepts linking vacancies, structure, and oxygen evolution reaction activity in cobalt-based electrocatalysts

Kenneth Crossley, Thomas J. Schmidt and Emiliania Fabbri*



Environmental Science: Atmospheres

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Fundamental questions
Elemental answers

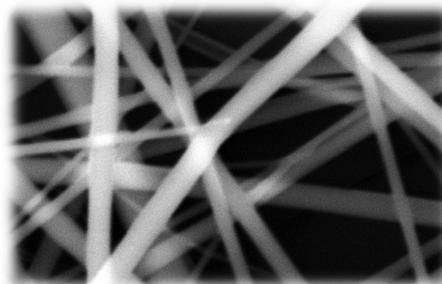


HIGHLIGHTS

11538

Long-range electron transport in self-assembled fibrils of peptides rich in aromatic residues

Ramesh Y. Adhikari

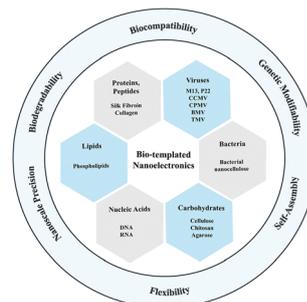


FEATURE ARTICLES

11551

From biology to circuitry: a review of DNA and other biomaterials as templates for nanoelectronic systems

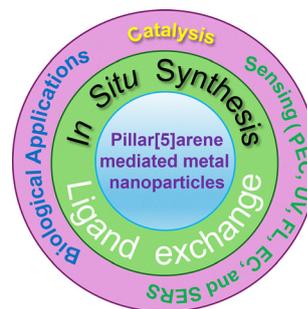
Chao Pang, Benjamin T. Karlinsey and Adam T. Woolley*



11567

Pillar[n]arene-mediated metal nanoparticles: from synthesis and self-assembly to applications

Fengqin Wang, Juan Yang, Yang Wang, Xufeng Liang, Yinfang Jiang,* Jin Wang, Wenqiang Yu, Haotian Wang, Hui Duan, Yushan Cheng, Yunhan Gao, Yujia Meng, Yihan Qian, Feiyu Chen and Yong Yao*

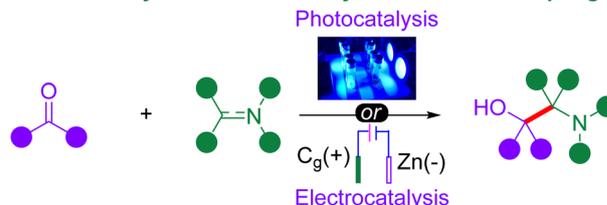


11581

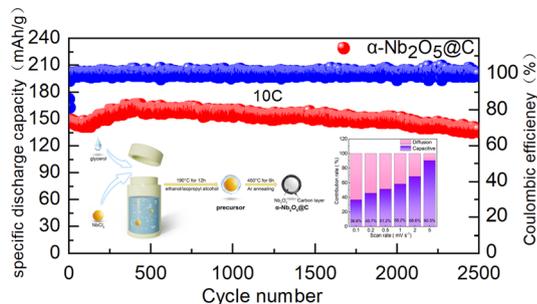
Photo/electro-catalytic stereo/enantioselective cross aza-pinacol coupling: synthesis of chiral amino alcohols

Padmanava Barik, Subhasmita Sahoo, Usharani Das and Santosh Kumar Nanda*

The Cross Aza-Pinacol Coupling: Photocatalytic or Electro-catalytic C-C Cross-Coupling



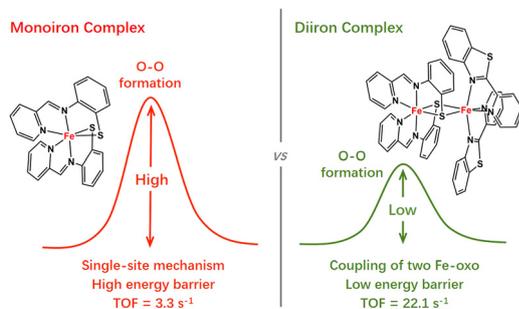
11597



An amorphous niobium pentoxide–carbon composite as a structurally stable high performance anode material for sodium-ion batteries

