

# ChemComm

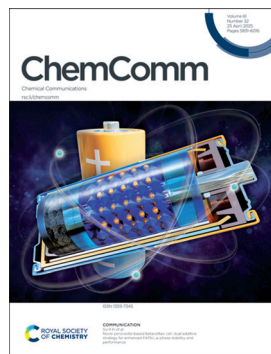
Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(32) 5831-6016 (2025)



### Cover

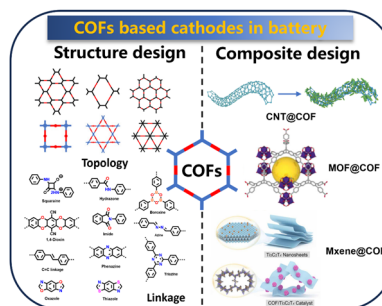
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*Chem. Commun.*,  
2025, 61, 5930.

## HIGHLIGHTS

5842

### Precision design of covalent organic frameworks for cathode applications

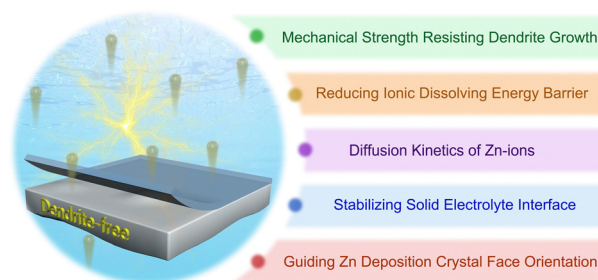
Zhiwei Zhao, Di Liu and Yang Wang\*



5857

### Advanced electrolyte strategies for dendrite-free aqueous Zn–metal batteries

Jiasen Yin, Yun Tan and Jun Pu\*



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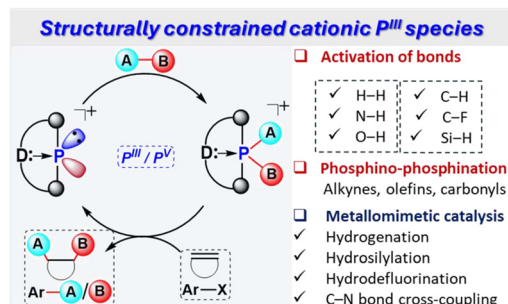
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## FEATURE ARTICLES

5871

Advancing metallomimetic catalysis through structural constraints of cationic  $P^{III}$  species

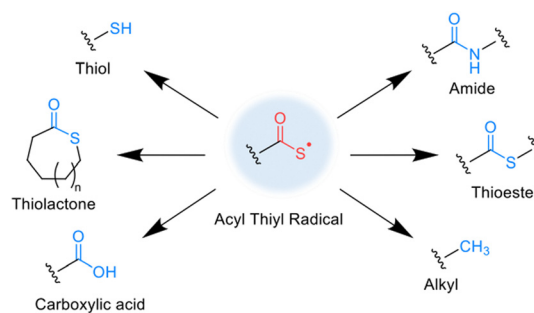
Deependra Bawari,\* Donia Toami and Roman Dobrovetsky\*



5883

## Harnessing radical mediated reactions of thioacids for organic synthesis

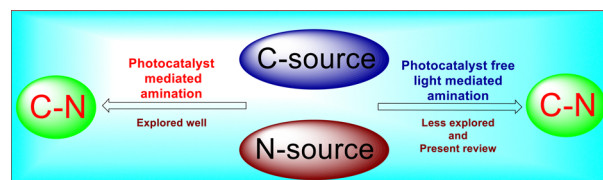
Alby Benny, Mark D. Nolan and Eoin M. Scanlan\*



