

# ChemComm

Chemical Communications

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## IN THIS ISSUE

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### Cover

See Adam T. Woolley et al.,

pp. 11551–11566.

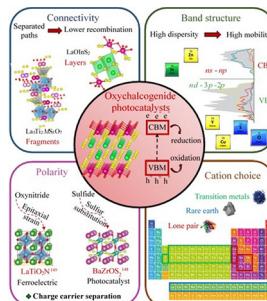
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## HIGHLIGHTS

11510

### Advances in oxychalcogenide materials for hydrogen evolution photocatalysis in aqueous media

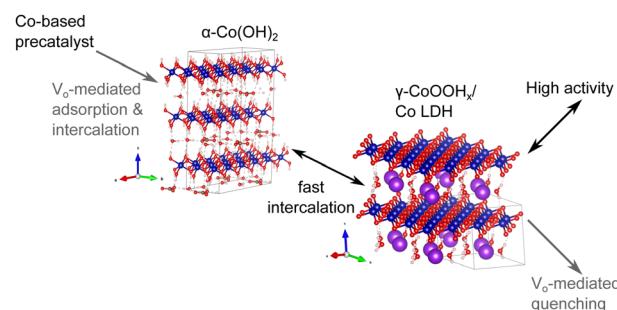
Sandy Al Bacha,\* Emma E. McCabe\* and Houria Kabbour\*



11529

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

Kenneth Crossley, Thomas J. Schmidt and Emiliana Fabbri\*



# Environmental Science: Atmospheres

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Fundamental questions  
Elemental answers



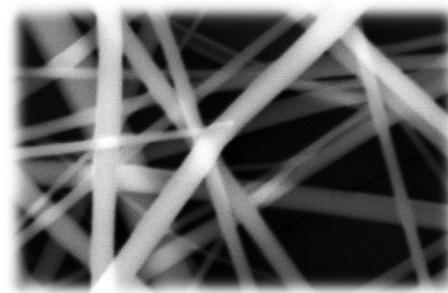
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## HIGHLIGHTS

11538

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

Ramesh Y. Adhikari

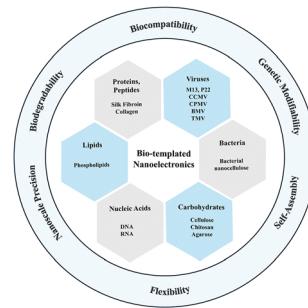


## FEATURE ARTICLES

11551

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

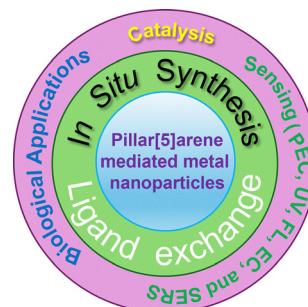
Chao Pang, Benjamin T. Karlinsey and Adam T. Woolley\*



11567

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

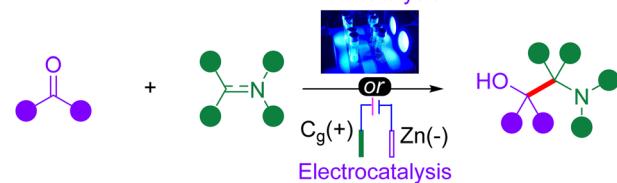
Fengqin Wang, Juan Yang, Yang Wang, Xufeng Liang, Yinfang Jiang,\* Jin Wang, Wenqiang Yu, Haotian Wang, Hui Duan, Yushan Cheng, Yunhan Gao, Yujia Meng, Yihan Qian, Feiyu Chen and Yong Yao\*



11581

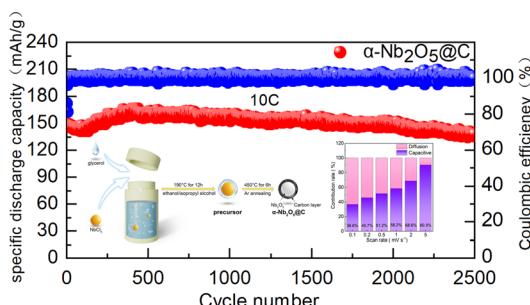
**Photo/electro-catalytic stereo/enantioselective cross aza-pinacol coupling: synthesis of chiral amino alcohols**

