

ChemComm

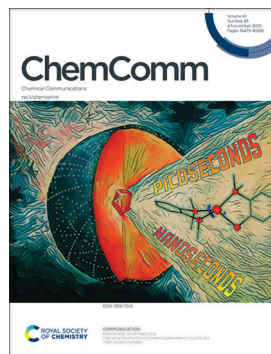
Chemical Communications

rsc.li/chemcomm

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

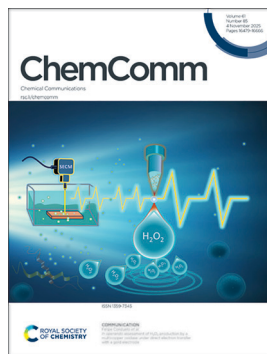
IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(85) 16479-16666 (2025)



Cover

See Katarzyna N. Jarzemska *et al.*, pp. 16560–16563. Image reproduced by permission of Katarzyna N. Jarzemska from *Chem. Commun.*, 2025, **61**, 16560.



Inside cover

See Felipe Conzuelo *et al.*, pp. 16564–16567. Image reproduced by permission of Panpan Wang from *Chem. Commun.*, 2025, **61**, 16564.

PROFILE

16491

Contributors to the Pioneering Investigators collection 2025: part 2

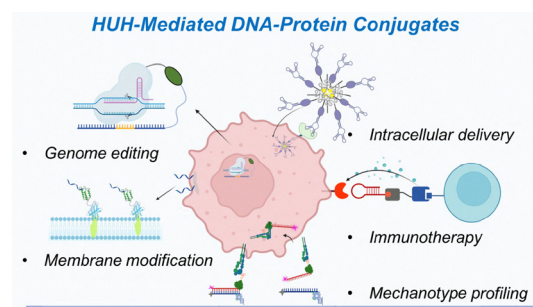


HIGHLIGHT

16498

HUH endonuclease-mediated DNA–protein conjugates: sequence-specific tools and cellular applications

Xiaowei Huang, Haokun Li, Jiajun Du, Wenxue Xie, Yuanyuan Liu, Yingwu Lin and Hang Xing*



Advance your career in science

with professional recognition that showcases
your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment
to attaining excellence in
your field

Gain the recognition you deserve

Achieve a professional
qualification that inspires
confidence and trust

Unlock your career potential

Apply for our professional
registers (RSci, RSciTech)
or chartered status
(CChem, CSci, CEnv)

Apply now

rsc.li/professional-development

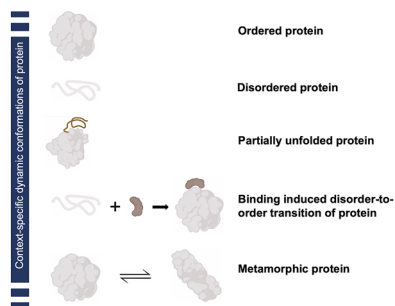


FEATURE ARTICLES

16512

Conditional disorder in proteins: functional transitions between order and disorder

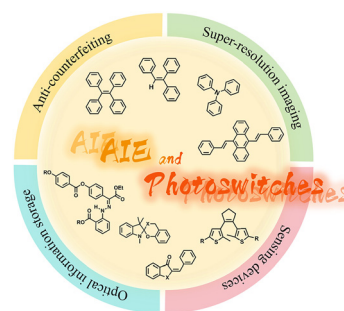
Bhaswati Devi, Niharika Nag, Vladimir N. Uversky* and Timir Tripathi*



16529

Advances in AIE-based solid-state fluorescent photoswitches

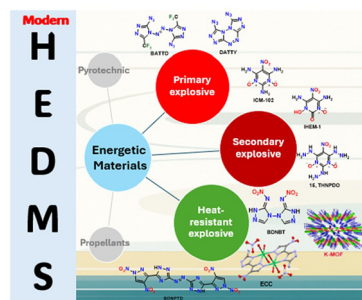
Chunyan Wei, Yaowu Zhang, Haoxuan Ren, Bin Xu* and Wenjing Tian*