5899

## Harnessing light without photocatalysts: advances in photocatalyst-free C-N bond formation

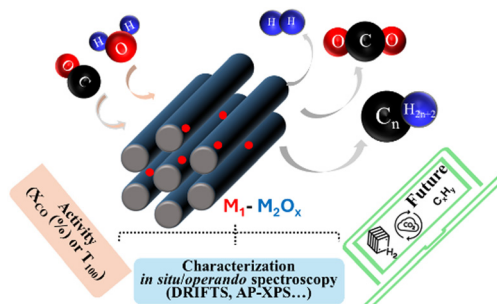
V. Muruges and Surya Prakash Singh\*



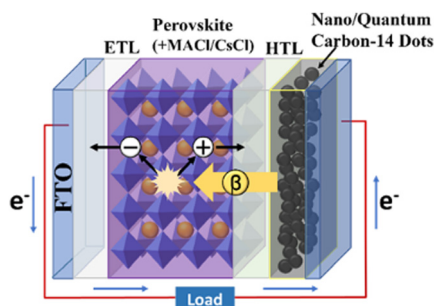
5917

Interactions of CO and/or  $H_2O$  with mesoporous oxide-supported metal catalysts: the role of MSI effects

Lingyi Qian Luo,\* Ling Fei, Rafael A. Hernandez and Hui Yan\*



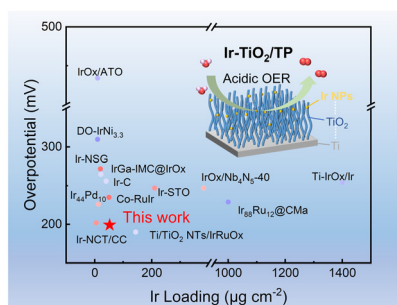
5930



### Novel perovskite-based betavoltaic cell: dual additive strategy for enhanced FAPbI<sub>3</sub> $\alpha$ -phase stability and performance

Chol Hyun Kim, Muhammad Bilal Naseem, Junho Lee, Hong Soo Kim, Sanghun Lee and Su-Il In\*

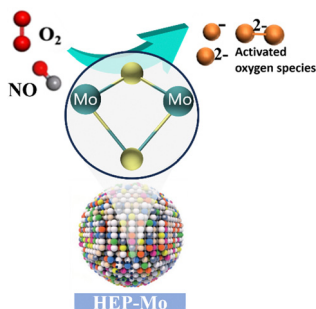
5934



### An integral composite electrode with low Ir loading for efficient acidic oxygen evolution

Peng Zhao, Kaihang Yue, Yao Dai, Yingjie Wan, Xuli Chen\* and Ya Yan\*

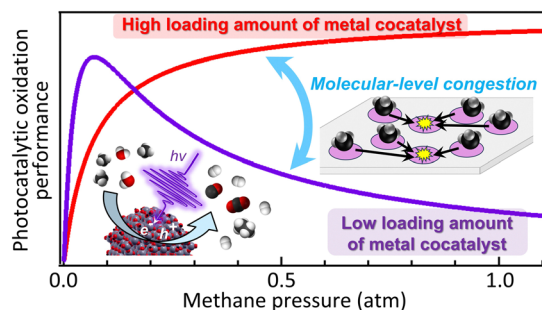
5938



### High-entropy strategies afford transition metal perovskite oxides with enhanced low-temperature NO<sub>x</sub> removal efficiency

Xuan Zhang, Dequan Jiang, Shenghui Han, Wanli Yi, Jianwen Su, Song Gao,\* Yonggang Wang\* and Ruqiang Zou

5942



### Critical impacts of metal cocatalysts on oxidation kinetics and optimal reaction conditions of photocatalytic methane reforming

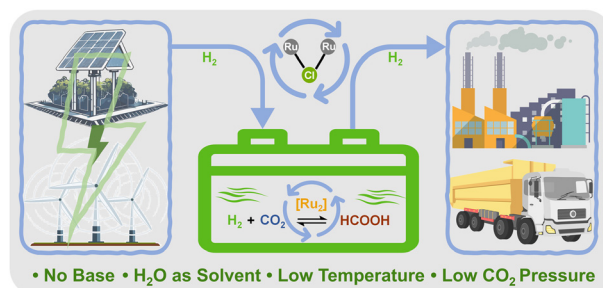
Hiromasa Sato, Hikaru Saito, Taisuke Higashi and Toshiki Sugimoto\*



