

# ChemComm

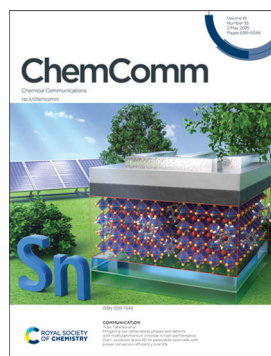
Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(35) 6381-6544 (2025)



### Cover

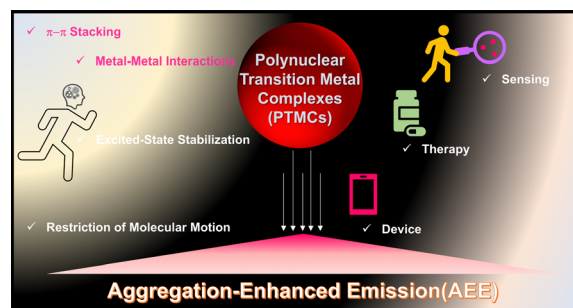
See Yuko Takeoka  
*et al.*, pp. 6462–6465.  
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Yuko Takeoka from  
*Chem. Commun.*,  
2025, 61, 6462.

## HIGHLIGHTS

6391

### Unveiling mechanistic insights and applications of aggregation-enhanced emission (AEE)-active polynuclear transition metal complexes

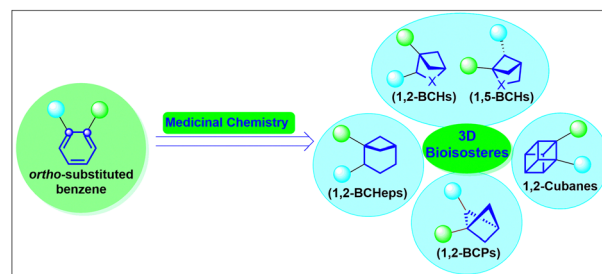
Bishnu Das\*



6417

### Recent advances in bridged structures as 3D bioisosteres of *ortho*-phenyl rings in medicinal chemistry applications

Kexue Xia



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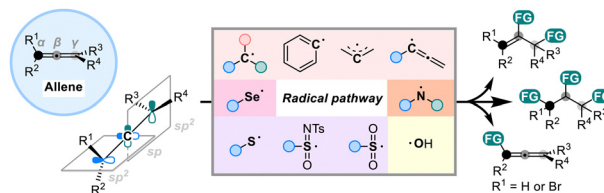
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## FEATURE ARTICLES

6426

## Radical functionalization of allenes

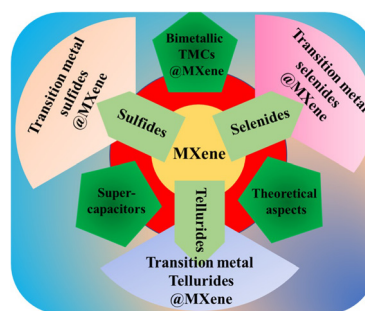
Rongnan Yi, Qiang Li, Long-Yong Xie\* and Wen-Ting Wei\*



6439

## MXene-transition metal chalcogenide hybrid materials for supercapacitor applications

Gopinath Sahoo and Chandra Sekhar Rout\*

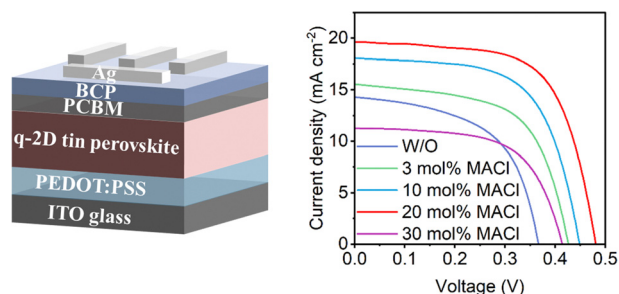


## COMMUNICATIONS

6462

## Mitigating low-dimensional phases and defects with methylammonium chloride in high-performance Dion–Jacobson quasi-2D tin perovskite solar cells with power conversion efficiency over 6%