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

**The Cross Aza-Pinacol Coupling: Photocatalytic or Electrocatalytic C-C Cross-Coupling Photocatalysis**

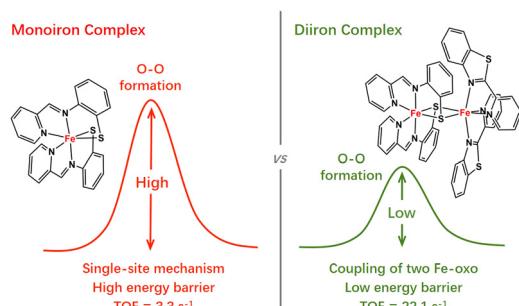
## COMMUNICATIONS

11597

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

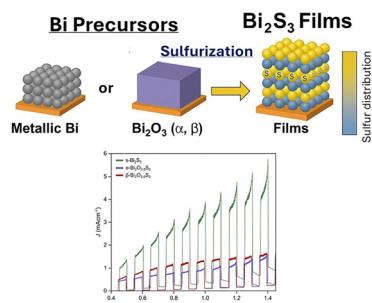
Yuanshan Zhang, Jing Yu, Shikai Gu and Lijun Gao\*

11601

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

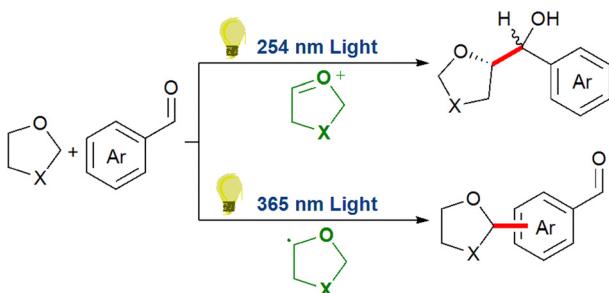
Rong Yan, Zi-Han Li, Qian-Cheng Luo, Na-Na Sun,\* Johnny C. Ho\* and Yan-Zhen Zheng\*

11605

**Impact of Bi and its oxide phases on  $\text{Bi}_2\text{S}_3$  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\*

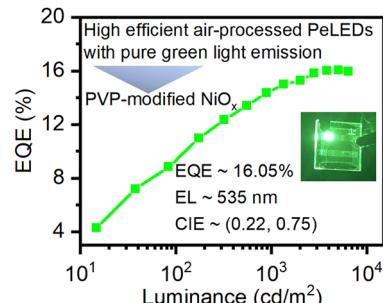


## COMMUNICATIONS

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**Air-processed efficient and pure green perovskite LEDs based on a PVP-modified  $\text{NiO}_x$  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**

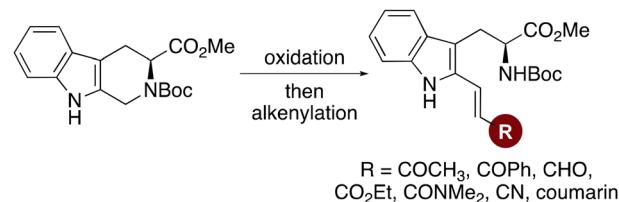
Gokul S. Londhe, Shankhajit Mondal and Boopathy Gnanaprakasam\*



11621

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

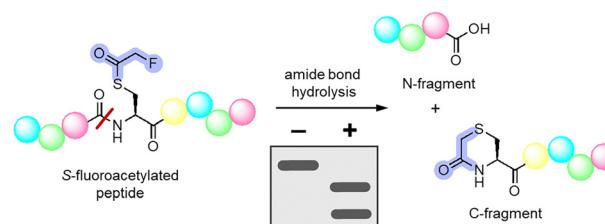
Valeria K. Burianova, Liyao Zeng, Abigail W. Thom, Niamh C. Radcliffe-Kennedy, Steven W. Magennis and Andrew Sutherland\*



11625

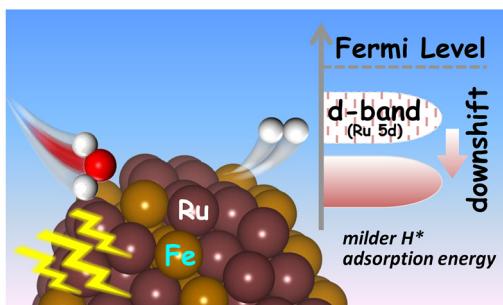
**Backbone cleavage of peptides and proteins via cysteine S-fluoroacetylation**