5946

### CO<sub>2</sub>-mediated hydrogen storage and release cycles realized by a bimetallic ruthenium complex in pure water

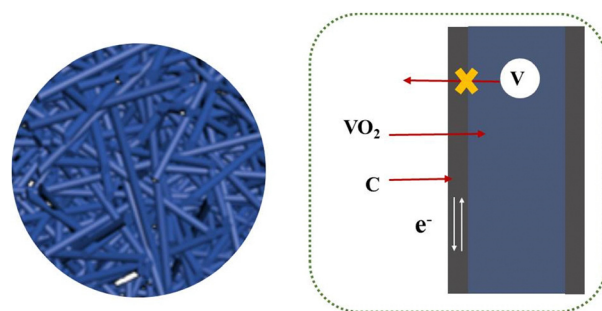
Tianhua Cui, Huihua Gong, Li Ji, Yuxuan Kong, Siheng Yang, Weichao Xue, Xueli Zheng, Haiyan Fu, Chong Cheng, Shuang Li, Hua Chen, Ruixiang Li\* and Jiaqi Xu\*



5950

### Carbon-wrapped vanadium dioxide for aqueous zinc batteries based on *in situ* carbon-impregnation engineering

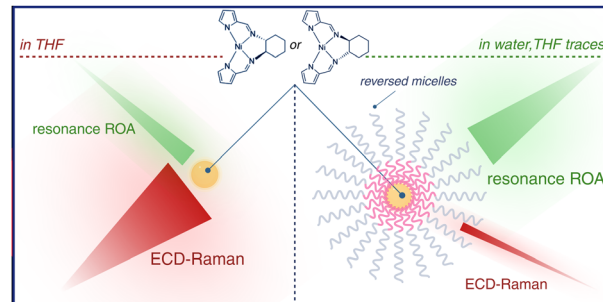
Xianyu Liu,\* Lei Tao, Yande Zhao, Hongmei Cao,\* Zhe Wang and Zhigang Fan\*



5954

### A simple strategy for measuring the genuine resonance Raman optical activity (RROA) of nonpolar molecules

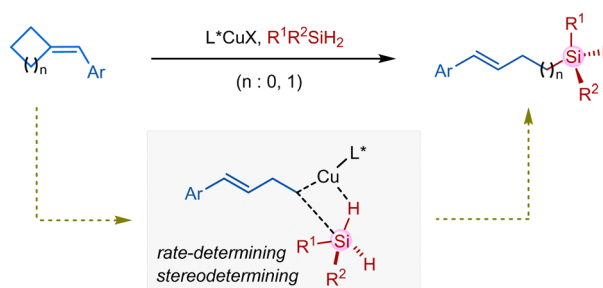
Joanna Mazurkiewicz, Aleksandra Orlef, Tomasz Misiaszek, Tomasz K. Olszewski and Agnieszka Kaczor\*



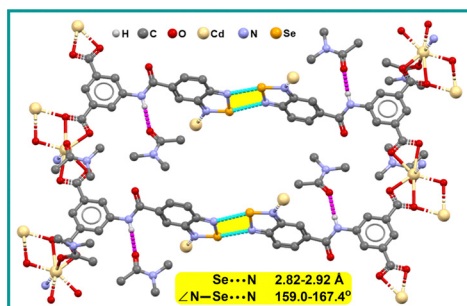
5958

### Si-stereogenic remote alkenyl monohydrosilanes enabled by CuH-catalyzed enantioselective hydrosilylation of strained methylenecyclopropanes

Wanying Xie, Dong Zhai,\* Xiao-Xi Li, Weiqiao Deng and Songjie Yu\*



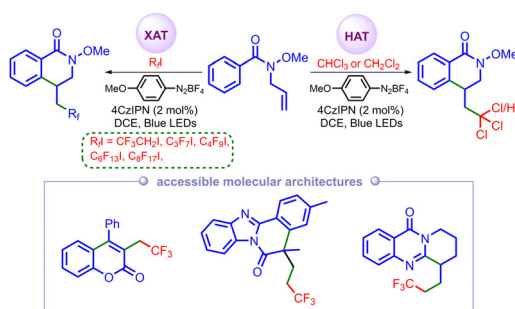
5962



### Chalcogen bonded metal–organic frameworks: insights from X-ray analysis and theoretical calculations

Vusala A. Aliyeva, Vânia André, Luísa M. D. R. S. Martins, Atash V. Gurbanov, Rosa M. Gomila, Antonio Frontera,\* Tiago F. C. Cruz and Kamran T. Mahmudov\*

