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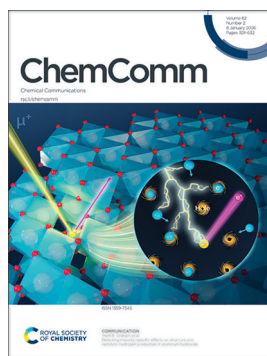
## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 62(2) 301-632 (2026)



### Cover

See Bhawani Narayan, pp. 379–388. Image reproduced by permission of Bhawani Narayan from *Chem. Commun.*, 2026, 62, 379.



### Inside cover

See Trent R. Graham *et al.*, pp. 470–473. Image reproduced by permission of Battelle Memorial Institute from *Chem. Commun.*, 2026, 62, 470. Cover image created by Nathan Johnson.

## PROFILE

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### Contributors to the Pioneering Investigators collection 2025: part 3

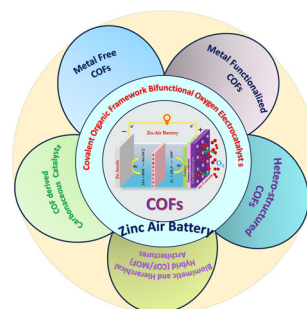


## HIGHLIGHTS

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### Recent progress in covalent organic frameworks for bifunctional oxygen electrocatalysis in rechargeable zinc–air batteries

Greesh Kumar, Manisha Das and Ramendra Sundar Dey\*



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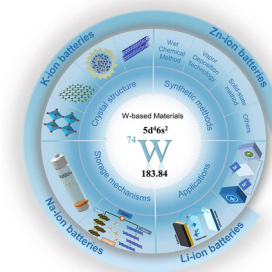


## HIGHLIGHTS

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### Emerging tungsten-based materials for rechargeable metal-ion batteries: progress and perspectives

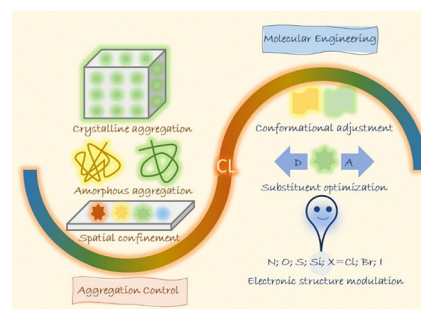
Chengcheng Xiao, Tianrui Liu, Linghao Sun and Lingyun Chen\*



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### Strategies for tailoring clusteroluminescence: from aggregation control to molecular engineering

Riliga Wu, Tongyue Wu, Weijiang Guan\* and Chao Lu\*

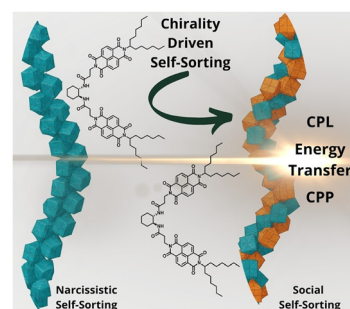


## FEATURE ARTICLES

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### Chirality driven self-sorting in supramolecular assemblies of $\pi$ -conjugated systems

Bhawani Narayan



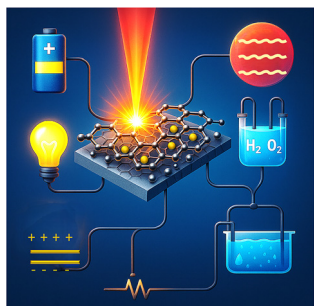
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### Carbene transfer reactions enabled by heterogeneous metal catalysis

Luan Lu and Jie Zhao\*



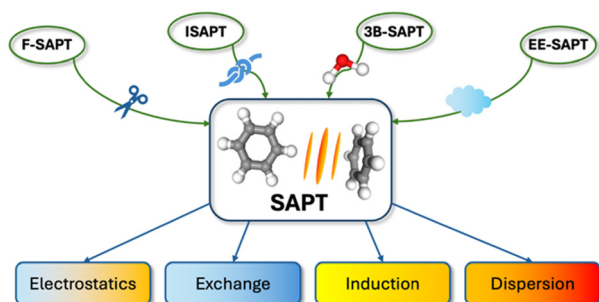
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## From synthesis to applications: evolution of metal-embedded laser-induced graphene (M-LIG)

