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IN THIS ISSUE

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Cover
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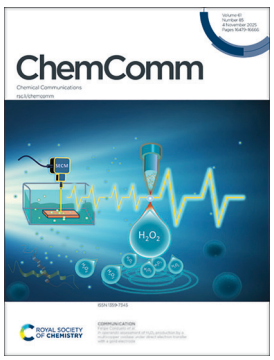


Inside cover
See Felipe Conzuelo *et al.*, pp. 16564–16567. Image reproduced by permission of Panpan Wang from *Chem. Commun.*, 2025, **61**, 16564.

PROFILE

16491

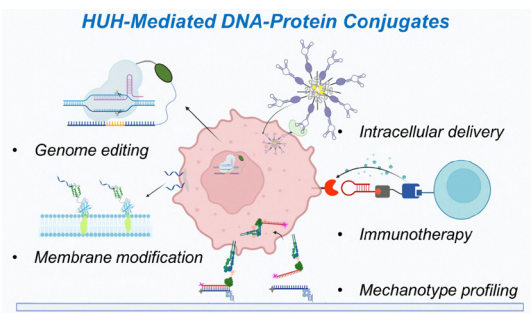
Contributors to the Pioneering Investigators collection 2025: part 2

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*



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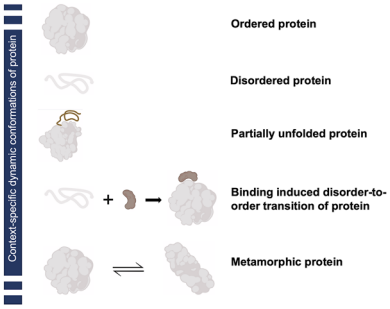
FEATURE ARTICLES

16512

Conditional disorder in proteins: functional transitions between order and disorder

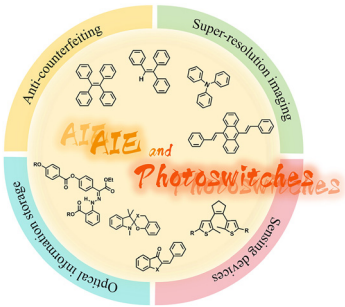
Bhaswati Devi, Niharika Nag, Vladimir N. Uversky* and Timir Tripathi*



16529

Advances in AIE-based solid-state fluorescent photoswitches

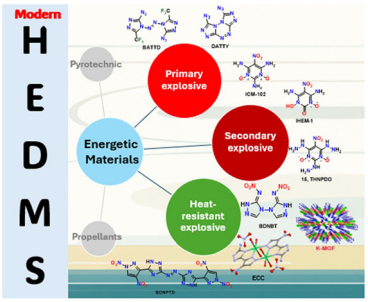
Chunyan Wei, Yaowu Zhang, Haoxuan Ren, Bin Xu* and Wenjing Tian*



16547

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

Abhishek Kumar Yadav and Srinivas Dharavath*

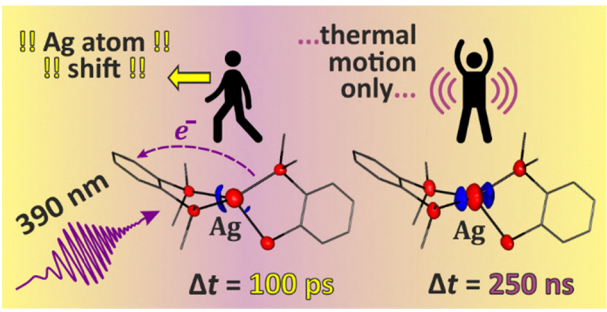


COMMUNICATIONS

16560

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

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



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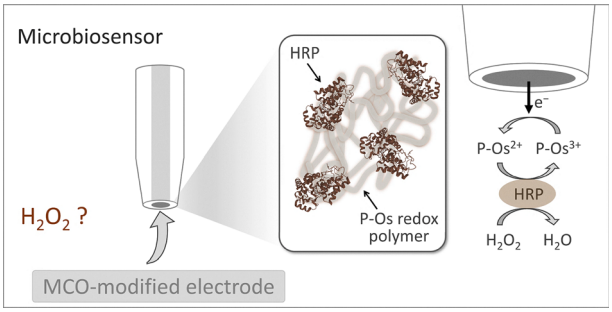
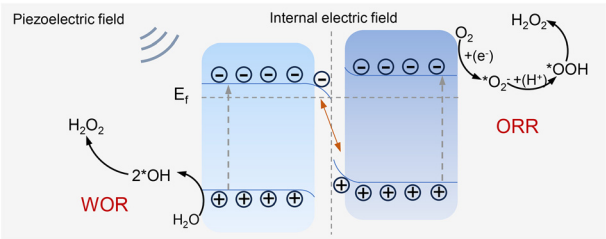
16564



