

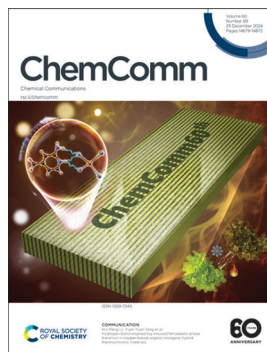
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ISSN 1359-7345 CODEN CHCOFS 60(99) 14679-14872 (2024)



Cover

See Bernd M. Schmidt *et al.*, pp. 14762-14765. Image reproduced by permission of Tim David from *Chem. Commun.*, 2024, 60, 14762.



Inside cover

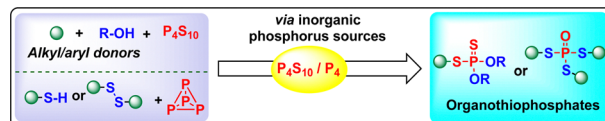
See Hui-Peng Lv, Yuan-Yuan Tang *et al.*, pp. 14766-14769. Image reproduced by permission of Yuan-Yuan Tang from *Chem. Commun.*, 2024, 60, 14766.

HIGHLIGHTS

14691

New Frontiers in phosphorothioate formation: harnessing inorganic phosphorus sources

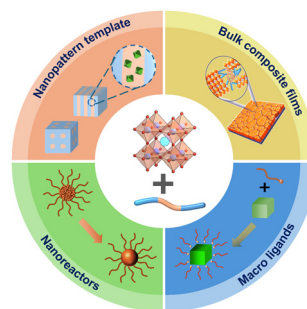
Jiawei He, Xuesi Zhou, Zixuan Wan, Hua Cao and Xiang Liu*



14703

Soft optical materials based on the integration of perovskite nanostructures and block copolymers

Naifu Shen, Jinyu Bu, Xun Liu and Weinan Xu*



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Fundamental questions
Elemental answers

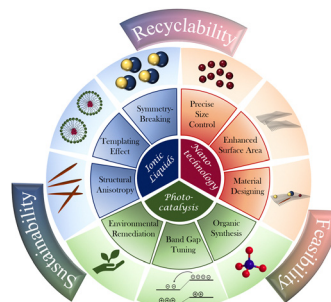


FEATURE ARTICLES

14717

Ionic liquid-assisted sustainable preparation of photo-catalytically active nanomaterials and their composites with 2D materials

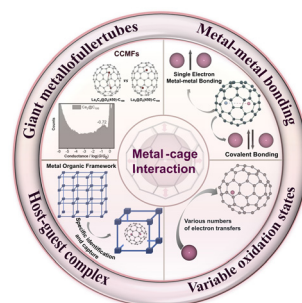
Kanica Sharma and Tejwant Singh Kang*



14733

Advancements in endohedral metallofullerenes: novel metal–cage interactions driving new phenomena and emerging applications

Dan-ning Wang, Wangqiang Shen,* Mengyang Li, Mengmeng Zhang, Jiuke Mu and Wenting Cai*

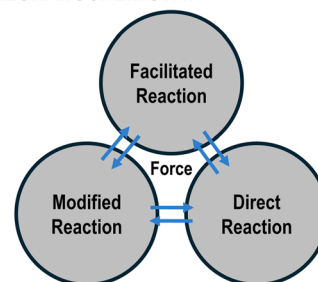


14750

On the physical processes of mechanochemically induced transformations in molecular solids

Adam A. L. Michalchuk

MECHANO-CHEMISTRY

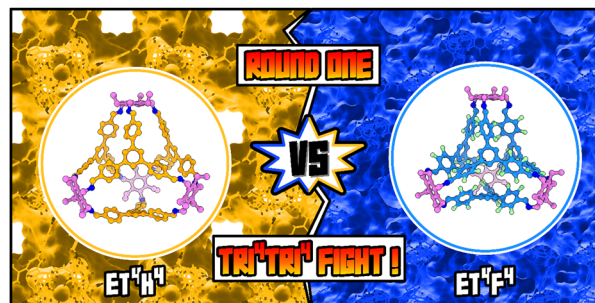


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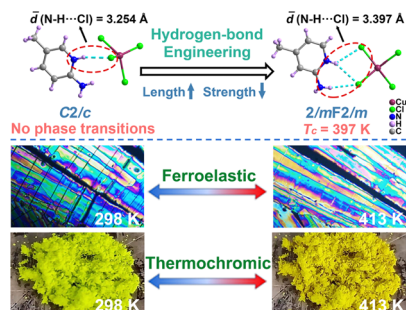
14762