Asmita Dutta, Tomer Zidki\* and Arie Borenstein\*

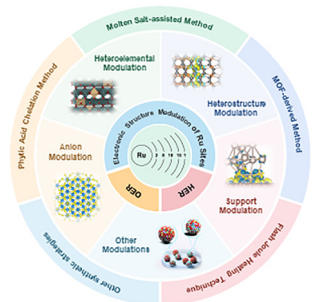
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## Understanding nonbonded interactions between molecular fragments

Konrad Patkowski

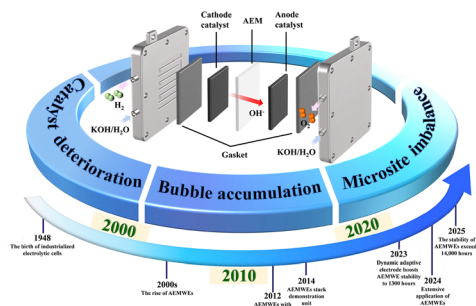
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## Electronic structure modulation of Ru sites toward efficient water splitting

Jixiang Jiao and Shichun Mu\*

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## Innovative perspectives on strategies for enhancing the stability of anion exchange membrane electrolyzers

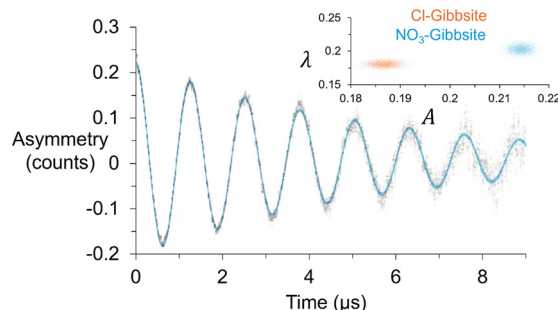
Zihe Liu, Yunchao Lei, Zichao Ji, Xinyuan Hu, Di Tian, Anlei Zhang\* and Longlu Wang\*



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### Detecting impurity-specific effects on structure and radiolytic hydrogen production in aluminum hydroxide

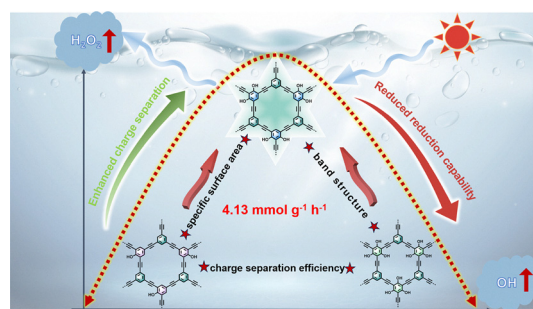
Trent R. Graham,\* Khashayar Ghandi, Micah Prange, Gregory Schenter, Larry M. Anovitz, Jay A. LaVerne and Carolyn I. Pearce



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### Precise molecular engineering in hydroxyl-containing conjugated microporous polymers for optimized hydrogen peroxide production

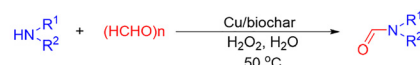
Daming Gao, Deli Kong, Wei Zhang,\* Peng Wang,\* Xiaobo Luo, Shiyuan Zhou\* and Peiyang Gu



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### Biochar-supported Cu catalyst for low-temperature base-free oxidative *N*-formylation of amines with paraformaldehyde in green solvent

Haihua Yin, Zhenjie Wang, Hangkong Yuan\* and Xingchao Dai\*

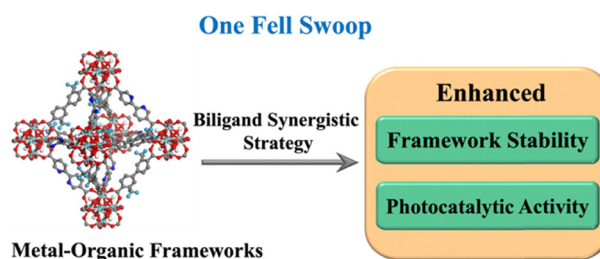


- ✓ the first non-noble metal base-free catalytic system
- ✓ Cellulose derived biochar support
- ✓ Low temperature (50 °C) and green solvent H<sub>2</sub>O
- ✓ Good amine scope