***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*

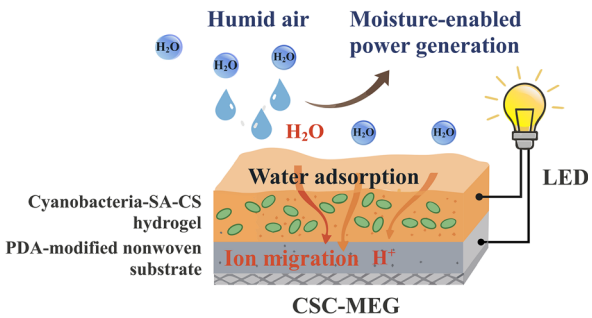
16568



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*

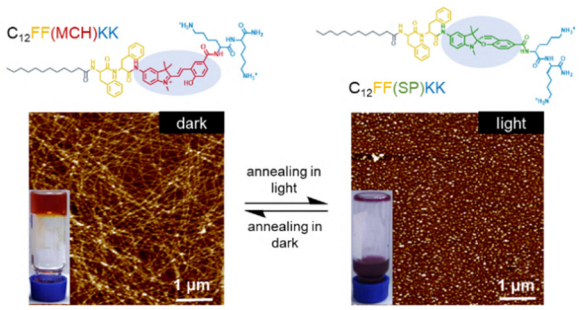
16572



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*

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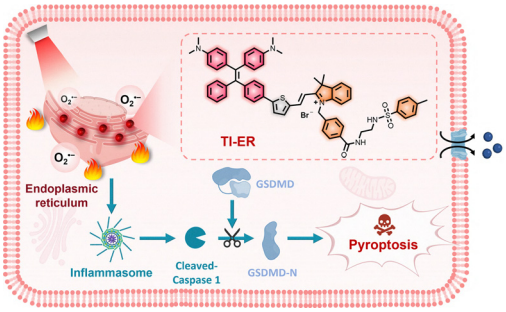
16580

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

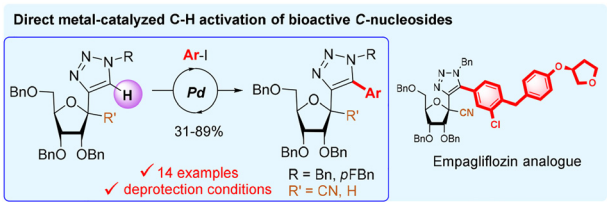
Xinyu Li, Lijin Yang, Bingbing He, Dongxiu Li, Changqing Lei, Nan Li* and Na Zhao*



16584

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

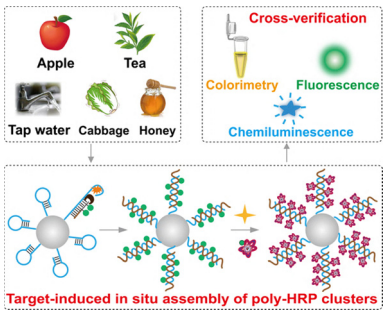
Bartosz Godlewski, Nina Bozinovic, Quentin Joachim, Olivier Monasson, Nadège Lubin-Germain* and Angélique Ferry*



16588

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

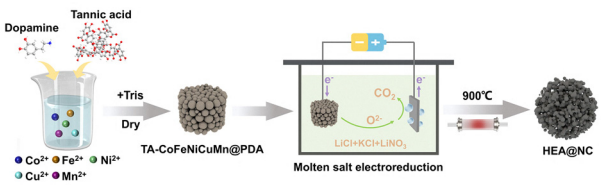
Luyu Wei, Mingrui Xu, Ziqi Cheng, Hengye Chen, Wanjun Long, Haiyan Fu and Yuanbin She*



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



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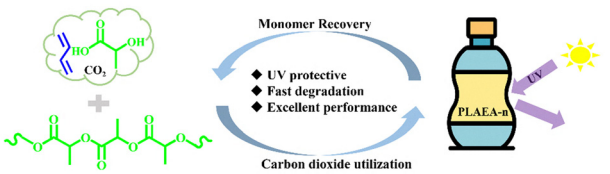
16596

Photo-triggered tandem cyclization of arylethynyl quinazolin-4(3*H*)-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*

