

# ChemComm

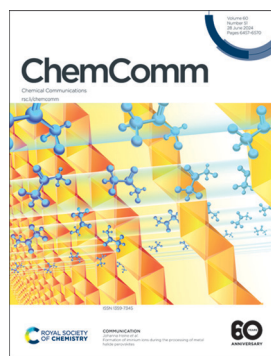
Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(51) 6457-6570 (2024)



### Cover

See Johanna Heine *et al.*, pp. 6488–6491. Image reproduced by permission of Leander Aurel Taubner from *Chem. Commun.*, 2024, 60, 6488.



### Inside cover

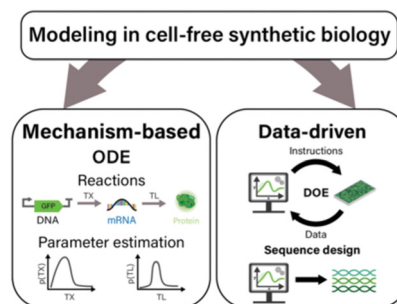
See Yuki Nagai, Yoichi Kobayashi *et al.*, pp. 6492–6495. Image reproduced by permission of Yoichi Kobayashi from *Chem. Commun.*, 2024, 60, 6492.

## HIGHLIGHT

6466

### Mechanism-based and data-driven modeling in cell-free synthetic biology

Angelina Yurchenko, Gökçe Özkul, Natal A. W. van Riel, Jan C. M. van Hest and Tom F. A. de Greef\*

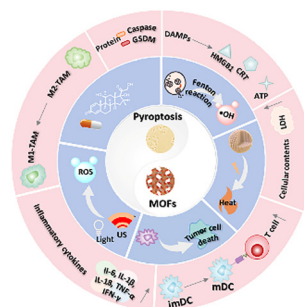


## FEATURE ARTICLE

6476

### Metal-organic framework (MOF)-based materials for pyroptosis-mediated cancer therapy

You Dou, Yuting Wang, Shu Tian, Qiao Song, Yun Deng, Zhipeng Zhang,\* PeiYao Chen\* and Yao Sun\*



# ChemComm

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with outstanding  
preliminary research

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Fundamental questions  
Elemental answers

6488

### Formation of iminium ions during the processing of metal halide perovskites

Jakob Möbs, Ajna Tomori and Johanna Heine\*

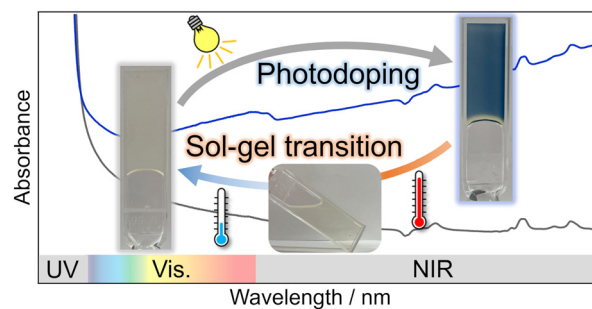


Rapid conversion in acetone

6492

### Photodoping-based broadband photochromism of semiconductor nanocrystals under air operated by a supramolecular gel

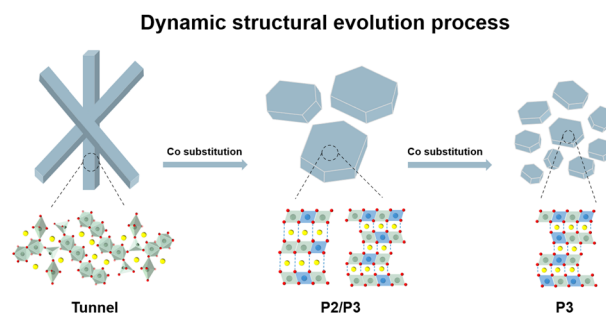
Yuki Nakai, Yuki Nagai,\* Yoshinori Okayasu and Yoichi Kobayashi\*



6496

### Insights into dynamic structural evolution and its sodium storage mechanisms of P2/P3 composite cathode materials for sodium-ion batteries

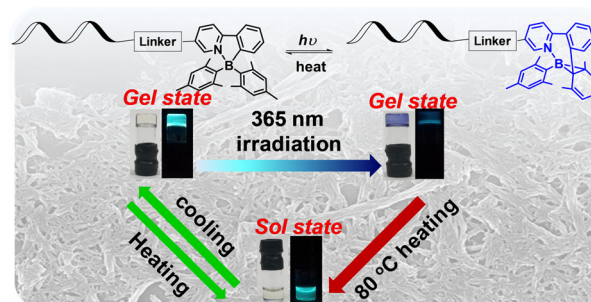
Yi-Feng Liu, Hai-Yan Hu, Yan-Fang Zhu,\* Dan-Ni Peng, Jia-Yang Li, Yan-Jiang Li, Yu Su, Rui-Ren Tang,\* Shu-Lei Chou\* and Yao Xiao\*