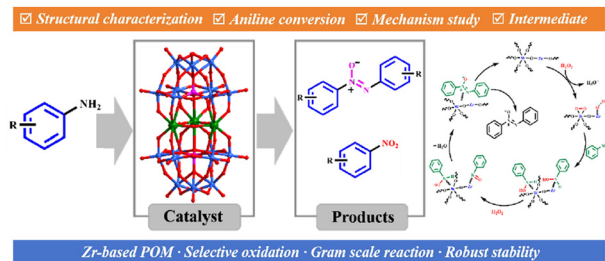
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### Biligand synergistic MOFs with dual enhancements in stability and charge transfer for efficient CO<sub>2</sub> photoreduction

Jiayin Tao, Yujun Ouyang, Kai Zhang, Keke Wang,\* Bolin Zhou, Xiahe Chen, Yi Zhang, Junze Zhao, Qin Wang, Yun-Fang Yang, Jiexiang Xia,\* Huaming Li and Yuanbin She\*



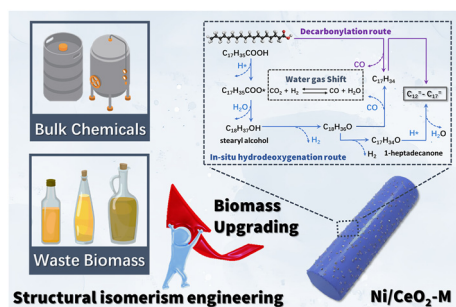
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### Stable Zr-based polyoxometalate as a green catalyst for selective oxidation of aniline

Zhijie Liang, Yiqing Yao, Yuyang Ding, Haifeng Wang,\*  
Huafeng Li\* and Gang Feng\*

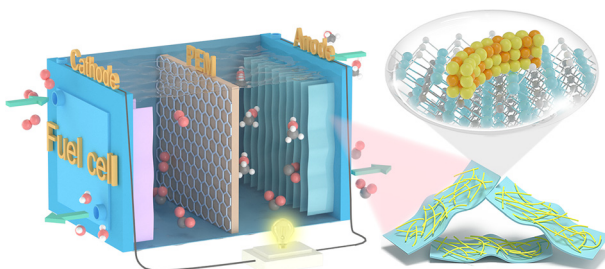
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### Structural isomerism in Ce-MOFs directs Ni/CeO<sub>2</sub> catalyst design for selective fatty acid deoxygenation to linear $\alpha$ -olefins

Jian Tian, Jiasen Li, Mingke Zhang, Youting Wang,  
Gen Li, Bin Chen and Guowu Zhan\*

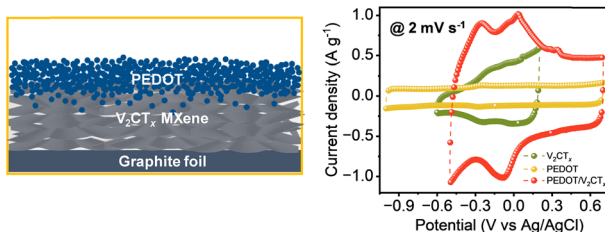
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### Bimetallic PtRu alloy nanowires confined on MXene nanosheets for highly efficient methanol electrooxidation

Jiawei Yang, Quanguo Jiang,\* Chi Zhang, Jian Zhang,  
Lu Yang, Haiyan He and Huajie Huang\*

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### Extrinsic pseudocapacitance of a vanadium carbide MXene-poly(3,4-ethylenedioxythiophene) heterostructure

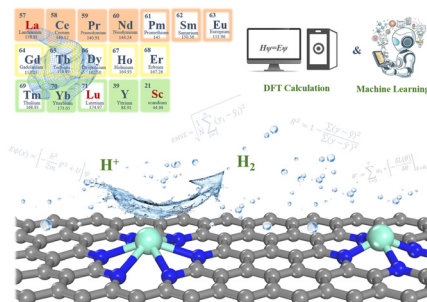
Suman Yadav and Narendra Kurra\*



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### Machine learning high-throughput screening of rare earth SACs with different coordination environments for the HER