Fluorinated vs. non-fluorinated tetrahedral Tri^4Tri^4 porous organic cages for H_2 , CO_2 , and CH_4 adsorption

Tim David, Robert Oestreich, Tobias Pausch, Yuki Wada, Tom Fleck-Kunde, Masaki Kawano, Christoph Janiak and Bernd M. Schmidt*



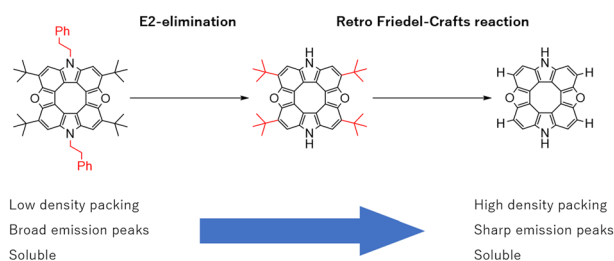
14766



Hydrogen-bond engineering induced ferroelastic phase transition in copper-based organic-inorganic hybrid thermochromic materials

Xin Deng, Lin Zhou, Xin Yan, Yan-Juan Wang, Wen-Li Yang, Hui-Peng Lv* and Yuan-Yuan Tang*

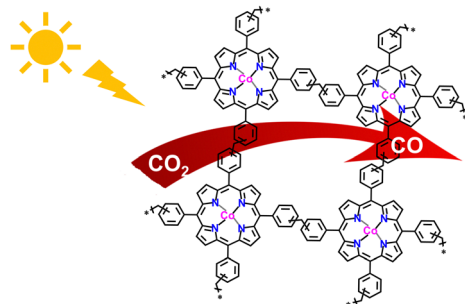
14770



Synthesis of substituent-free dioxadiaza[8]circulene to investigate intermolecular interactions and photophysical properties

Aoi Nakagawa, Wataru Ota, Takumi Ehara, Yusuke Matsuo, Kiyoshi Miyata, Ken Onda, Tohru Sato,* Shu Seki* and Takayuki Tanaka*

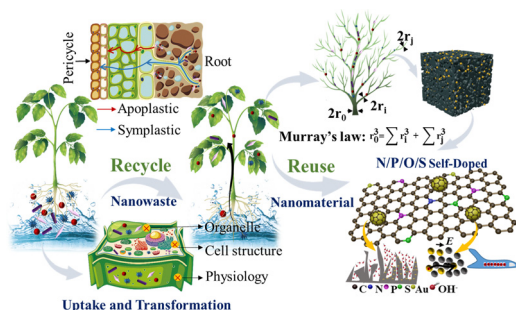
14774



A cobalt-tetraphenylporphyrin-based hypercrosslinked polymer for efficient CO₂ photoreduction to CO

Saif Ullah, Xunliang Hu, Yaqin Zhang, Irshad Hussain, Xiaoyan Wang, Hui Gao* and Bien Tan*

14778



Living plant-assisted recycling of nano gold into Murray porous carbon electrode materials

Jinling Li, Qianghong Wu, Huanzhong Zeng, Rong Zou, Jianzhou Niu, Junlong Chen, Hongjun Liu and Fen Ran*

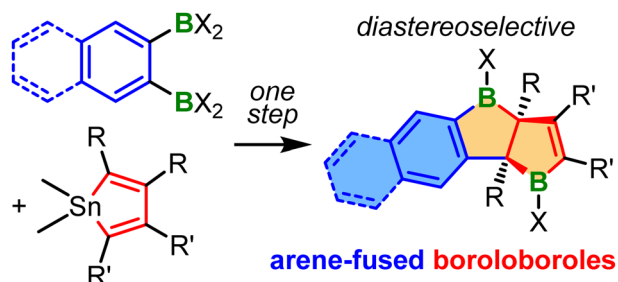


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14782

One-step selective synthesis of doubly and triply fused chiral boroloborole derivatives