16547

Shaping the future of energetic materials: breakthroughs, barriers, and emerging frontiers

Abhishek Kumar Yadav and Srinivas Dharavath*

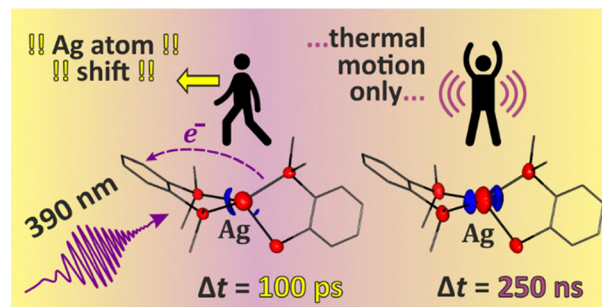


COMMUNICATIONS

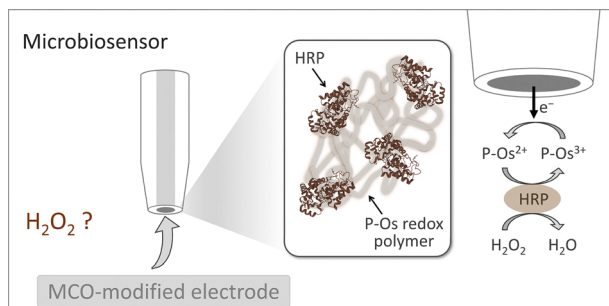
16560

Capturing the short-lived excited singlet state in crystals of a TADF silver(i) complex

Piotr Łaski, Jakub Drapała, Radostaw Kamiński, Krzysztof Durka, Dariusz Szarejko, Robert Henning and Katarzyna N. Jarzemska*



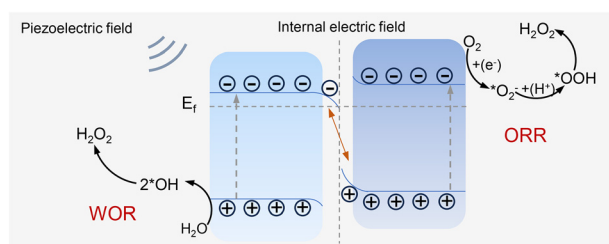
16564



In operando assessment of H_2O_2 production by a multicopper oxidase under direct electron transfer with a gold electrode

Panpan Wang, Vânia Brissos, Lígia O. Martins, Wolfgang Schuhmann and Felipe Conzuelo*

16568



Interfacial electric field in Zr-MOF-grafted carbon nitride to boost H_2O_2 piezo-synthesis under ambient conditions

Jingyi Yang, Zhi Li,* Huiru Chen, Jie Leng, Li Gong* and Mingshan Zhu*

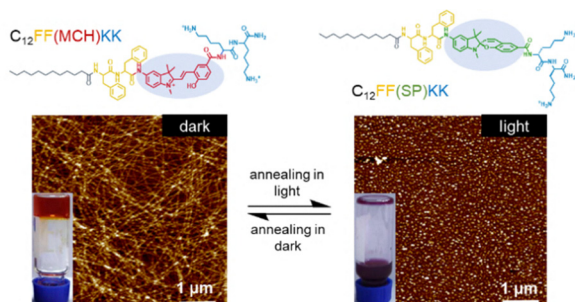
16572



Moisture-electric generator based on a facilely prepared cyanobacteria–sodium alginate–chitosan composite hydrogel

Xiuwen Wang, Yunan Lin, Shipu Jiao and Xianhua Liu*

16576



Photoswitchable supramolecular self-assembly of amphiphilic peptides enabled by backbone-integrated spiropyran