Yuanshan Zhang, Jing Yu, Shikai Gu and Lijun Gao*

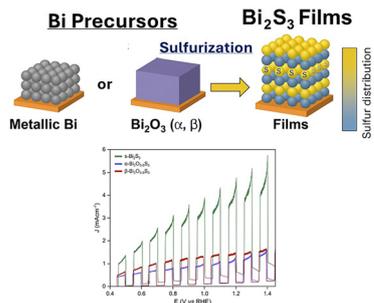
11601



Nuclearity effect on water oxidation: a comparative study of dinuclear and mononuclear iron complexes

Rong Yan, Zi-Han Li, Qian-Cheng Luo, Na-Na Sun,* Johnny C. Ho* and Yan-Zhen Zheng*

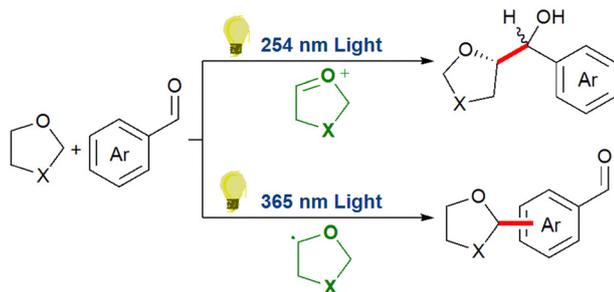
11605



Impact of Bi and its oxide phases on Bi₂S₃ compound transformation and photoelectrochemical performance

Erhon L. Aragão, Ariadne Köche, Gabriela C. Touguinha, Johnny F. Dias, Larissa dos Santos Stein, Julia M. Barradas, Anderson Thesing and Sherdil Khan*

11609



Light-switchable divergent C–H activation and cross-coupling of cyclic ethers with aromatic aldehydes

Xumao Yang, Quansheng Mou and Mingxin Liu*

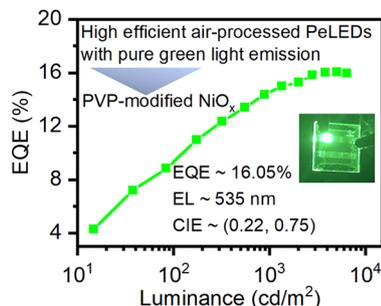


COMMUNICATIONS

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Air-processed efficient and pure green perovskite LEDs based on a PVP-modified NiO_x interface layer

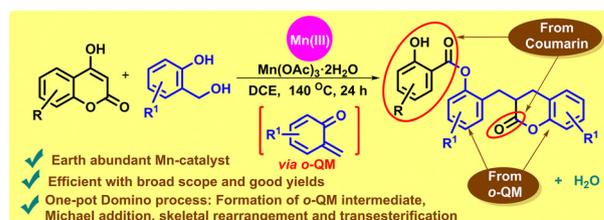
Jingyi Ding, Shuai Yang, Yiman Zhang, Yangming Hu, Wenjun Zhang, Jibo Tang, Hailong Wang,* Qingqian Wang,* Xiaobo He* and Hongxing Xu



11617

A Mn(III)-catalysed domino process for C-3 substituted dihydrocoumarins from 2-hydroxybenzyl alcohols and 4-hydroxy-2H-chromen-2-ones

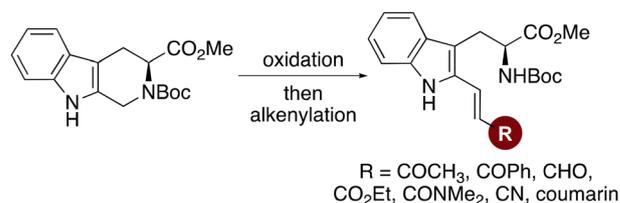
Gokul S. Londhe, Shankhajit Mondal and Boopathy Gnanaprakasam*



11621

Environment-sensitive fluorescent tryptophan analogues via indole C-2 alkenylation reactions

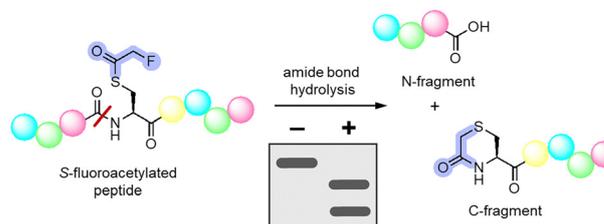
Valeria K. Burianova, Liyao Zeng, Abigail W. Thom, Niamh C. Radcliffe-Kennedy, Steven W. Magennis and Andrew Sutherland*



