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Cover
See Hiroto Watanabe, Hiroaki Imai *et al.*, pp. 4419–4422. Image reproduced by permission of Hiroaki Imai from *Chem. Commun.*, 2024, **60**, 4419. Artwork by Hiroto Watanabe.

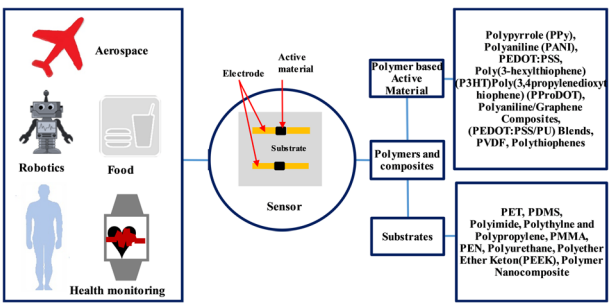
Inside cover
See Feng Bai, Yusen Li *et al.*, pp. 4423–4426. Image reproduced by permission of Yusen Li from *Chem. Commun.*, 2024, **60**, 4423.

FEATURE ARTICLES

4382

Engineering mechanical compliance in polymers and composites for the design of smart flexible sensors

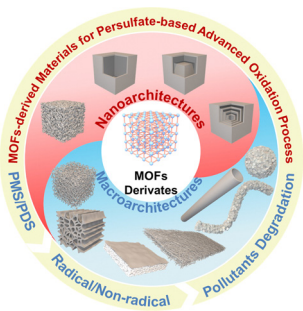
Shivank Sahu, Kamalesh Tripathy, Mitradip Bhattacharjee* and Deepak Chopra*



4395

From nano- to macroarchitectures: designing and constructing MOF-derived porous materials for persulfate-based advanced oxidation processes

Chengming Xiao, Xin Guo and Jiansheng Li*



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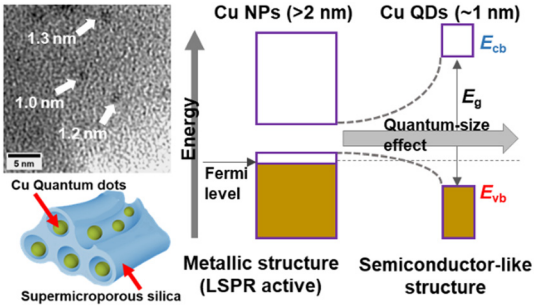
COMMUNICATIONS

4419

The size-dependent valence and conduction band-edge energies of Cu quantum dots

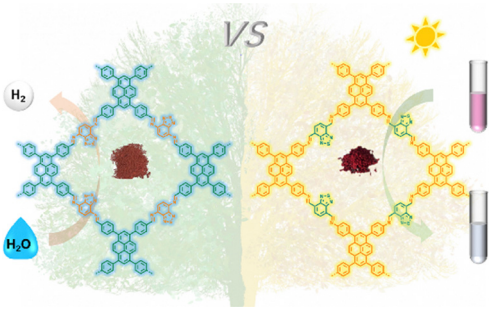
Takahiro Matsui, Hiroto Watanabe,* Shoichi Somekawa, Sayaka Yanagida, Yuya Oaki and Hiroaki Imai*



4423

Covalent organic framework isomers with divergent photocatalytic properties

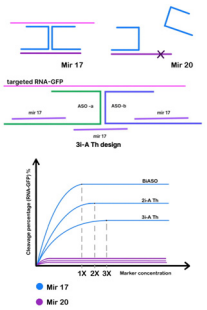
Xitong Ren, Mengyao Wen, Xiaobin Hou, Jiajie Sun, Feng Bai* and Yusen Li*



4427

RNase H-dependent DNA thresholder modulated by cancer marker concentration

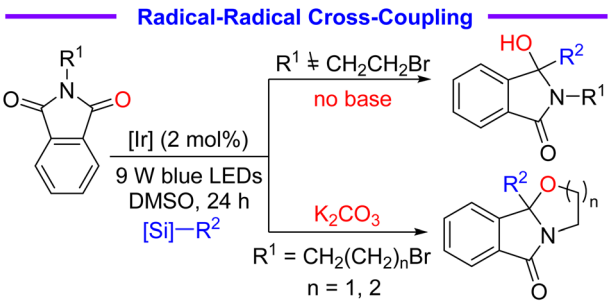
Moustapha A. Y. Nour, Valeriia S. Drozd, Evgenii A. Lemeshko, Lilia Tafran, Adeliia A. Salimova, Alexandra V. Kulikova and Ahmed A. Eldeeb*