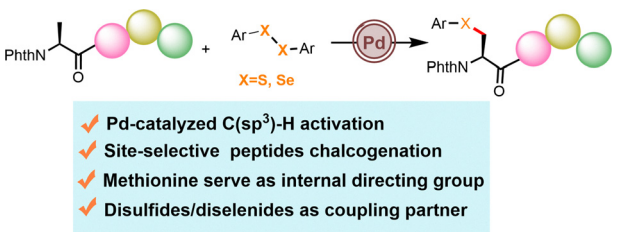
16600



Synthesis of a CO_2-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*

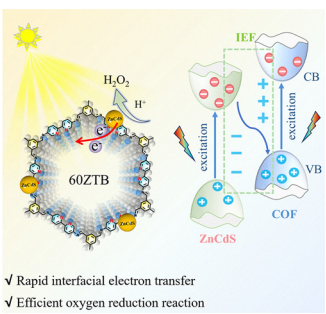
16604



Methionine-facilitated chalcogenation of peptides through palladium-catalyzed β-C(sp^3)–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 H_2O_2 production

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

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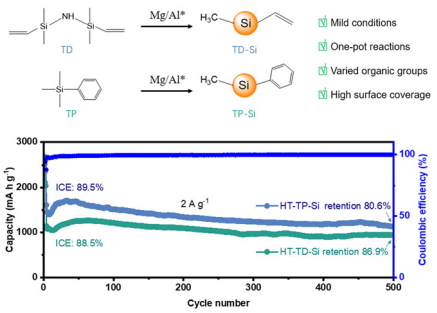
16612

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

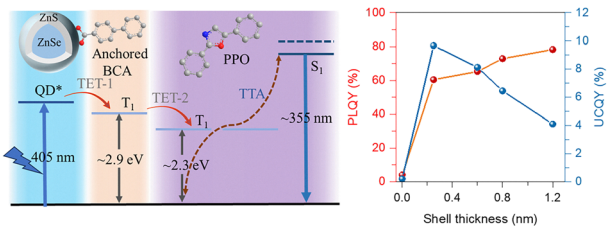
Yanan Xu, Shiyue Zhang, Pengliang Gu, Qing Hu, Yu Zhang, Hao Li, Wenkai Wang and Hongbin Du*



16616

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

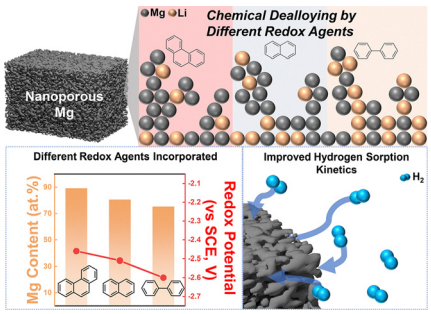
Lei Wang, Rongxin Zhang, Zixiang Zhou, Feng Chen, Xin Zhang, Meihua Chen,* Yanchun Zhao* and Guijie Liang*



16620

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

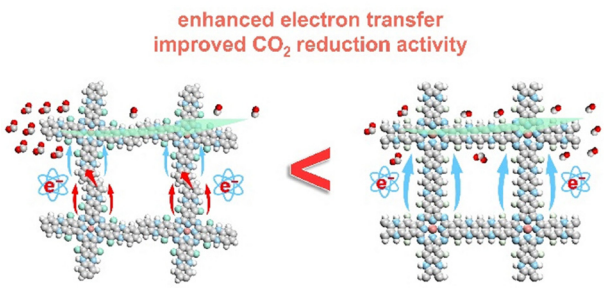
Byungmoon Yoo, YongJun Cho, Jinseok Koh, Aqil Jamal and Eun Seon Cho*



16624

Co phthalocyanine covalent organic frameworks with enhanced π-electron delocalization for boosted electrocatalytic CO_2 reduction reaction

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



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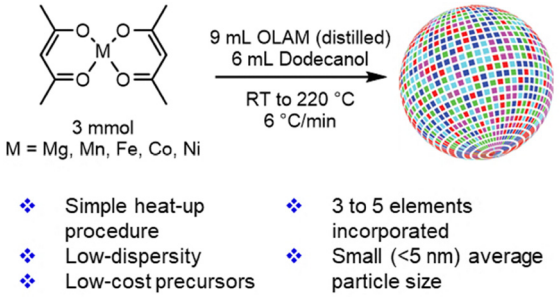
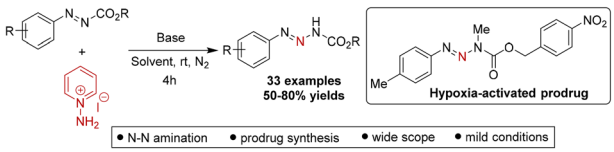