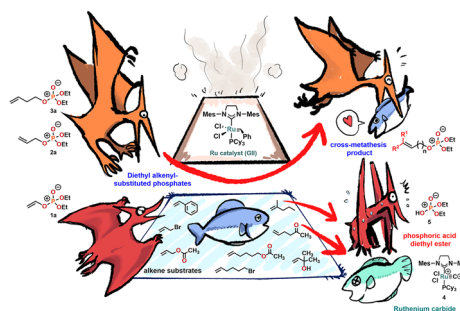
Meiling Liu, Qiming Fu, Wei Zhong, Shaik Gouse Peera\* and Chao Liu\*



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### Chain-length-dependent reactivity of alkenyl phosphates in ruthenium-catalyzed cross-metathesis

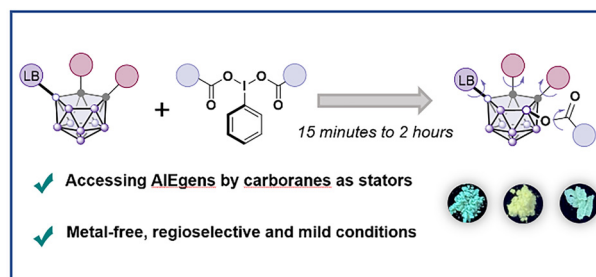
Apicha Pontavatchai, Kevin Schwedtmann, Philipp Royla, Kai Schwedtmann, Tossapol Khamnaen, Uwe Schwarzenbolz, Thomas Henle, Ekasith Somsook\* and Jan J. Weigand\*



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### Metal-free regioselective B–O coupling in carboranes for constructing aggregation-induced emission luminogens

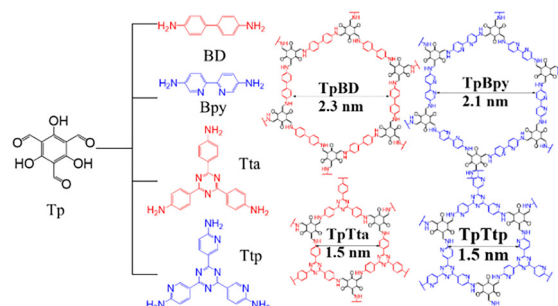
Xinrui Li, Ningning Zhou, Deshuang Tu,\* Chang-sheng Lu\* and Hong Yan\*



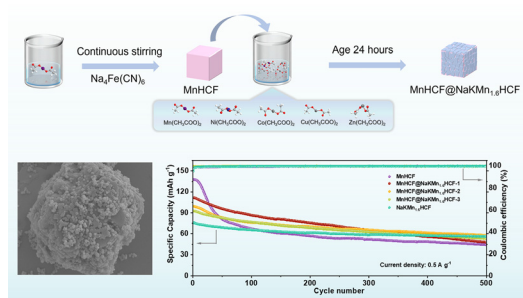
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### Water-assisted SO<sub>2</sub> capture in pyridine-functionalized COFs

Zhenling Tang, Guang-Rui Si, Qiang Chen,\* Jia-Ao Lv, Shengjun Wang, Xue-Feng Bai, Lin-Hua Xie, Kecheng Wang\* and Jian-Rong Li



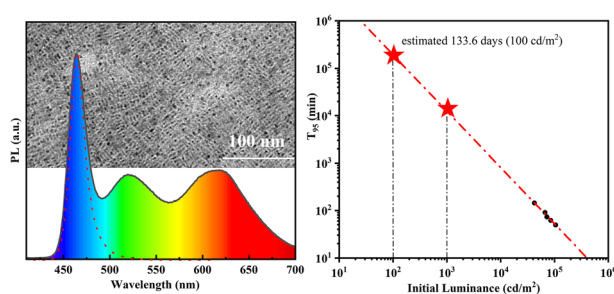
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### A high-entropy Prussian Blue shell enabling the high-rate and long-term cycling stability of the Mn-PBA cathode for sodium-ion batteries

Yuxin Li, Beibei Kuang, Ziwen Zhu, Peng Liu, Zilin Yang,\*  
Wenting Li and Zheng Liu\*