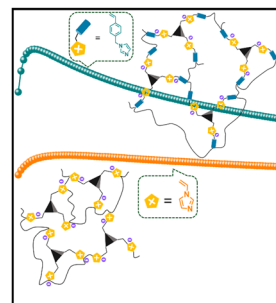
Chunqing Li, Towhid H. Chowdhury, Masahiro Yoshizawa-Fujita, Masahiro Rikukawa, Masatoshi Yanagida, Yasuhiro Shirai and Yuko Takeoka\*



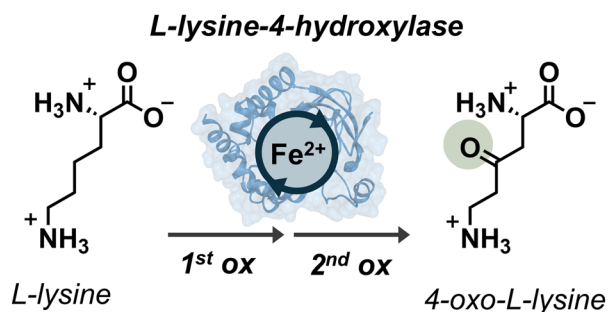
6466

## An ionic ultramicroporous polymer with engineered nanopores enables enhanced acetylene/carbon dioxide separation

Asif Raza, Sousa Javan Nikkhah, Lilia Croitor, Ahmed Gamal Attallah, Eric Hirschmann, Matthias Vandichel\* and Soumya Mukherjee\*



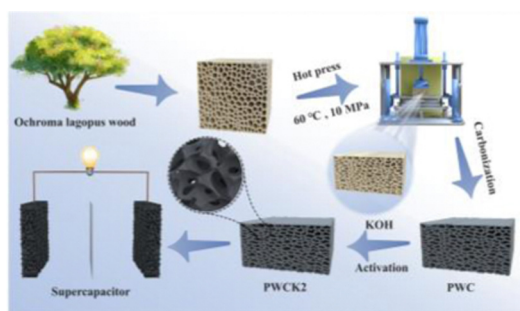
6470



### Sequential oxidation of *L*-lysine by a non-heme iron hydroxylase

Elizabeth S. Reynolds, Thomas G. Smith,  
Anoop R. Damodaran\* and Ambika Bhagi-Damodaran\*

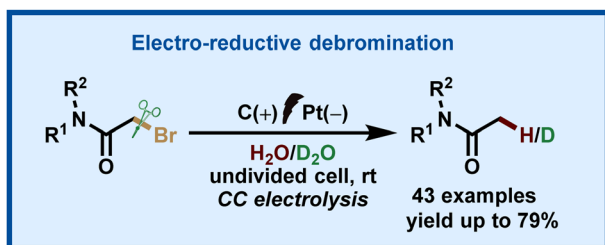
6474



### A densification-activation strategy toward hierarchical porous self-supporting thick carbon electrodes for high-power supercapacitors

Zixuan Guo, Zhiwei Tian, Yanbo Liu,\* Yong Huang,  
Weijun Li,\* Xiaoshuai Han, Shuijian He, Haimei Mao,  
Chunmei Zhang,\* Gaigai Duan and Shaohua Jiang\*