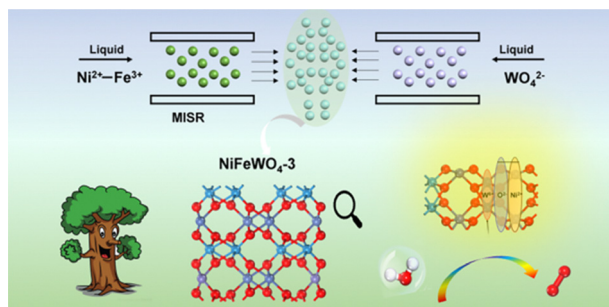
5966



### Haloalkane-driven dichotomous reactivity of aryl radicals as halogen and hydrogen atom transfer agents: photocatalytic olefin and alkyne functionalization cascades

Shivani Arora, Anshika Sinha, Tavinder Singh and Anand Singh\*

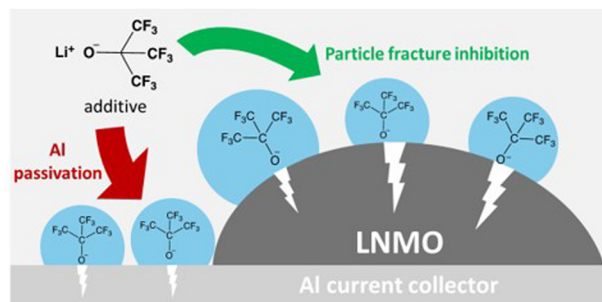
5970



### Scale-up synthesis of amorphous Ni–Fe tungstate for highly-efficient oxygen evolution reaction

Heng Chen, Xinyue Yang, Yueli Wang, Gaoyan Zhang, Nairui Luan, Qingcheng Zhang,\* Fan He, Siting Lv, Xi Yu, Xijun Liu, Wei Zhang,\* Ge Meng,\* Yong Lei\* and Shun Wang\*

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### Understanding the electrolyte additive properties of lithium nonafluoro-*tert*-butoxide for its application in high-voltage LiNi<sub>0.5</sub>Mn<sub>1.5</sub>O<sub>4</sub>-graphite batteries

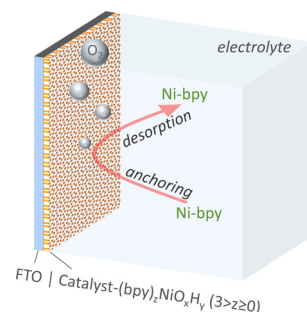
Binayak Roy,\* Urbi Pal, Jason John, Cuong Nguyen, Patrick C. Howlett, Mega Kar and Douglas R. MacFarlane\*



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### A nearly transparent Ni-based oxygen-evolving catalyst for photoelectrocatalysis

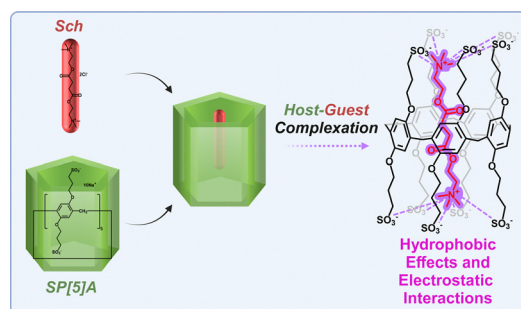
Qiu Zhang, Peikun Zhang\* and Chunhua Cui\*



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### A sulfonated supramolecular host based on pillar[5]arene for succinylcholine-induced neuromuscular blockade reversal

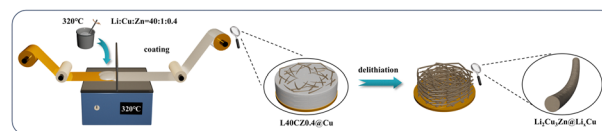
Mengyao Li, Yujie Cheng, Rui Fei, Danyu Xia,\*  
Zibin Zhang,\* Shaolong Qi\* and Jianshi Du\*



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### In situ formed 3D hybrid framework of lithiophilic Li<sub>2</sub>Cu<sub>3</sub>Zn modified Li<sub>x</sub>Cu alloy nanowires towards a dendrite-free Li metal anode