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### High-quality deep-blue CsPbBr<sub>3</sub> quantum rods toward stable white light-emitting diodes

Wei Shen,\* Wei Zhao, Zhongyi Yang, Yue Qiu,  
Meng Nan, Erdong Zhang, Shuang Lu, Ting Zhi,  
Pengfei Xia and Shufen Chen\*

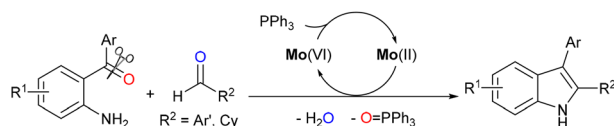
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### Nickel-catalyzed dehydrogenative Zn–Zn coupling to a Zn(II) dimer and its reactivity

Sagrika Rajput, Smrutirani Padhan, Nithya M. Thilakan,  
Sayantan Mukhopadhyay and Sharanappa Nembenna\*

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- ◆ Non-noble metal catalysis
  - ◆ Readily available substrates
  - ◆ Broad substrate scope
  - ◆ Valuable products
  - ◆ Gram-scale synthesis
  - ◆ A mechanism of Mo-carbene insertion
- 39 examples  
up to 94% yield

### Molybdenum-catalyzed synthesis of 2,3-disubstituted indoles *via* imine condensation and C(sp<sup>2</sup>)–H insertion

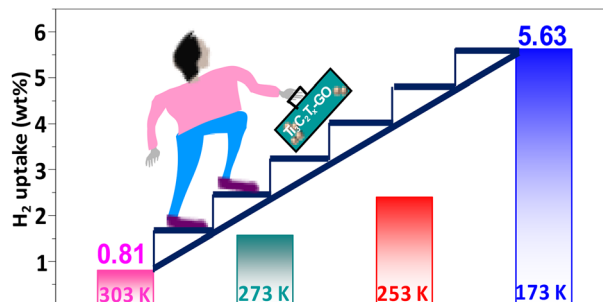
Haoke Chu,\* Xiuxin Lv, Yitong Luo, Meiyong Liu,  
Rong-Hui Huang,\* Xiao-Qing Feng and Fen-Er Chen\*



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### Synergy of a 2D/2D Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene–graphene oxide heterostructure for enhanced hydrogen storage

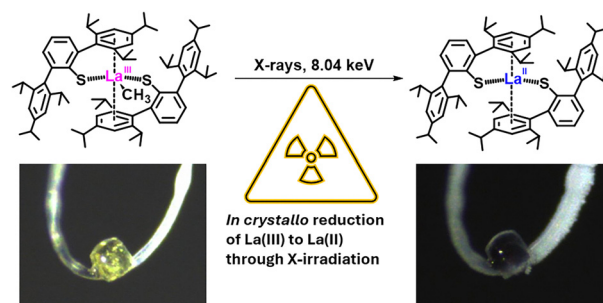
Shankar Ghotia, Seemita Banerjee, Asheesh Kumar and Pradip Kumar\*



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### In crystallo homolytic cleavage of a terminal lanthanum(III)–methyl bond by Cu K $\alpha$ X-radiation forms a La(II) complex

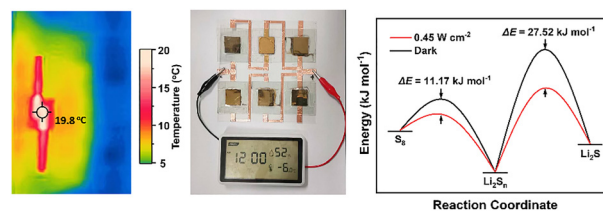
Cary R. Stennett, Makayla R. Luevano, Joseph W. Ziller and William J. Evans\*



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### Boosting Li–S redox chemistry by the plasmonic effect of MXene

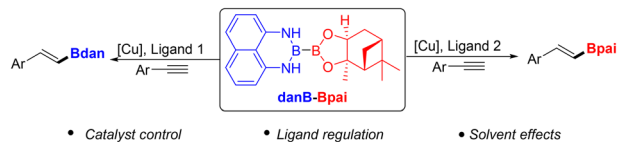
Yu Liu, Xingyu Wang, Xiangyu Meng and Zhiyu Wang\*