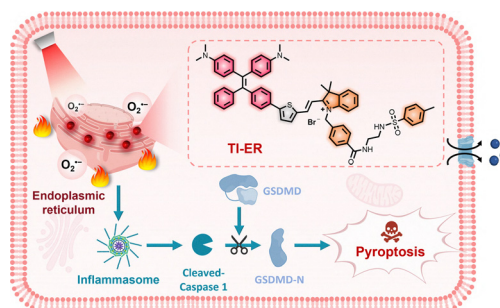
Jinying He, Meiqing Yang, Yifan Zheng, Yingjie Liu, Zhaomiao Chu and Chuang Li*



16580

An endoplasmic reticulum-targeted NIR-II type I AIE photosensitizer for triggering pyroptosis

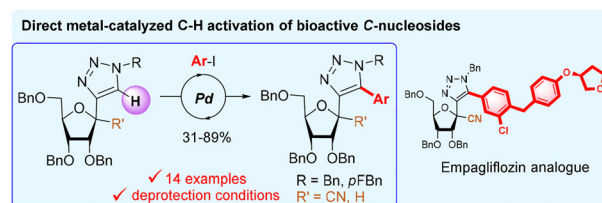
Xinyu Li, Lijin Yang, Bingbing He, Dongxiu Li, Changqing Lei, Nan Li* and Na Zhao*



16584

Direct palladium-catalyzed C–H arylation of bioactive triazolyl-C-nucleosides on a key position of the heterocyclic base

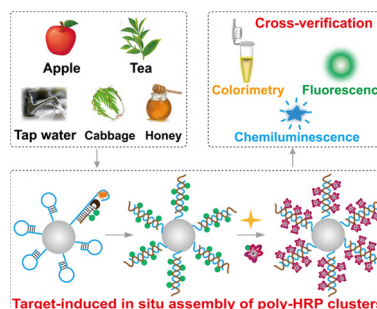
Bartosz Godlewski, Nina Bozinovic, Quentin Joachim, Olivier Monasson, Nadège Lubin-Germain* and Angélique Ferry*



16588

Optical sensing of imidacloprid *via* target-induced *in situ* assembly of poly-horseradish peroxidase clusters

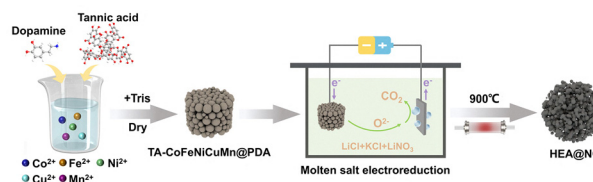
Luyu Wei, Mingrui Xu, Ziqi Cheng, Hengye Chen, Wanjun Long, Haiyan Fu and Yuanbin She*



16592

Constructing a high-entropy nanoalloy by molten salt electroreduction for efficient bifunctional oxygen electrocatalysis

Lielie He, Shudong Chen, Junyang Zhou, Jian Chen, Yangen Zhou,* Mengran Wang* and Yanqing Lai



COMMUNICATIONS

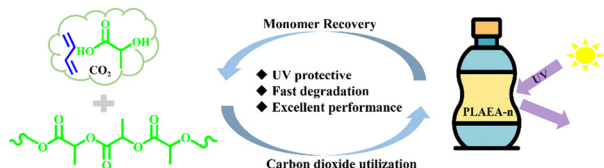
16596



Photo-triggered tandem cyclization of arylethynyl quinazolin-4(3H)-one for difluoroalkylated quinolino[2,1-b]quinazolines

Haibo Yao, Qiyang Liu, Jinwei Yuan,* Weixian Lv, Liangru Yang, Yongmei Xiao, Yuntao Xia and Dongliang Xing*

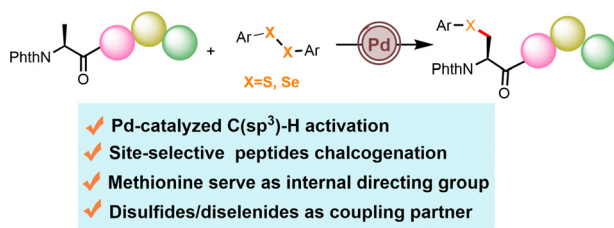
16600



Synthesis of a CO₂-based polyester for remarkably improving the toughness, UV-resistance and degradability of bio-based polylactic acid