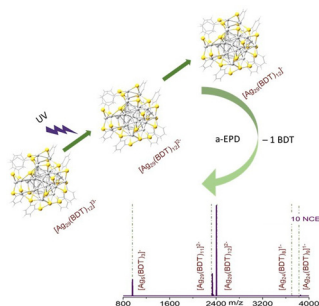
6478



### Electrochemical debrominative hydrogenation/ deuteration of 2-bromo-*N*-arylacetamides

Saurabh Singh, Malkeet Singh, Ashvani Singh and  
Maya Shankar Singh\*

6482



### Ultraviolet photoactivation perturbs the metal-ligand interface of atomically precise nanoclusters

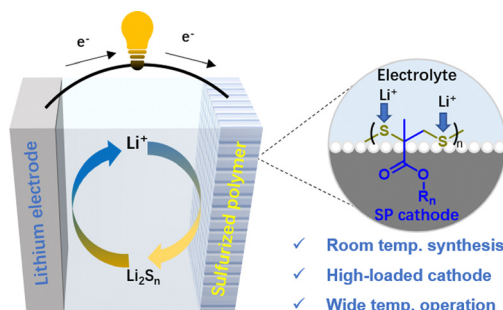
Anagha Jose, Jada N. Walker, Maya Khatun, Sami Malola,  
B. S. Sooraj, Hannu Häkkinen,\* Jennifer S. Brodbelt\* and  
Thalappil Pradeep\*



6486

### Room-temperature synthesis of a methacrylate-derived sulfurized polymer cathode for rechargeable lithium batteries

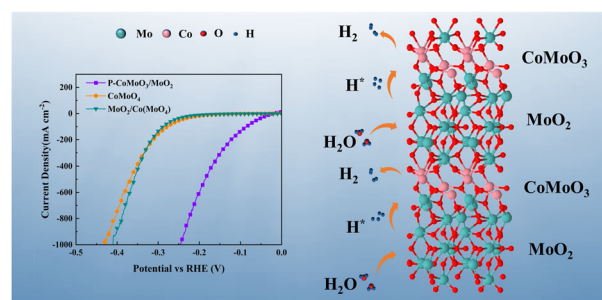
Zhangyu Zheng, Xiaofei Qian,\* Duan Bin, Yanrong Wang and Jie Xu\*



6490

### Boosting P-CoMoO<sub>3</sub>/MoO<sub>2</sub> hydrogen evolution via water molecule dissociation by MoO<sub>2</sub> and H<sub>2</sub> desorption by CoMoO<sub>3</sub>

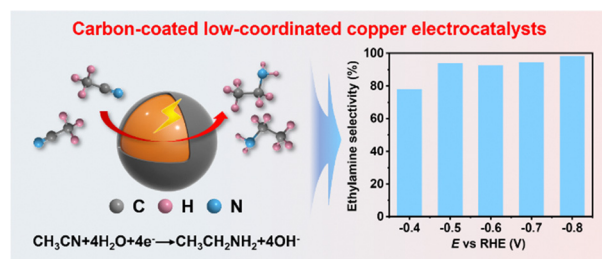
Xue Yang, Liangkun Qiu, Yan Zhang, Ao Dong, Chenyang Guo, Shuo Zhang, Yunjin Song, Hongtao Gao\* and Tianrong Zhan\*



6494

### Electroreduction of acetonitrile to ethylamine by thin carbon-coated copper catalysts with rich active interphases

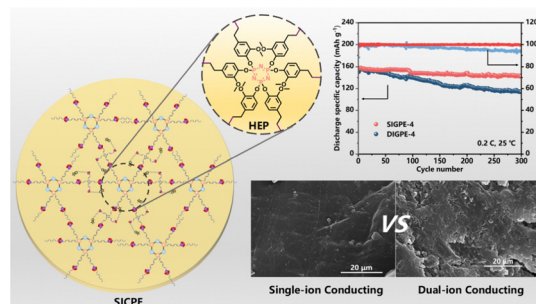
Min-Yi Zhu, Ling-Yu Dong, Yu-Tai Wu, Jingyuan Ma,\* Guang-Ping Hao\* and An-Hui Lu