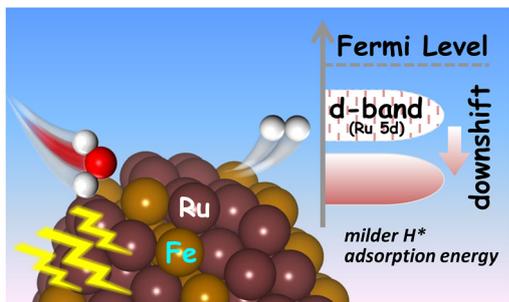
11625

Backbone cleavage of peptides and proteins via cysteine S-fluoroacetylation

Yuya Matsumoto, Naoki Zenmyo, Shunsuke Watanabe, Kaori Sasaki-Tabata, Shohei Uchinomiya, Naoya Shindo and Akio Ojida*



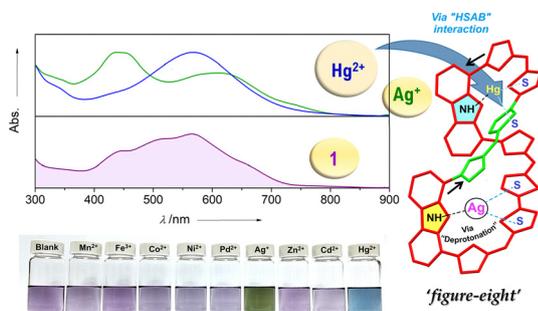
11629



Modulation of the electronic structure of bimetallic FeRu alloy nanoparticles for efficient alkaline hydrogen evolution

Cheng Ye, Yu Liu, Huamei Tong, Mengyue Qi, Yong Chen, Di Li* and Deli Jiang*

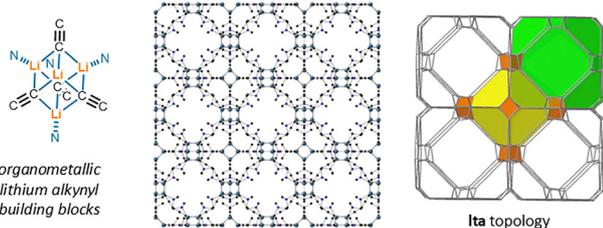
11633



A carbazole-embedded cyclodimer adopting a helical conformation and metal-ion sensing

Athira Naniyil, Arun Kumar, Athira Edwin and Sabapathi Gokulnath*

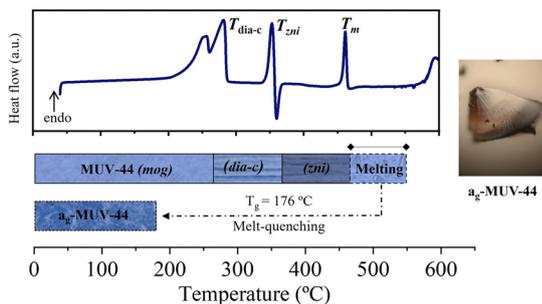
11637



Organometallic and zeolitic ultralight MOFs from lithium alkynyl building blocks

Ruichen Zhang, Tom O'Brien, Fauzi Abdilah, Andrew J. P. White, Paul D. Lickiss and Robert P. Davies*

11641



Melt-quenched synthesis of a manganese ZIF glass

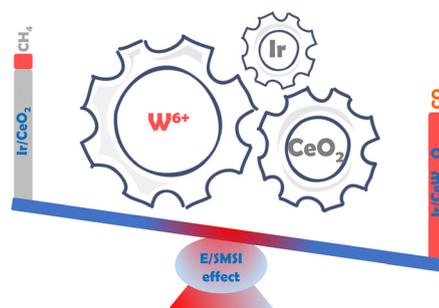
Luis León-Alcaide, Alberto Fernández-Alarcón, Joaquín Calbo, David A. Keen and Guillermo Mínguez Espallargas*



11645

The superiority of W^{6+} overturns the CO_2 hydrogenation selectivity of iridium