Jiang Li, Hengsheng Liu, Yu Jiang,* Xiaoqiang Hu and Daohong Zhang*

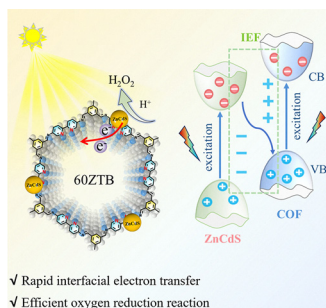
16604



Methionine-facilitated chalcogenation of peptides through palladium-catalyzed β -C(sp³)-H activation

Jian Tang,* Qinyu Lu, Fengjie Lu, Yi Sun, Yuqi Pan and Weishuai Qu

16608



An efficient S-scheme Tb-BPY COF/ZnCdS heterojunction for visible-light H₂O₂ production

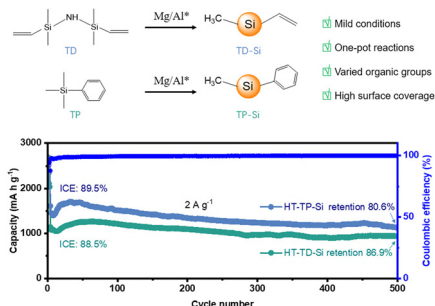
Jie Zhang, Jianjun Zhang, Changhong Sun, Huogen Yu, Jiaguo Yu, Matvey V. Fedin and Liuyang Zhang*



16612

In situ one-pot synthesis of organic-functionalized crystalline silicon nanoparticles

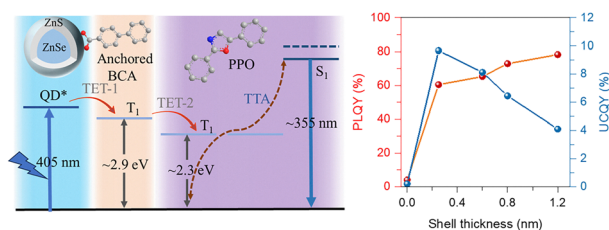
Yanan Xu, Shiyue Zhang, Pengliang Gu, Qing Hu, Yu Zhang, Hao Li, Wenkai Wang and Hongbin Du*



16616

Optimizing shell thickness in ZnSe/ZnS quantum dots for enhanced triplet energy transfer and photon upconversion

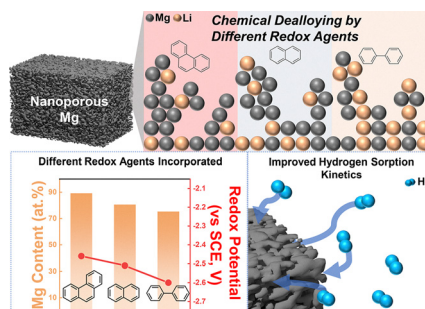
Lei Wang, Rongxin Zhang, Zixiang Zhou, Feng Chen, Xin Zhang, Meihua Chen,* Yanchun Zhao* and Guijie Liang*



16620

Chemical redox agent-mediated dealloying enables structural tuning of nanoporous Mg for hydrogen storage

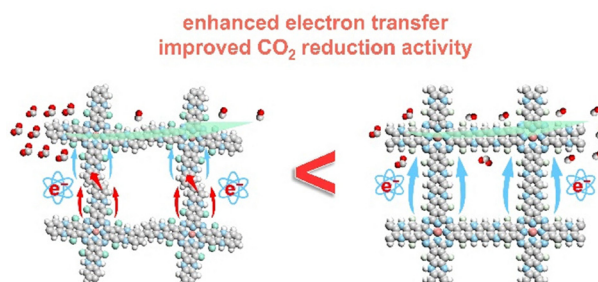
Byungmoon Yoo, YongJun Cho, Jinseok Koh, Aqil Jamal and Eun Seon Cho*