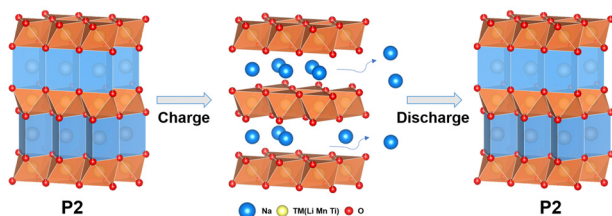
6498

### A cyclic-triphosphazene based single-ion polymer electrolyte prepared via click reaction for lithium metal batteries

Kuan Lu, Cengliang Shan, Huinan Li, Hongbin Li, Hui Zhang, Chen Xiong, Wei Hu and Baijun Liu\*



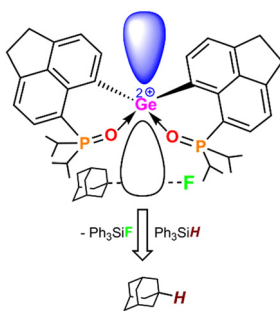
6502



### Realizing reversible anionic redox based on a Na–O–Li configuration for Na-layered oxide cathodes with solid-solution reaction

Mingjing Yang, Guangyu Zhang, Hai-Yan Hu, Yu Su,\* Hanghang Dong, Zhuang-Chun Jian, Qianqian Peng, Shuangqiang Chen, Shu-Lei Chou\* and Yao Xiao\*

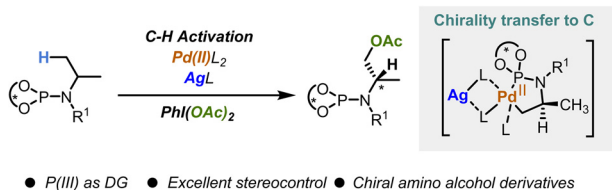
6506



### An intramolecular phosphine-oxide stabilized germanium(IV) di-cation with enhanced Lewis acidity and catalytic applications

Akanksha Kumari, Balakrishna Peddi, Cem. B. Yildiz\* and Moumita Majumdar\*

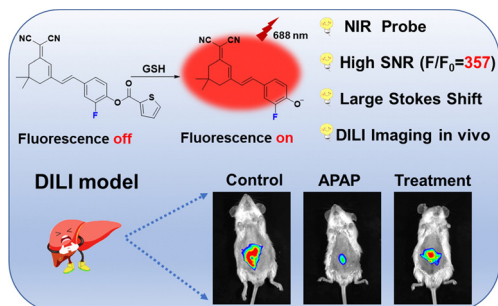
6510



### Diastereoselective C(sp<sup>3</sup>)–H acetoxylation of phosphoramidites

Anirban Mondal, Vanda Dašková, Xiaobing Chen, Niklas O. Thiel, Georgios Alachouzos and Ben L. Feringa\*

6514



### Construction of a novel highly selective NIR probe for monitoring the changes of glutathione levels in drug-induced liver injury

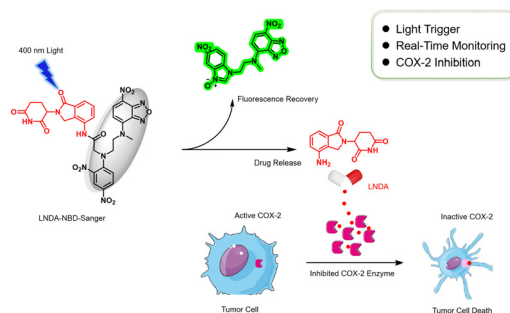
Zhiyuan Wang, Xiao Li, Suntao Shi, Ruipeng Shen, Yue Yang, Chunlin Sun, Zitong Liu, Haijuan Zhang\* and Baoxin Zhang\*



6518

### Light-triggered release of lenalidomide with fluorescent indication for inhibition of COX-2 enzyme activity in cancer cells

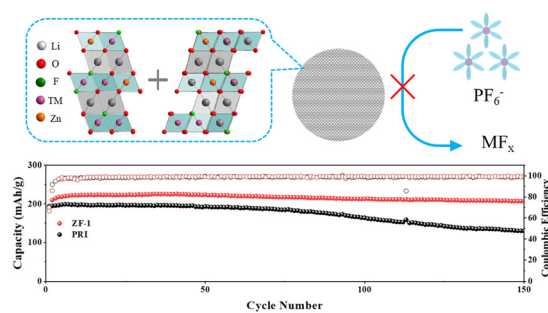
Ming Liu, Yajing Li, Fang Wang, Sheng Lu,\* Long Jiang\* and Xiaoqiang Chen\*