Colloidal synthesis of low-dispersity high entropy rock-salt oxide nanoparticles

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

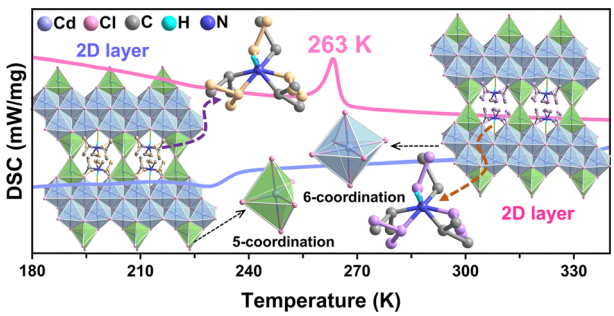
16632



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

Prashant Kumar, Ruchir Kant and Namrata Rastogi*

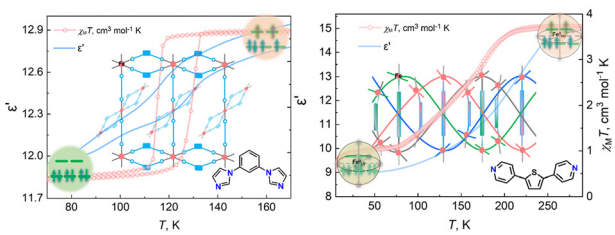
16636



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

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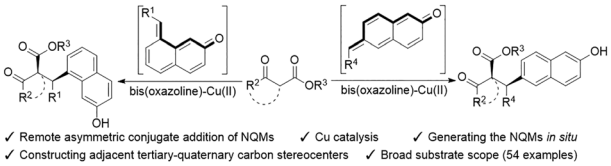
16644

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

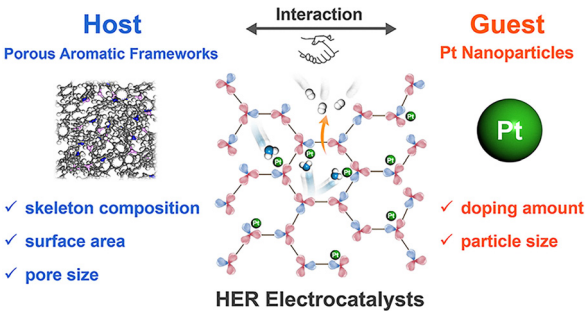
Jing-Jing Zhai, Shao-Jie Lou, Xiao-Xiao Zhang, Qiu-Yi Lan, Cheng-Cheng Jing, Yang-Jie Mao, Yi-Feng Wang,* Ming-Ming Chu* and Dan-Qian Xu*



16648

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

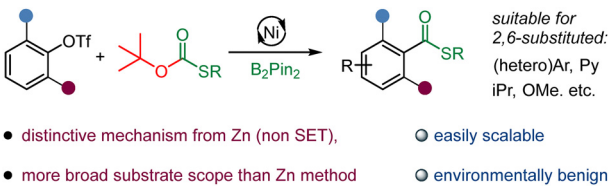
Yang Xiao, Zelin Shi, Han Yan, Jiahui Li, Shuo Han, Yuting Yang* and Xiaofei Jing*



16652

B_2Pin_2-enabled reductive thioesterification of aryl triflates with thiocarbonates

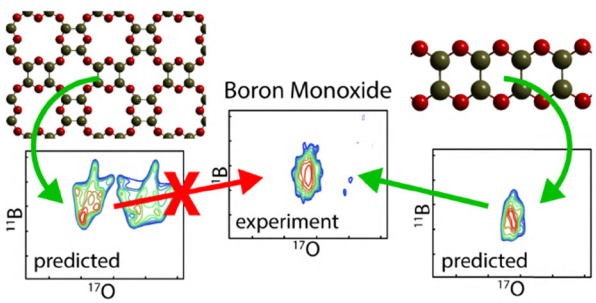
Houguang Shi, Fan Wu,* Wei Zhu, Hong C. Shen, Shaojie Xu, Xiaotai Wang and Hegui Gong*



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*



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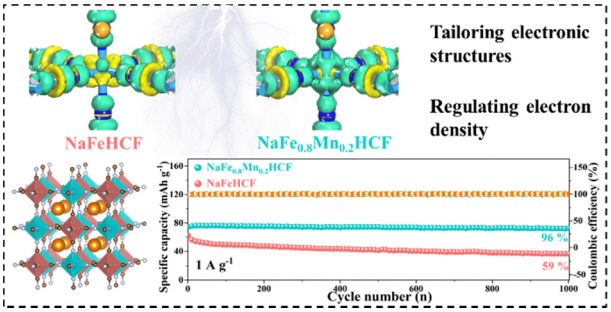
16660



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*

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