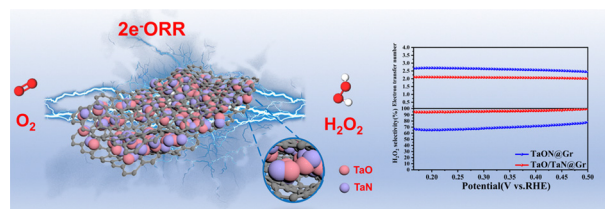
Josina L. Bohlen, Nele Wieprecht, Merle Arrowsmith, Alena Häfner, Marco Neder and Holger Braunschweig*



14786

A Janus structured TaO/TaN heterojunction as an efficient oxygen reduction electrocatalyst for H₂O₂ production

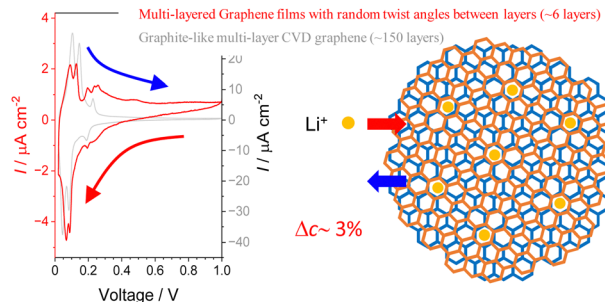
Mei Li, Ting Yang, Wenling Du, Jiaxin Bai, Haoran Ma, Jiansheng Liu and Zhanli Chai*



14790

Electrochemical lithium-ion insertion/extraction reactions of multilayered graphene with random twist angles

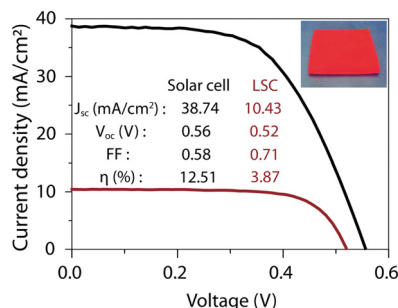
Satoshi Yamamoto, Ryotaro Sakakibara, Soichi Shima, Shinsuke Matsuura, Takeshi Yajima, Munekazu Motoyama, Wataru Norimatsu, Yuta Kimura, Koji Amezawa and Yasutoshi Iriyama*



14794

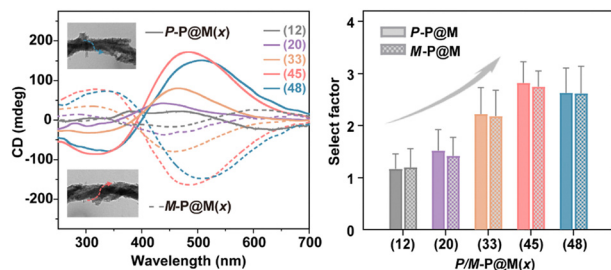
Bright colloidal gallium-doped CuInS₂ quantum dots for luminescent solar concentrators

Haoran Chen, Zhipeng Xu, Zhijun Shi, Fenghuan Zhao, Lixin Cao, Bohua Dong* and Chenghui Xia*



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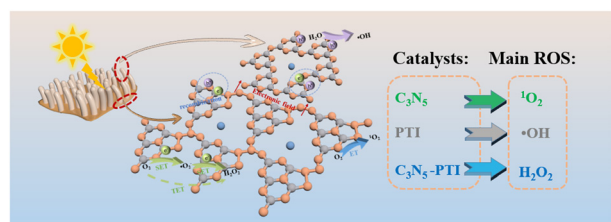
14798



In situ growth of MnO₂ nanoparticles on supramolecular polyaniline as chiral nanozymes for effective enantioselective catalysis

Chu Wang, Zheng Xi,* Xiaohuan Sun, Jie Han* and Rong Guo

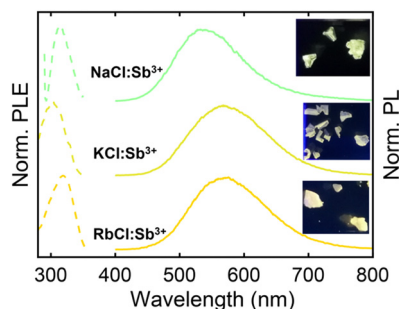
14802



From one to two: *in situ* construction of C₃N₅-poly(triazine imide) heterojunction for enhanced O₂ activation