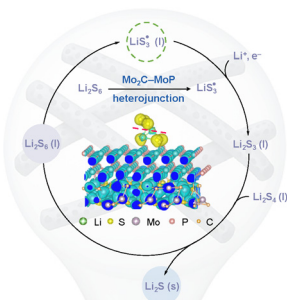
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### Cu-catalyzed selective coupling of alkynes with danB–Bpai

Qi Li, Dezhao Zhang, Tanyu Song, Xiaodong Tang, Jun-An Ma and Chun Zhang\*



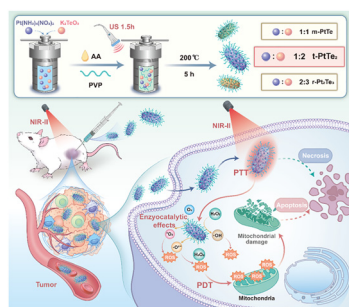
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### A Mo<sub>2</sub>C–MoP heterostructure enabled catalytic route for high-performance lithium–sulfur batteries

Baijing Wu, Xiaoxia Tang, Yujiao Xiang, Hongrui Wang, Cheng Tong,\* Minhua Shao, Cunpu Li\* and Zidong Wei

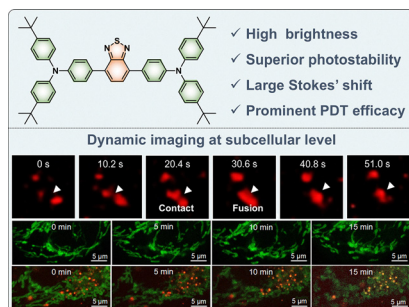
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### NIR-II photozymes with stoichiometric chemistry-regulated enzymatic activities for multi-modal nanocatalytic therapy

Zhengzheng Lin, Ziyang Song, He Shen, Yi Shen,\* Liang Chen\* and Yu Chen\*

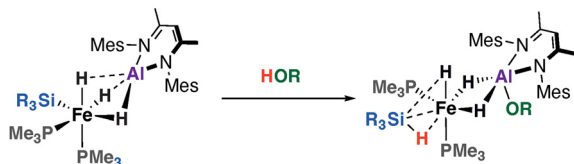
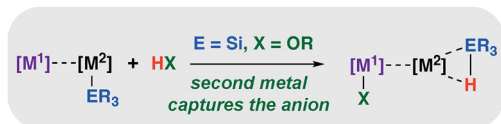
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### Red/NIR-emissive AIE nanoprobe to track subcellular dynamics in a photodynamic therapy process

Yu Zhou, Yalei Jiang, Lanqiong Zhang, Yukang Li, Ying Hao, Pei Zhou, Zhi Wang, Youming Zhang, Jen-Shyang Ni, Yanzi Xu,\* Lingjie Meng\* and Dongfeng Dang\*

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### A heterometallic $\sigma$ -silane adduct from cooperative reactivity of an iron–aluminium complex

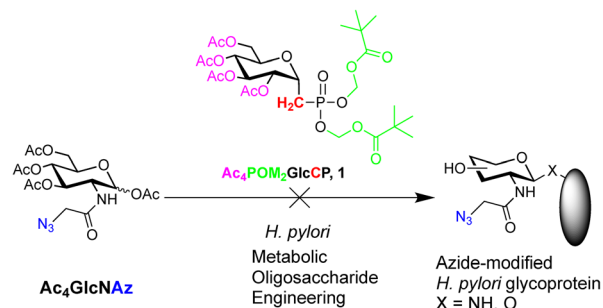
Benedek Stadler and Mark R. Crimmin\*



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### Inhibition of glycoprotein biosynthesis in the pathogenic bacterium *Helicobacter pylori* by masked carbohydrate phosphonates

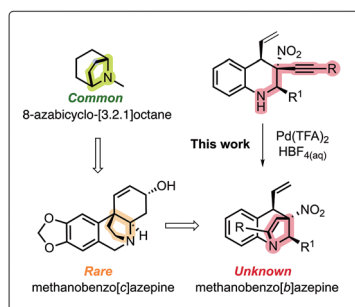
Ebrahim Soleimani, Aniq Chowdhury, Jian-She Zhu, Elisa Ospanow, Karen D. Moulton, Danielle H. Dube\* and David L. Jakeman\*