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



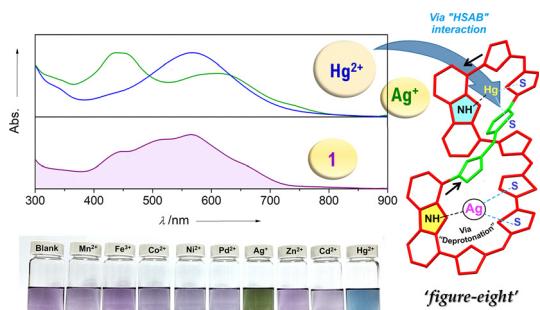
## COMMUNICATIONS

11629

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

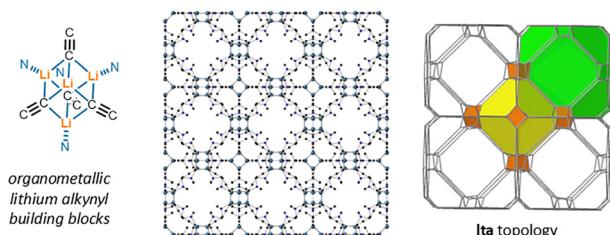
Cheng Ye, Yu Liu, Huamei Tong, Mengyue Qi, Yong Chen, Di Li\* and Deli Jiang\*

11633

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

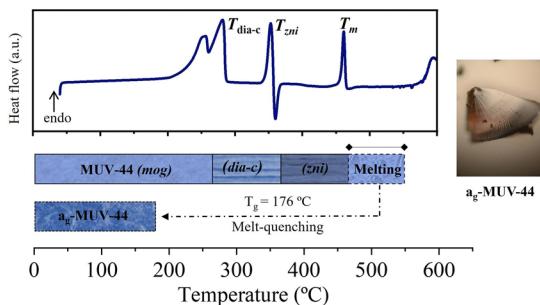
Athira Naniyil, Arun Kumar, Aathira Edwin and Sabapathi Gokulnath\*

11637

**Organometallic and zeolithic 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 Minguez Espallargas\*

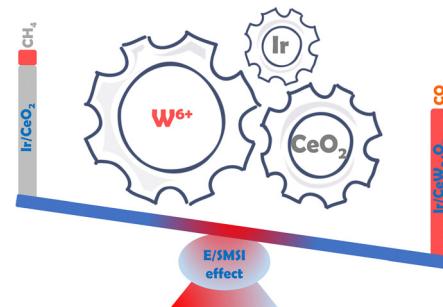


## COMMUNICATIONS

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**The superiority of W<sup>6+</sup> overturns the CO<sub>2</sub> hydrogenation selectivity of iridium**

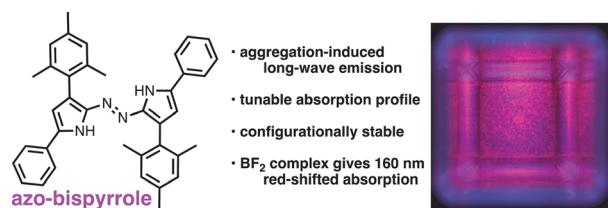
Haiqiang Lin,\* Xuelian Liang, Zhaojun Wen, Weizhou Jiao, Ruixin Wang, Yixin Lian and Xinping Duan\*



11649

**Introducing the substituted azobispyrrole framework: synthesis and properties**

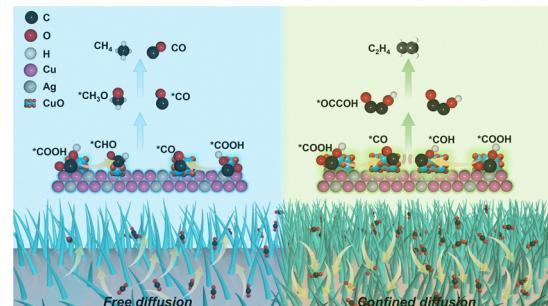
Adil Alkaş, Roberto M. Diaz-Rodriguez, Steve O. Sequeira, James W. Hilborn, Mmasinachi Atansi, Em C. Sullivan, Emily B. Brown, Rosinah Liandrah Gapare, Bulent Mutus, Katherine N. Robertson and Alison Thompson\*



11653

**Spatial confinement boosts C–C coupling in brushed Cu/Ag@CuO NWs for CO<sub>2</sub> electroreduction into C<sub>2</sub>H<sub>4</sub>**