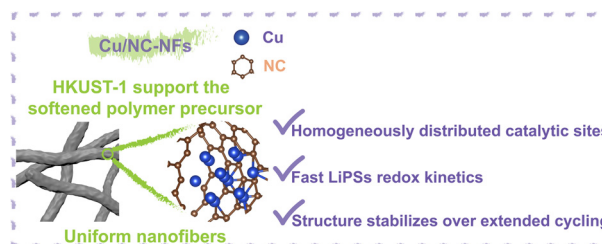
Hang Liu, Chaohui Wei, Zhicui Song, Yujie Wu,  
Donghuang Wang, Aijun Zhou and Jingze Li\*



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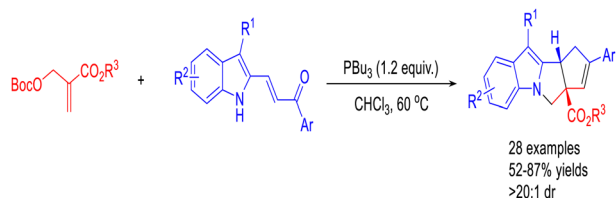
### Built-in skeleton Cu/NC-NFs as a sulfur carrier for lithium sulfur batteries

Die Su, Yuhong Zeng, Meiqi Geng, Tao Wang,\*  
Minhua Shao, Cunpu Li\* and Zidong Wei



## COMMUNICATIONS

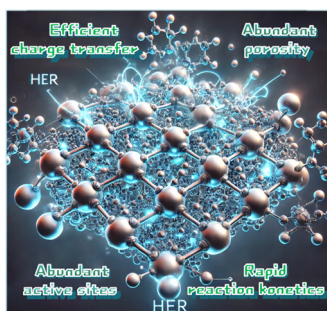
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### Phosphine-mediated [2+3]/[2+3] domino annulation reaction: access to cyclopentane[3,4]pyrrolo[1,2-a]-indoles

Yannan Zhu, Nan He, Yumeng Li, Yuxuan Zhu and Gang Qi\*

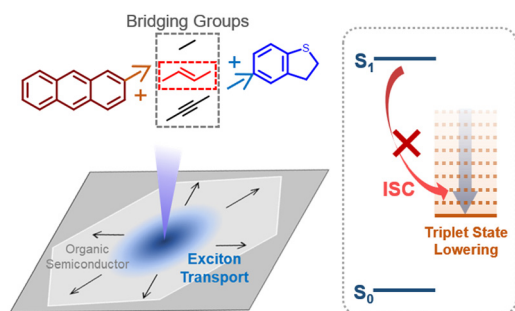
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### Innovative bipyridine-bridged metal porphyrin polymer for Robust and superior electrocatalytic hydrogen evolution

Xiaoyu Zhai, Kainan Wang, Cheng Yuan, Pengfei Chen, Wei Zhao,\* Aijian Wang,\* Long Zhao and Weihua Zhu

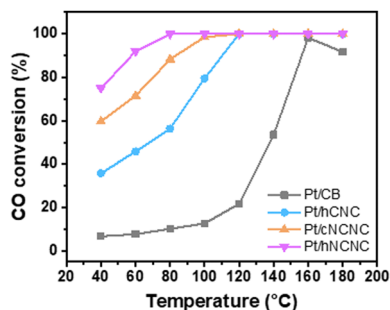
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### Promoted exciton transport in organic semiconductors by triplet-state manipulation

Lingchen Meng, Chunyi Zhao, Feng Li, Jie Liu, Xianchang Yan, Yaxiong Wei, Tao Yang, Xianyi Zhang, Lang Jiang,\* Zhou Lu,\* Qi Sun,\* Wenming Tian\* and Shengye Jin

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### High-efficiency Pt catalyst immobilized on hierarchical N-doped carbon nanocages for preferential oxidation of CO in H<sub>2</sub>

Lijie Yan, Xinyi Wang, Changkai Zhou, Haojie Yu, Lijun Yang, Qiang Wu,\* Xizhang Wang,\* Yining Fan and Zheng Hu



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## Scalable fabrication of nano-to-micro carbon disk ultramicroelectrodes for single small extracellular vesicle detection

Hong-Yuan Liu, An-Rong Sun, Li-Yuan Wu and Zhi-Ling Zhang\*