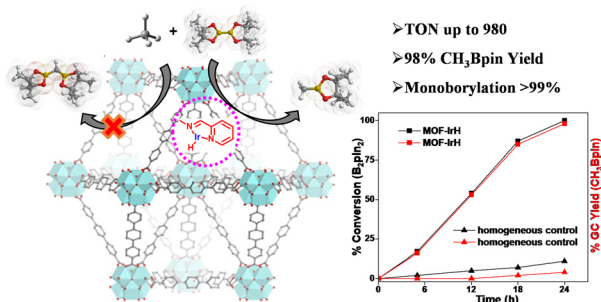
6500

### Organoboron based photochromic gelator

Tongtong Zhang, Zhenhui Zhao, Xiaodong Yin and Nan Wang\*



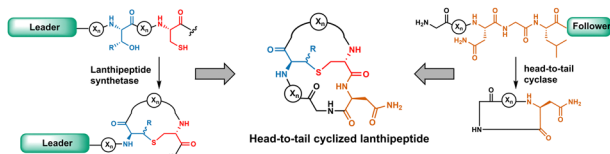
6504



### Selective monoborylation of methane by metal–organic framework confined mononuclear pyridylimine-iridium(i) hydride

Rahul Kalita, Manav Chauhan, Poorvi Gupta, Wahida Begum, Chhaya Thadhani, Biplab Ghosh, Balendra, Himani Bisht and Kuntal Manna\*

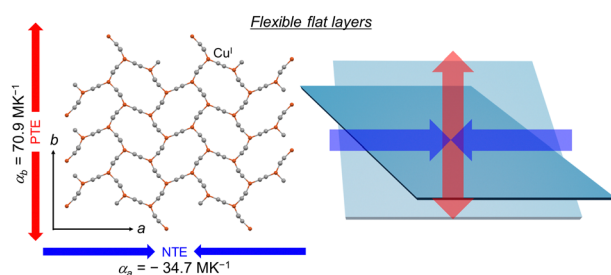
6508



### Use of a head-to-tail peptide cyclase to prepare hybrid RiPPs

Tung Le, Dongtianyuan Zhang, Rachel M. Martini, Subhanip Biswas and Wilfred A. van der Donk\*

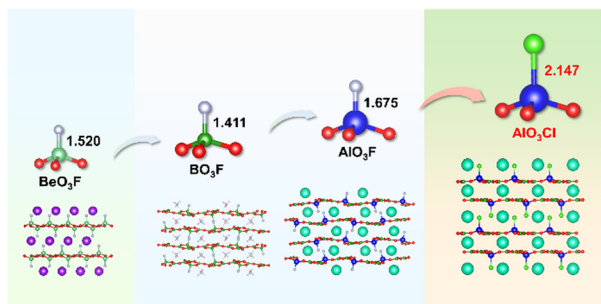
6512



### Giant anisotropic thermal expansion of copper-cyanido flat layers with flexible copper nodes

Yuudai Iwai, Manabu Nakaya, Yuta Tsuji, Benjamin Le Ouay, Masaaki Ohba\* and Ryo Ohtani\*

6516



### CsAlB<sub>3</sub>O<sub>6</sub>Cl: the rational construction of a KBBF-type structure with aligned <sup>2</sup><sub>∞</sub>[AlB<sub>3</sub>O<sub>6</sub>Cl] layers *via* introducing unprecedented [AlO<sub>3</sub>Cl] tetrahedra

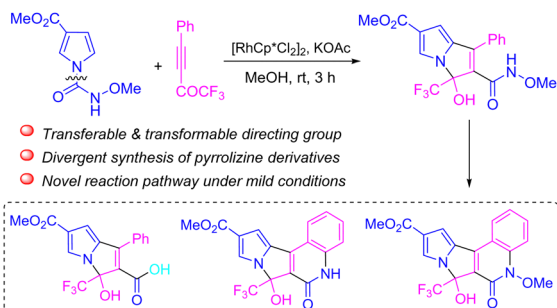
Haoran Liu, Jiahao Jiao, Abudukadi Tudi, Qingyu Liu, Zhihua Yang, Shilie Pan\* and Min Zhang\*