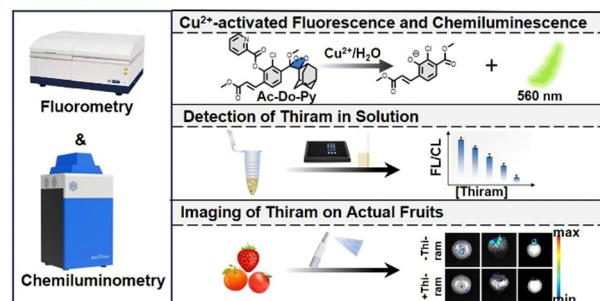
Chengbin Zhang, Wenya Fan, Peipei Li, Changjing Wang, Mengqian Li, Zequn Han, Qingxia Chen\* and Xingchen Jiao\*



11657

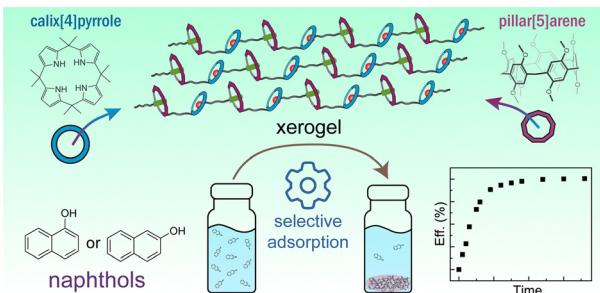
**Cu<sup>2+</sup>-activatable fluorescence and chemiluminescence dual-mode sensing platform for visual detection of thiram**

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



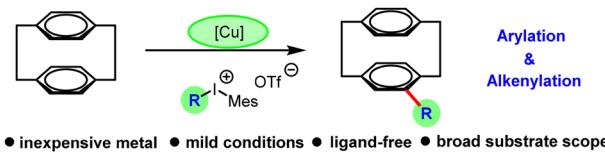
## COMMUNICATIONS

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

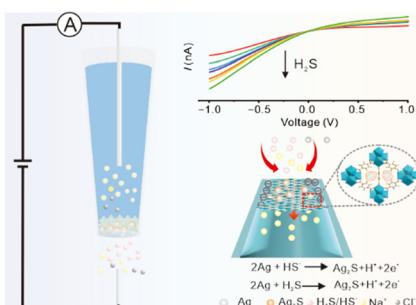
Deniz Memis, Saide Akin and Abdullah Aydogan\*

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

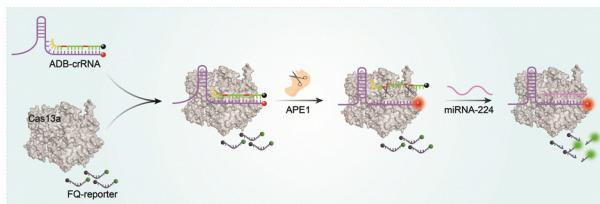
Kun Zhou,\* Rui-Rui Wu, Xin-Rou Zhong, Jun Pu, Xin Yang, Kai Liu, Yue Wang, Dan-Qian Xu\* and Shao-Jie Lou\*

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**Ag<sub>2</sub>S-gated ion rectification in confined AgNCs@UiO-66 nanochannels enables sensitive monitoring of bacterial H<sub>2</sub>S release**

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

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**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

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

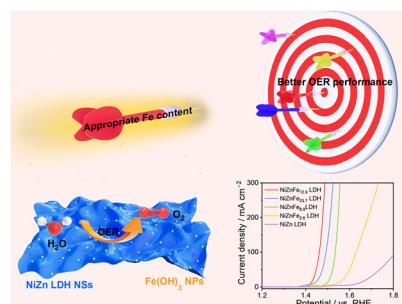
Dan Yang, Qiang Xiao,\* Yan Zhou, Hui Zhang, Tingting Chen and Mingsong Shi\*



11681

**Decorated high-dispersity  $\text{Fe(OH)}_3$  nanoparticles on NiZn LDH nanosheets towards enhanced alkaline oxygen evolution reaction**

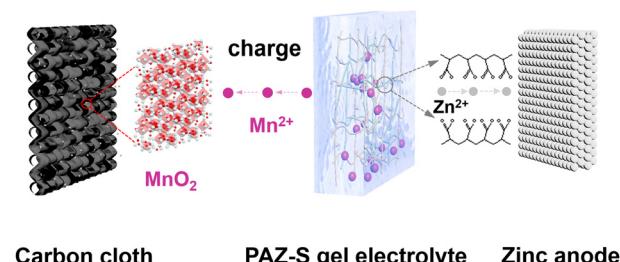
Tianyi Yang, Jianfeng Huang, Zhaojun Liu\* and Cailing Chen\*



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 enynones: a sustainable approach to 9*H*-pyrrolo[1,2-*a*]indole frameworks**

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