16624

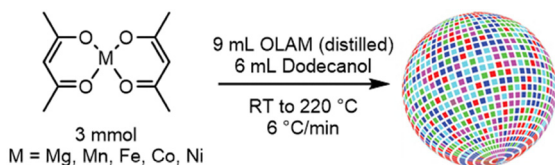
Co phthalocyanine covalent organic frameworks with enhanced π -electron delocalization for boosted electrocatalytic CO₂ reduction reaction

Anhao Han, Ping Fang, Qian Zhao, Jiwu Zhao, Jilong Yin, Haitao Lei* and Rui Cao*



COMMUNICATIONS

16628

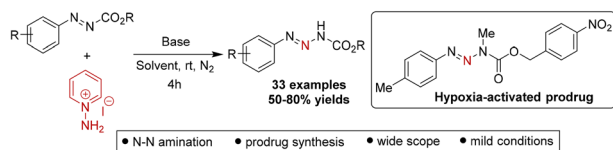


- ❖ Simple heat-up procedure
- ❖ Low-dispersity
- ❖ Low-cost precursors
- ❖ 3 to 5 elements incorporated
- ❖ Small (<5 nm) average particle size

Colloidal synthesis of low-dispersity high entropy rock-salt oxide nanoparticles

Jonathan L. Rowell, Aditya A. Joshi, Haotian Tan, Dasol Yoon, David A. Muller and Richard D. Robinson*

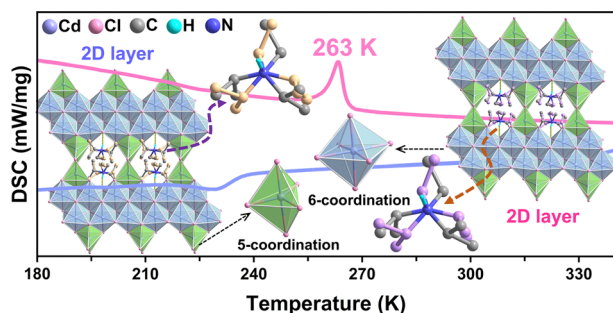
16632



Nitrogen atom insertion into N=N double bonds: straightforward access to triazenes

Prashant Kumar, Ruchir Kant and Namrata Rastogi*

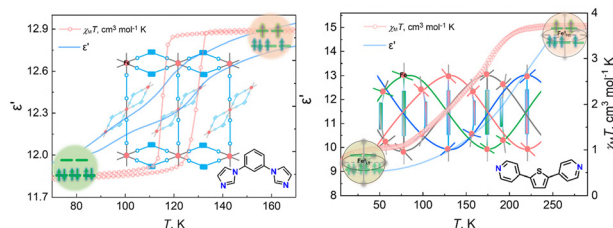
16636



A five- and six-coordinated two-dimensional metal halide organic-inorganic phase transition material

Hui-Ping Chen, Zhen-Yu Wang, Jun-Chao Qi, Hang Peng, Tian-En Yang, Xiao-Xuan Zhang, Xin-Yu Luo and Wei-Qiang Liao*

16640



Large dielectric modulation triggered by spin crossover in polar Hofmann-type polymers

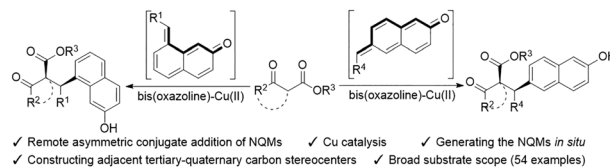
Nian-Tao Yao,* Jiao-Jiao Jiang, Bing-Yuan Qian, Hui-Ying Sun,* Cheng Yi* and Liang Zhao