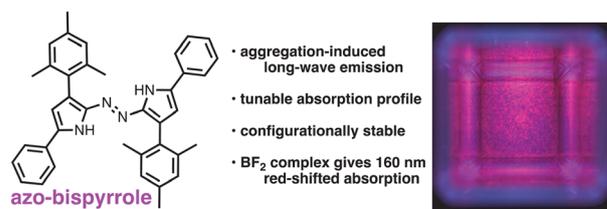
Haiqiang Lin,* Xuelian Liang, Zhaojun Wen, Weizhou Jiao, Ruixin Wang, Yixin Lian and Xinping Duan*



11649

Introducing the substituted azobispyrrole framework: synthesis and properties

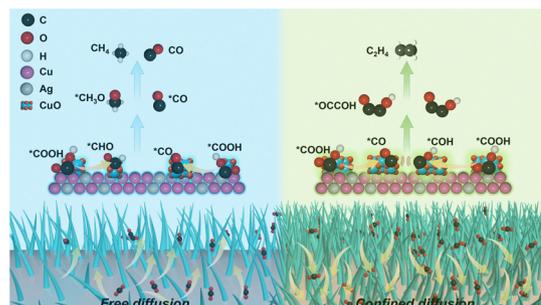
Adil Alkaş, Roberto M. Diaz-Rodriguez, Steve O. Sequeira, James W. Hilborn, Mmasinachi Atansi, Em C. Sullivan, Emily B. Brown, Rosinah Liandrah Gapare, Bulent Mutus, Katherine N. Robertson and Alison Thompson*



11653

Spatial confinement boosts C–C coupling in brushed $Cu/Ag@CuO$ NWs for CO_2 electroreduction into C_2H_4

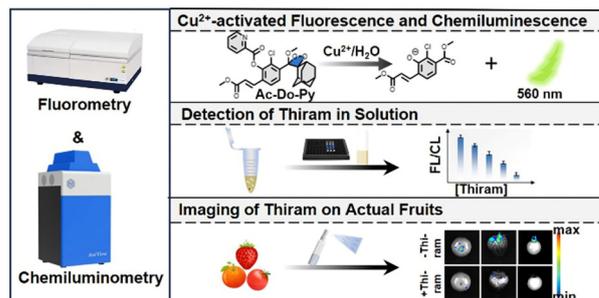
Chengbin Zhang, Wenya Fan, Peipei Li, Changjing Wang, Mengqian Li, Zequn Han, Qingxia Chen* and Xingchen Jiao*



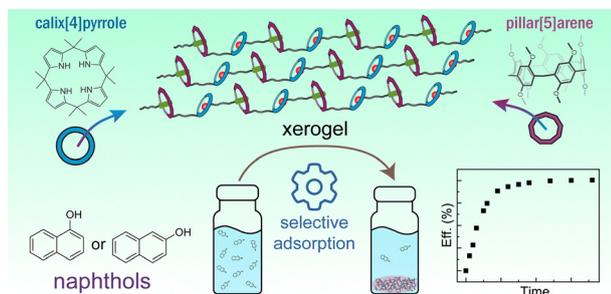
11657

Cu^{2+} -activatable fluorescence and chemiluminescence dual-mode sensing platform for visual detection of thiram

Pan Zhu, Yuanyu Tang, Yu Tang, Yating Xu, Shaojing Zhao, Chaoyi Yao, Benhua Wang, Xiangzhi Song and Minhuan Lan*



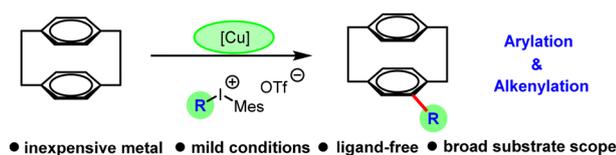
11661



A pillar[5]arene- and calix[4]pyrrole-based supramolecular polymer for selective removal of naphthols from water