Shiling Xu, Ziheng Yang, Laiqing Zhang, Xiaorui Zhang, Zikang Zeng, Wenxuan Wang, Yujun Liang,* Lan Yuan* and Chuang Han*

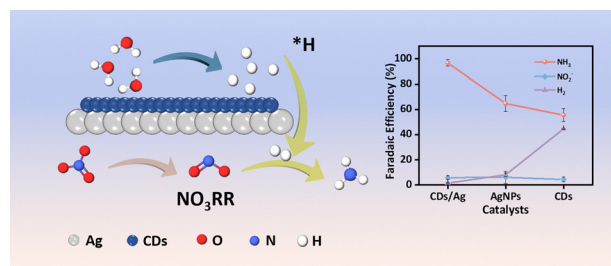
14806



Broadband emission in alkali halides triggered by Sb³⁺ doping

Yanyan Li, Mircea Cotlet, Ido Hadar and Peijun Guo*

14810



Carbon dots boost nitrate-to-ammonia conversion via hydrogen evolution control in CDs/Ag nanocomposites

Chan Wang, Huan Zhuo, Wenchao Zhang, Dongliang Xiang, Jiace Hao, Qijun Song and Han Zhu*

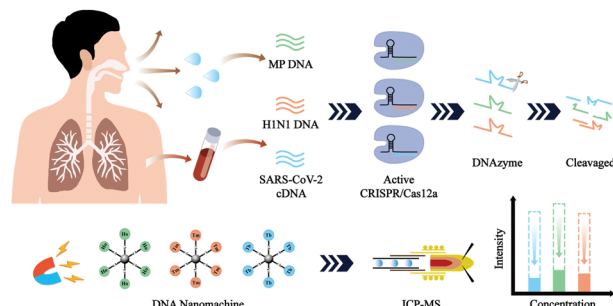


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CRISPR/Cas12a-enhanced DNA nanomachine for multiple respiratory pathogens detection

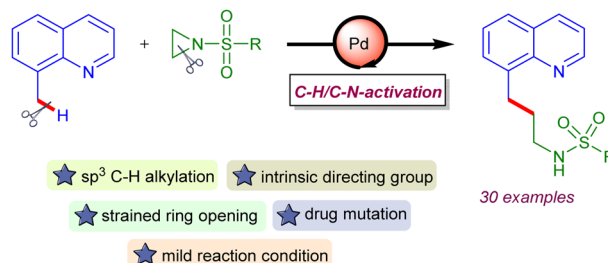
Siyi Wang, Yueli Hu, Ziqiang Deng, Rui Liu* and Yi Lv*



14818

Palladium catalyzed C(sp³)-H alkylation of 8-methylquinolines with aziridines: access to functionalized γ -quinolinylpropylamines

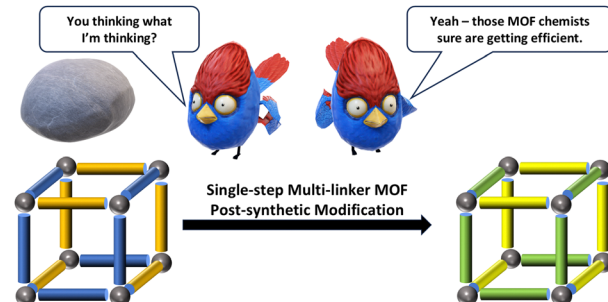
Anita Sahoo, Tripti Paul, Shubhajit Basak and Tharmalingam Punniyamurthy*



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Dual metal organic framework post-synthetic modification; two birds with one stone

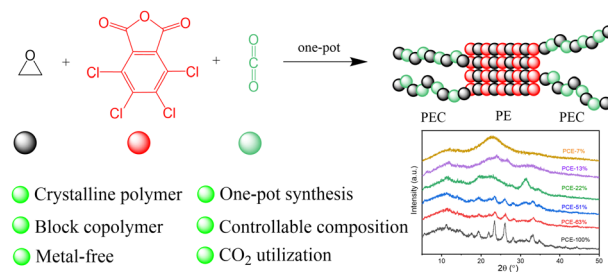
Sally O. Hunter, Alexandra Nikolich, Macguire R. Bryant, Dayne Skelton and Christopher Richardson*