4431

Photoredox-catalyzed radical–radical cross coupling of ketyl radicals with unstabilized primary alkyl radicals

Shishen Feng, Hong Liu, Yan Li* and Yewen Fang*



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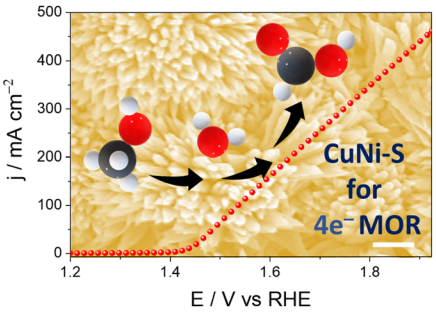
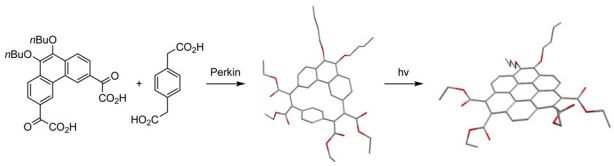
4435



CuNi sulphidation maximizes MOR activity by expanding the accessibility of active sites!

Roshini Arulraj, Karthik Eswaran, Sara Fidha C. M., Rajini Murugesan, Silda Peters, Arthanareeswari Maruthapillai, Sethumathavan Vadivel,* Rajendra Kumar Konidena,* Tumpa Sadhukhan* and Anantharaj Sengeni*

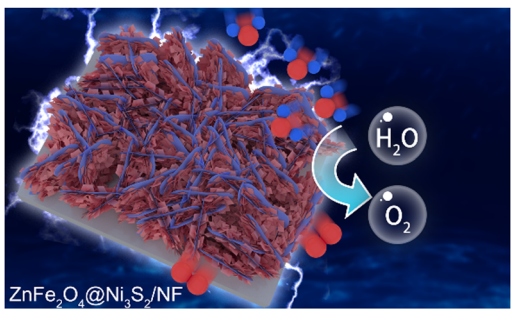
4439



Coronenes with push–pull geometries from macrocycle-forming Perkin condensations

Luc Soliman, Elsa Ramassamy, Katia Dujarric, Guillaume Naulet, Pierre Dechambenoit, Harald Bock and Fabien Durola*

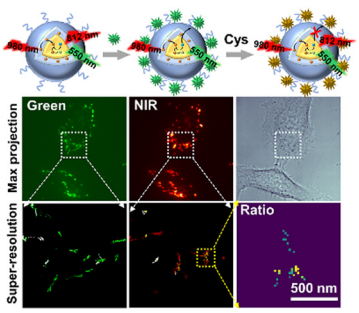
4443



Heterostructured $ZnFe_2O_4$@Ni_3S_2 nanosheet arrays on Ni foam as an efficient oxygen evolution catalyst

Haiqing Liu, Juhong Miao,* Yubin Wang, Siyu Chen, Yujia Tang and Dongdong Zhu*

4447



A ratiometric upconversion nanoprobe enables super-resolution imaging sensing of biothiols in living cells

Hongqi Chen,* Ruoxin Wang, Juanjuan Cheng, Lun Wang and Hua He*

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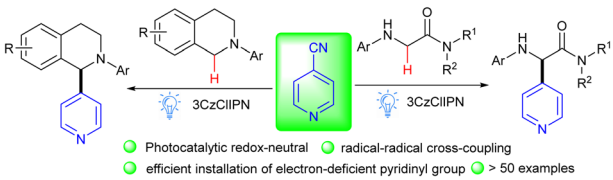
4451

Photocatalytic redox-neutral α-C(sp^3)–H pyridination of glycine derivatives and *N*-arylamines with cyanopyridines