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### Palladium(II)-catalysed intramolecular hydroamination of 3-alkynyltetrahydroquinolines to methanobenzo[*b*]azepines

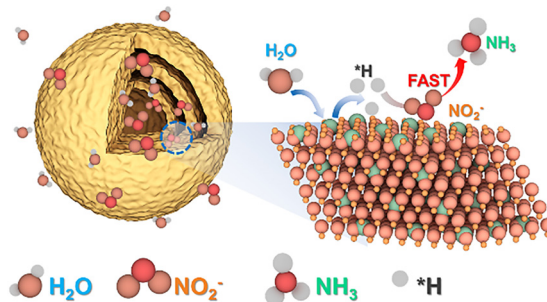
Chi Bong Eric Chao, Lloyd R. Kellermann, Christopher Richardson, Andrew J. Tague\*, Stephen G. Pyne\* and Christopher J. T. Hyland\*



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### Boosting nitrite conversion to ammonia by rational design of a Cu<sub>2</sub>O-based electrocatalyst

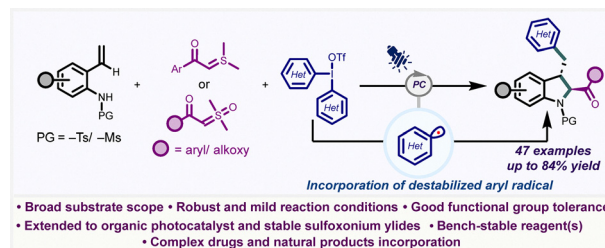
Yu Zhang, Encong Zhang, Jiahui Huang, Qingquan Chen, Jianyu Chen, Zhen Shen\*, Li Shi\*, Yanwen Ma and Jin Zhao\*



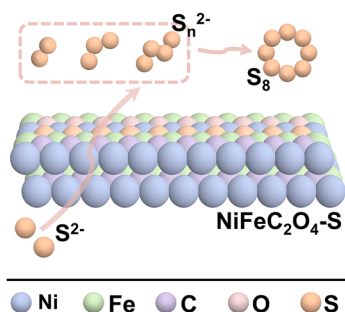
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### Photoredox-catalyzed multicomponent transformation towards functionalized *trans*-2,3-disubstituted indolines

M. Siva Prasad, Sneha Chandra, Prahallad Meher and Sandip Murarka\*



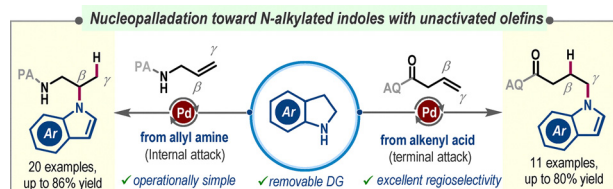
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### Employing oxalate to protect metal active sites for efficient sulfion oxidation coupled with hydrogen production

Yang Nie, Xinzheng Liu, Jingyu Li, Ruonan Wang\* and Bohua Dong\*

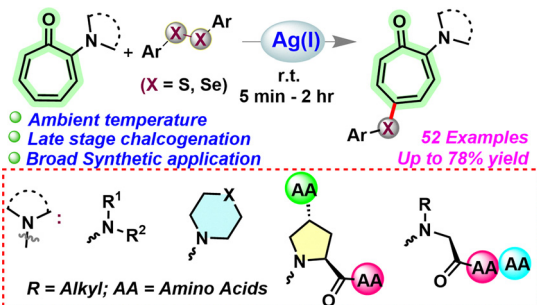
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### Nucleopalladation strategy towards regioselective *N*-alkylation of indoles with unactivated olefins

Shib Nath Saha, Niloy Ballav, Nitya Gupta and Mahiuddin Baidya\*

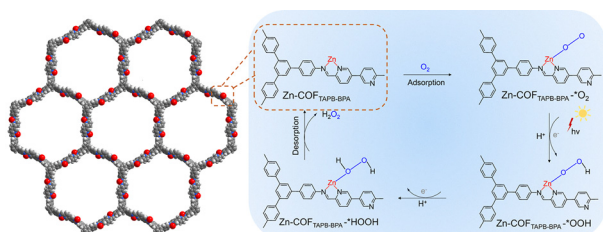
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### Ag(I)-mediated *mono*-selective C(sp<sup>2</sup>)-H chalcogenation of $\alpha$ -aminotropones and their peptides at room temperature