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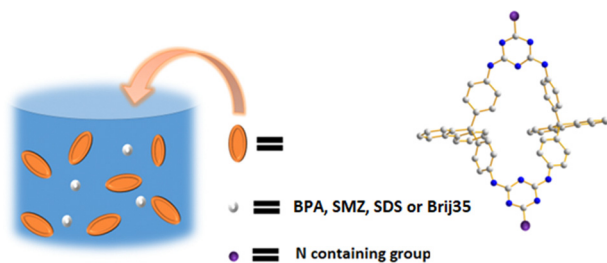
One-pot synthesis of crystalline polycarbonate-*block*-polyesters

Bingkai Shang, Min Xiao, Shuanjin Wang, Dongmei Han, Sheng Huang, Hui Guo* and Yuezhong Meng*



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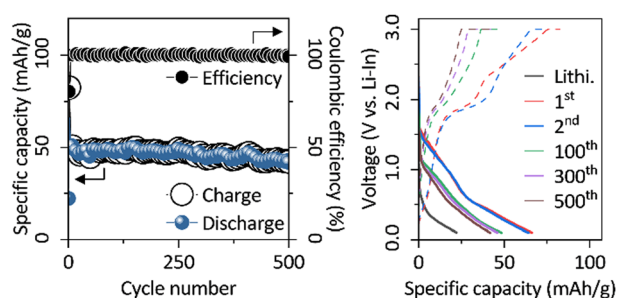
14830



Efficient synthesis of porous triazine-based macrocycles with 22-carbon and 6-nitrogen ring atoms and their adsorption/desorption of non-volatile organic compounds

Zi-Ting Gu, Hao-Chin Chen, Jin-Peng Yang, Hsiu-Fu Hsu, Ting-shen Kuo and Long-Li Lai*

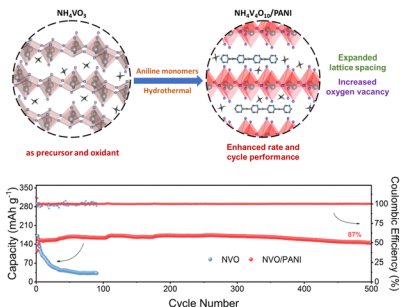
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Unraveling the reversible redox mechanism of $\text{Li}_6\text{PS}_5\text{Cl}$ solid electrolyte in all-solid-state lithium-sulfur batteries

Eunbyoul Lee, Heejun Kim, Hamin Choi, Se Young Kim* and Kyung Yoon Chung*

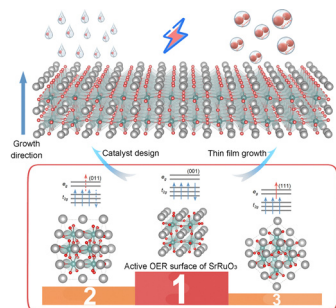
14838



In situ aniline polymerization during $\text{NH}_4\text{V}_4\text{O}_{10}$ lattice formation achieves a high-performance hybrid cathode for aqueous zinc-ion batteries

Chang Liu, Ziqiao Meng, Yuwu Cai, Chenglong Wei, Jingjing Xu, Yuming Chen,* Xinlei Wang* and Jie Zhou*

14842



Orientation-modulated oxygen evolution reaction in epitaxial SrRuO_3 films

Shencheng Pan, Lianjin Wei, Junlong Xie, Zhenjie Lu, Jiajia Yuan, Tian Tang, Leichao Meng, Xin Wang, Junwu Zhu and Yongsheng Fu*