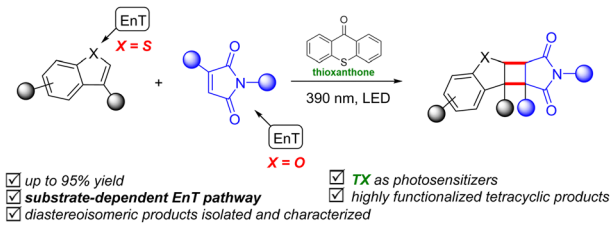
Changduo Pan,* Dongdong Chen, Yangjian Cheng and Jin-Tao Yu*



4455

Construction of cyclobutane-fused tetracyclic skeletons *via* substrate-dependent EnT-enabled dearomative [2+2] cycloaddition of benzofurans (benzothiophenes)/maleimides

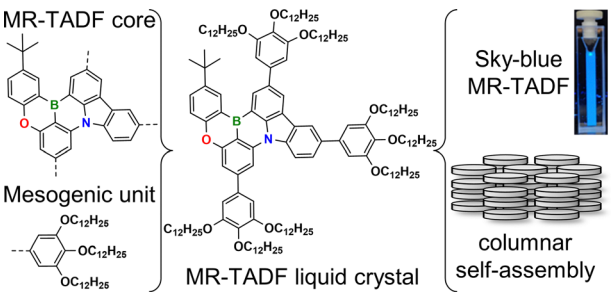
Zhi-Yu Liao, Fan Gao, Yu-Hang Ye, Qian-Hui Yu, Cui Yang, Qing-Yu Luo, Fei Du, Bin Pan, Wen-Wu Zhong* and Wu Liang*



4459

A novel B,O,N-doped mesogen with narrowband MR-TADF emission

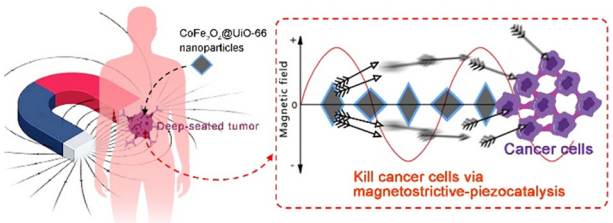
Julius A. Knöller,* Burcu Sönmez, Tomas Matulaitis, Abhishek Kumar Gupta, Eli Zysman-Colman* and Sabine Laschat*



4463

Magnetostrictive-piezocatalytic $CoFe_2O_4$@UiO-66 nanohybrid and its potential for deep-seated tumor treatment

Qian Yu,* Meiyu Li, Jiaojiao Zhang, Hong Liu, Long Zhang, Shun Li, Dengfeng Ge* and Jianming Zhang*



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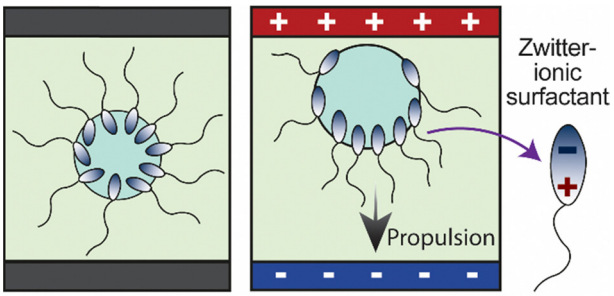
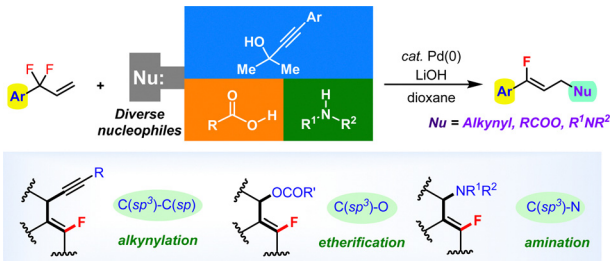


Propulsion of zwitterionic surfactant-stabilized water-in-oil droplets by low electric fields

Lotta Gustavsson, Bo Peng, Rémi Plamont* and Olli Ikkala*

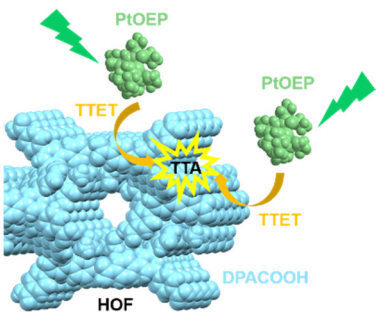
4471



Palladium-catalyzed alkynylation of allylic *gem*-difluorides

Guo-ying Liu, Lu-ning Tang,* Jun-hua Li, Sen Yang* and Ming Chen*

4475



Crystalline hydrogen-bonded organic framework for air-tolerant triplet–triplet annihilation upconversion