6522

### Improving the surface structural stability of Li-rich layered cathodes by cation–anion doping

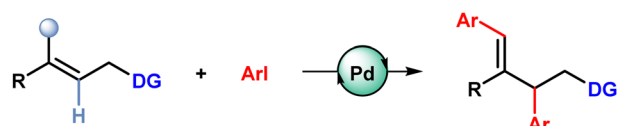
Fulin Tan, Yuqing Liu, Wenzhao Huang, Boyang zhang, Ziyang Liang, Xiaola Li, Shuxing Wu, Chenyu Liu,\* Zhan Lin and Dong Luo\*



6526

### Native group-directed double Heck arylation of internal alkenes *via* selective $\beta$ -H elimination

Jiali Wang, Runze Luan, Tianming Liu, Siqing Liu, Yu Du\* and Weiping Su\*



DG = ester, amide, hydroxyl, etc.

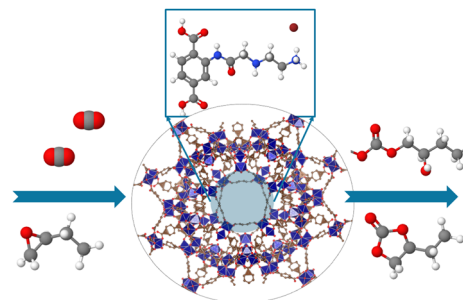
without the need for ligands and bases

mild conditions, simple operations, broad substrate scope

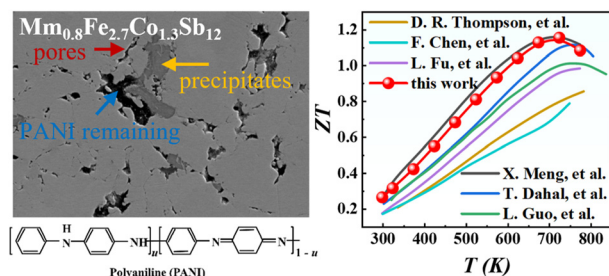
6530

### Immobilizing amine species in a Cr-MOF for enhanced selectivity in CO<sub>2</sub> cycloaddition reactions

Anita Justin, Till Schertenleib, Jocelyn Roth, Jordi Espín and Wendy L. Queen\*



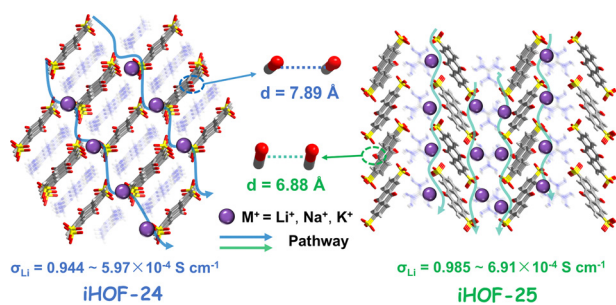
6534



### Enhanced thermoelectric figure of merit and heat-electricity efficiency in p-type $Mm_{0.8}Fe_{2.7}Co_{1.3}Sb_{12}$ skutterudites via polyaniline compositing

Xiaofang Cao, Fudong Zhang, Mingzhen Song, Xiaohui Pang, Xiaolian Chao, Zupei Yang\* and Di Wu\*

6538



### Anthraquinone substituents modulate ionic hydrogen-bonded organic frameworks to achieve high ionic conductivity for alkali metal ions

Xu-Yong Chen, Guiqiang Fei,\* Xiang-Tian Bai, Simeng Qi, Xiao-Jie Cao, Yi-Da Gao, Xin Luo and Li-Hui Cao\*