Malobika Kar and Nagendra K. Sharma\*

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### Atomic zinc active sites on imine-pyridine based covalent organic frameworks for enhancing photocatalytic H<sub>2</sub>O<sub>2</sub> production

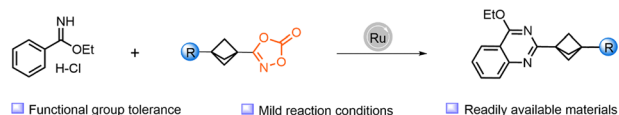
Ruolan Huang, Xuan-He Liu\* and Bing Sun\*



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### Ru-catalyzed C–H annulation: accessing quinazolinone–BCP hybrids from stable precursors

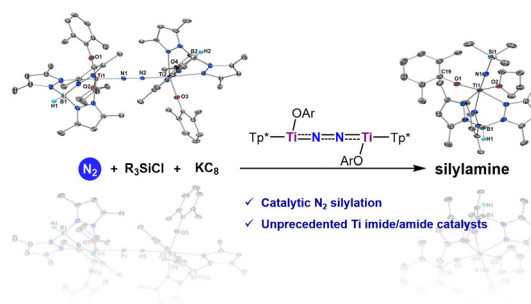
Yu-Yong Luan, Jin-Ye Li, Xue-Yuan Liu\* and Yong-Min Liang\*



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### Catalytic dinitrogen silylation by tris(pyrazolyl)borate-supported titanium complexes

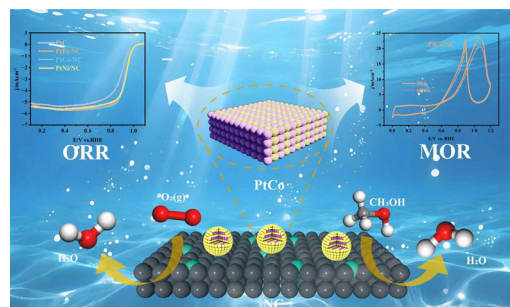
Chenrui Liu, Ling-Ya Peng, Yumeng Chen, Jingyi An, Zhaoxin Li, Wenshuang Huang, Ganglong Cui\* and Shaowei Hu\*



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### Atomically ordered PtM intermetallics on nitrogen-doped carbon for high-efficiency bifunctional electrocatalysis

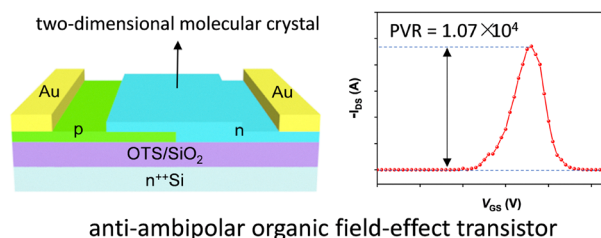
Yang Han, Qingmei Wang,\* Fengqin Zhang, Qingsong Hua\* and Shun Lu\*



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### High peak-to-valley ratio in anti-ambipolar organic transistors enabled by two-dimensional molecular crystal heterojunctions

Jiarong Yao, Xianfeng Shen, Xianshuo Wu, Hai Xie\* and Rongjin Li\*



## EXPRESSION OF CONCERN

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**Expression of concern: Photo-triggered C-arylation of active-methylene compounds with diazonium salts via an electron donor–acceptor (EDA) complex**

Shikha Pandey, Arsala Kamal, Ambuj Kumar Kushwaha, Himanshu Kumar Singh, Suresh Kumar Maury and Sundaram Singh\*

## CORRECTION

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**Correction: Photoswitchable inhibitors: temporally regulated inhibition of the IDO1 enzyme using photoactive merocyanine derivatives**

Niku Moni Das, Sayantani Biswas, Suravi Chauhan, Adyasa Sahoo, Debdas Dhabal and Debasis Manna\*