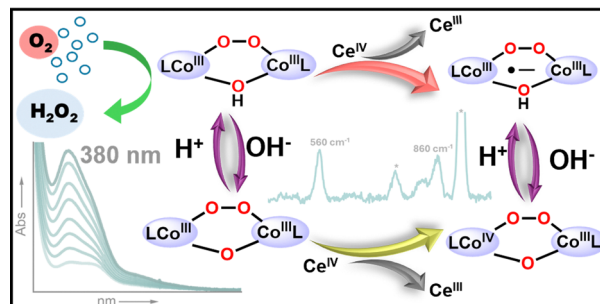


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Structural and reactivity insights into high-valent Co(III)–(μ -peroxo)–Co(IV) and its electromer Co(III)–(μ -superoxo)–Co(III)

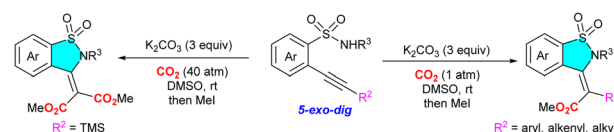
Parkhi Sharma, Sikha Gupta, Rakesh Kumar, Asterios Charisiadis, Maxime Sauvan, Lucia Velasco, Abhishek Saini, Dooshaye Moonshiram* and Apparao Draksharapu*



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Base-promoted cascade 5-*exo-dig* annulation/ carboxylation of *o*-(1-alkynyl)benzenesulfonamides with CO₂: divergent synthesis of mono- or *gem*-dicarboxylic esters

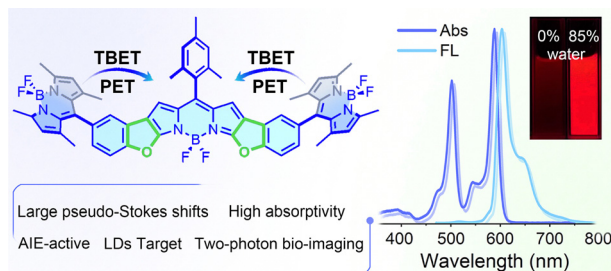
Yang Yao, Junxue Bai, Peidong Cheng, Han Yang, Jianwei Sun and Song Sun*



14854

A benzofuran-[*b*]-fused BODIPY trimer enabled by dual TBET and PET mechanisms for high-performance two-photon fluorescence imaging

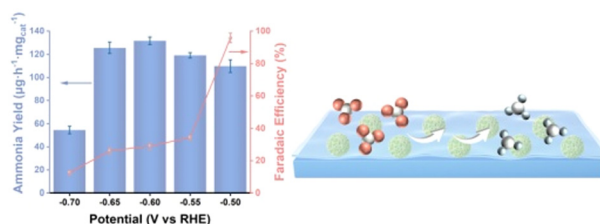
Huiquan Zuo, Xing Guo,* Luying Guo, Qinghua Wu, Long Wang, Zhengxin Kang, Shaozhen Wang, Lijuan Jiao and Erhong Hao*



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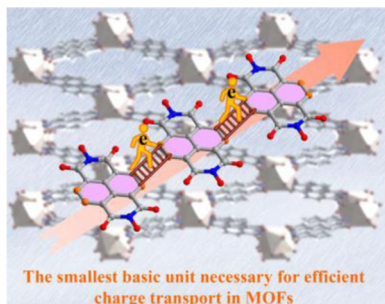
Efficient reduction of nitrate to ammonia on an AuPt@ZIF-8 composite film

Yijie Yang,* Guorui Tang, Xiaoyun Liu, Liu Yang, Ruimin Gao and Cheng-Peng Li*



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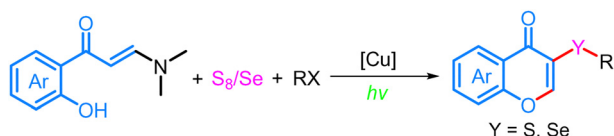
14862



Efficient charge transport *via* limited π – π interactions between naphthyl carbon atoms in a metal–organic framework

Yong Yan, Zhen-Yu Li, Harald Krautscheid* and Ning-Ning Zhang*

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- green energy source
- S_8 and Se as the chalcogenide source
- broad substrate scope with good functionality

Visible-light-induced cascade chromone cyclization/chalcogenation to access 3-chalcogenyl-chromones using elemental sulfur/selenium

Tao Guo, Chuanhu Gao, Zhonghui Li, Penghua Hu, Huan Chen, Shulei Han,* Yunhui Zhao* and Congjun Zhu*