16644

Remote asymmetric conjugate addition of naphthoquinone methides: constructing adjacent tertiary-quaternary carbon stereocenters

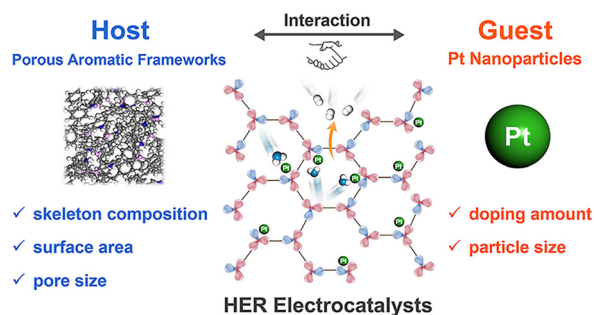
Jing-Jing Zhai, Shao-Jie Lou, Xiao-Xiao Zhang, Qiu-Yi Lan, Cheng-Cheng Jing, Yang-Jie Mao, Yi-Feng Wang,* Ming-Ming Chu* and Dan-Qian Xu*



16648

Elucidating host-guest interactions between phosphine-based porous aromatic frameworks and platinum for enhanced HER

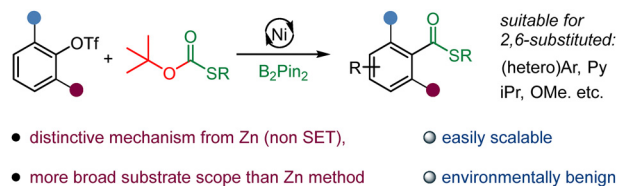
Yang Xiao, Zelin Shi, Han Yan, Jiahui Li, Shuo Han, Yuting Yang* and Xiaofei Jing*



16652

B₂Pin₂-enabled reductive thioesterification of aryl triflates with thiocarbonates

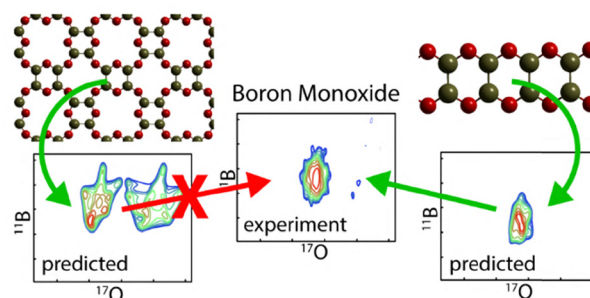
Houguang Shi, Fan Wu,* Wei Zhu, Hong C. Shen, Shaojie Xu, Xiaotai Wang and Hegui Gong*



16656

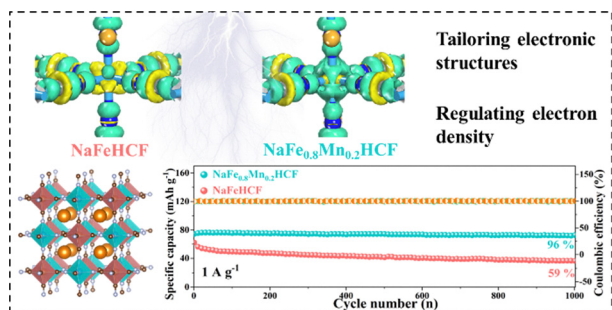
Boron monoxide is a one-dimensional polymer

Joseph F. Thuma, Rana Biswas, Carl F. Fleischer III, Levi Stanley, Wenyu Huang and Frédéric A. Perras*



COMMUNICATIONS

16660



A high-spin Mn-tailored sodium hexacyanoferrate electronic structure enables efficient Mg^{2+} storage

Yue Yang, Hui Li, Yusheng Zhang, Qin Zhao* and Tianyi Ma*

CORRECTION

16664

Correction: Revealing cobalt-induced Li-ion trapping at the LATP/LCO interface with a fine-tuned machine learning interatomic potential

Yu-Ting Tai and Hong-Kang Tian*