## COMMUNICATIONS

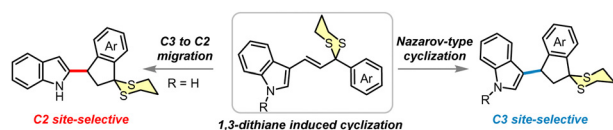
6536



## Divergent synthesis of pyrrolizine derivatives through C–H bond functionalization of pyrroles

Manqing Wang, Yuanshuang Xu, Huihang Hou, Xinying Zhang\* and Xuesen Fan\*

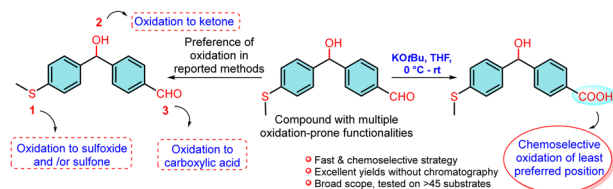
6540



## Site-selective synthesis of indanyl-substituted indole derivatives via 1,3-dithiane induced Nazarov cyclization

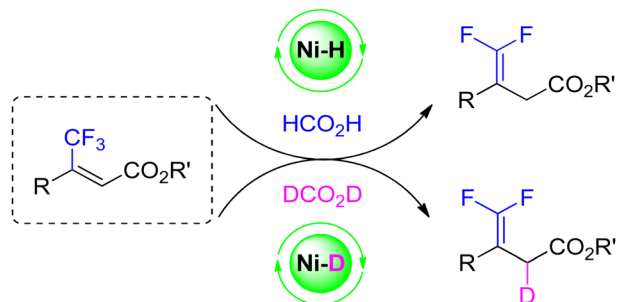
Jia Li, Liang Li, Mingming Mao, Rui-Peng Li, Xing Huo\* and Shouchu Tang\*

6544

Chemoselective oxidation of aromatic aldehydes to carboxylic acids: potassium *tert*-butoxide as an anomalous source of oxygen

Waseem I. Lone, Auqib Rashid, Bilal A. Bhat\* and Showkat Rashid\*

6548

Nickel-catalyzed hydrodefluorination/deuterodefluorination of CF<sub>3</sub>-alkenes with formic acid

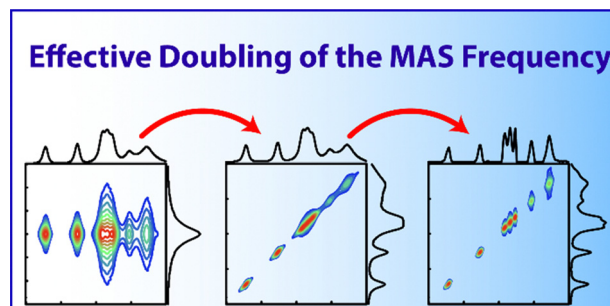
Peng Yang,\* Haiping Yu, Runze Zhai, Jianrong Steve Zhou\* and Bo Tang\*



6552

### Elimination of homogeneous broadening in $^1\text{H}$ solid-state NMR

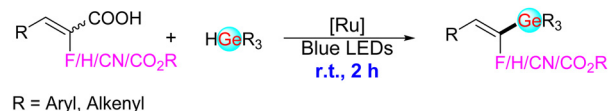
Frédéric A. Perras



6556

### Photoinduced decarboxylative germylation of $\alpha$ -fluoroacrylic acids: access to germylated monofluoroalkenes

Xiao-Yu Lu,\* Yu-Jun Qian, Hai-Lun Sun, Meng-Xue Su, Zi-Zhen Wang, Fan Jiang, Xin-Yue Zhou, Yan-Xi Sun, Wan-Li Shi and Ji-Ru Wan

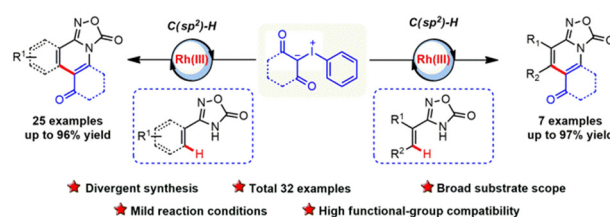


- ✓ Short photoirradiation time
- ✓ Excellent E/Z selectivity
- ✓ Efficient synthesis of germylated monofluoroalkenes

6560

### Rh(III)-catalyzed $\text{C}(\text{sp}^2)\text{-H}$ functionalization/[4+2] annulation of oxadiazolones with iodonium ylides to access diverse fused-isoquinolines and fused-pyridines

Wang-Liang Chen, Jia-Lin Song, Sheng Fang, Jiong-Bang Li, Shang-Shi Zhang\* and Bing Shu\*



6564

### Over-lithiated NCM through $\text{Li}_5\text{FeO}_4$ for high energy silicon-based lithium-ion batteries

Yue Dai, Bo Chang, Wei Li,\* Haoshen Zhou and Ping He\*