Deniz Memis, Saide Akin and Abdullah Aydoğan*

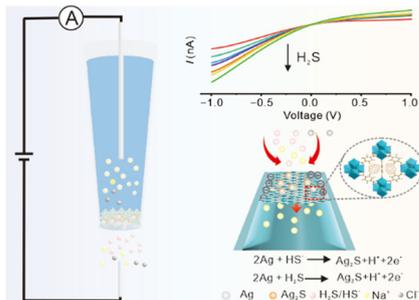
11665



C–H functionalisation of [2.2]paracyclophane under copper catalysis

Kun Zhou,* Rui-Rui Wu, Xin-Rou Zhong, Jun Pu, Xin Yang, Kai Liu, Yue Wang, Dan-Qian Xu* and Shao-Jie Lou*

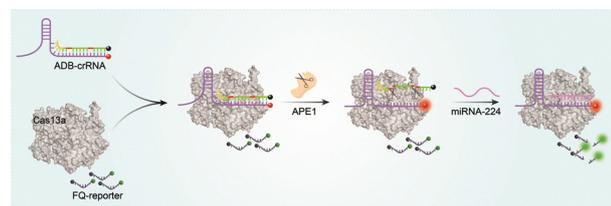
11669



Ag₂S-gated ion rectification in confined AgNCs@UiO-66 nanochannels enables sensitive monitoring of bacterial H₂S release

Xiaotong Cui, Yuxin Xie, Siyu Wan, Zhonggang Liu,* Zheng Guo* and Xingjiu Huang

11673



CRISPR-Cas13a-based dual-channel AND-logic gated biosensor for the simultaneous assay of APE1 and miRNA-224

Tongyan Yuan, Jinlian Du, Jingjing Hu, Jiaming Luo, Xingxiang Pu,* Xinyue Zhu, Bojie Chen, Yuling Teng, Han Li, Sheng Li, Ling Jiang* and Erhu Xiong*

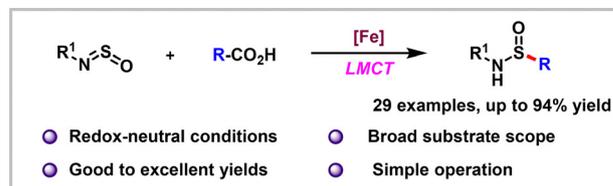


COMMUNICATIONS

11677

Decarboxylative sulfinamidation of *N*-sulfinylamines with carboxylic acids via a photochemical iron-mediated ligand-to-metal charge transfer process

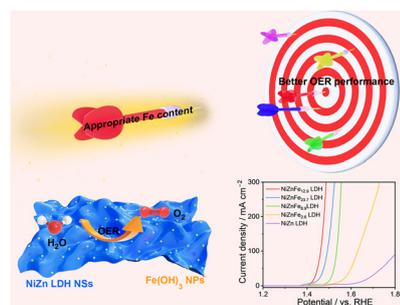
Dan Yang, Qiang Xiao,* Yan Zhou, Hui Zhang, Tingting Chen and Mingsong Shi*



11681

Decorated high-dispersity Fe(OH)₃ nanoparticles on NiZn LDH nanosheets towards enhanced alkaline oxygen evolution reaction

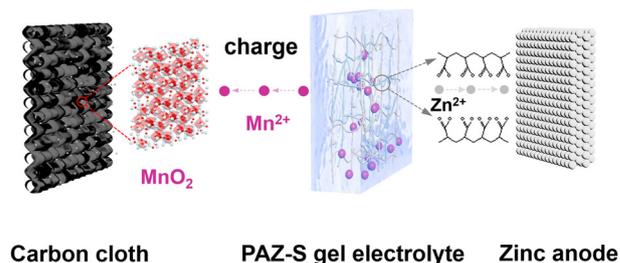
Tianyi Yang, Jianfeng Huang, Zhaohui Liu* and Cailing Chen*



11685

A dual-functional sodium alginate–poly-(zinc acrylate) hydrogel electrolyte for enhanced stability of aqueous zinc-ion batteries

Jiale Chen, Rongchang Yang, Yuchao Chen, Dongshu Liu, Shibo Meng, Wenxian Liu, Fangfang Wu, Wenhui Shi* and Xiehong Cao*



11689

Calcium(II)-catalyzed [2+3] annulation of enynes: a sustainable approach to 9*H*-pyrrolo[1,2-*a*]indole frameworks

Ashok Kale, Shubham C Rivonker, Jong-hyuk Kim, Jong Yeon Hwang, Yongseok Choi and Kyeong Lee*