Qiaoyu Zhang, Guiwen Luo, Rui Hu, Guoqiang Yang, Jinping Chen, Tianjun Yu, Yi Zeng* and Yi Li

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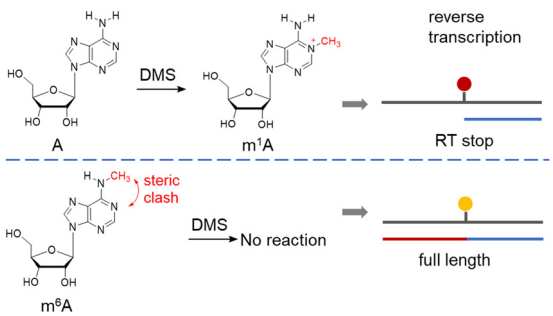

Steric hindrance of N^6-methyl in m^6A and its application for specific loci detection

Xiaoyi Xie, Qi Wei, Jingyu Han, Xin Fang, Wei Yang, Xiang Zhou, Yafen Wang* and Xiaocheng Weng*

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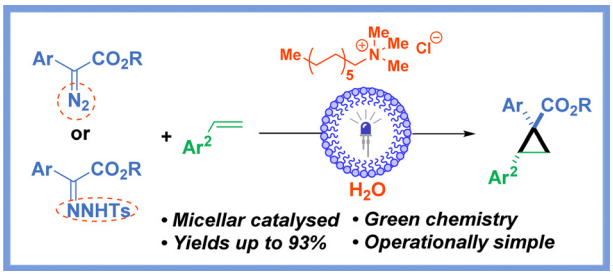
COMMUNICATIONS

4483

Photochemical cyclopropanation in aqueous micellar media – experimental and theoretical studies

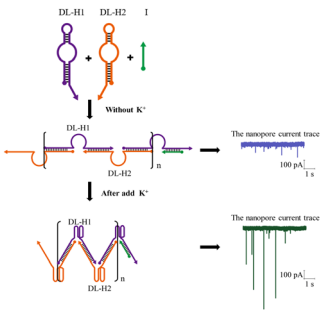
Joseph P. Milton, Adam Milanowski, Martin Andersson* and Dorota Gryko*



4487

Nanopore sensitization based on a double loop hybridization chain reaction and G-quadruplex

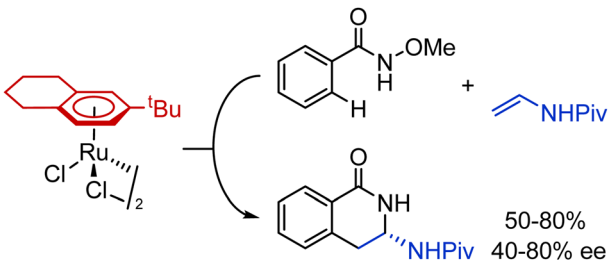
Yanru Li, Chunmiao Yu, Yesheng Wang, Jin Yu, Huaning Wang and Bingling Li*



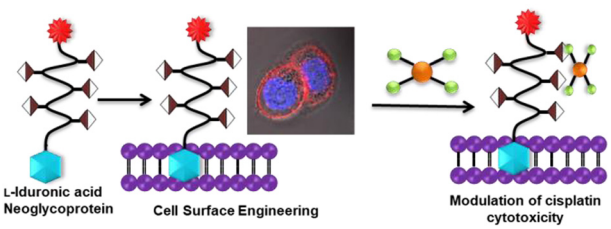
4491

Planar-chiral arene ruthenium complexes: synthesis, separation of enantiomers, and application for catalytic C–H activation

Mikhail A. Boym, Roman A. Pototskiy, Evgeniya S. Podyacheva, Denis A. Chusov, Yulia V. Nelyubina and Dmitry S. Perekalin*



4495

Molecular recognition and proteoglycan mimic arrangement: modulating cisplatin toxicity

Saurabh Anand, Sandhya Mardhekar, Preeti Ravindra Bhoge, Sandeep Kumar Mishra and Raghavendra Kikkeri*