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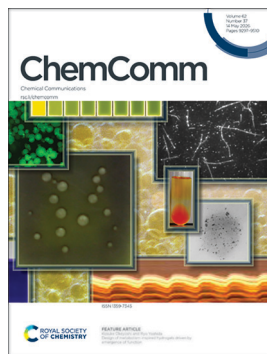
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See Dorota Gryko *et al.*, pp. 9309–9324. Image reproduced by permission of Klaudia Miecznikowska – IChOPAN, *Chem. Commun.*, 2026, 62, 9309.



Inside cover

See Kosuke Okeyoshi and Ryo Yoshida, pp. 9325–9334. Image reproduced by permission of Kosuke Okeyoshi from *Chem. Commun.*, 2026, 62, 9325.

FEATURE ARTICLES

9309

Sustainable steps forward in vitamin B₁₂-catalysis

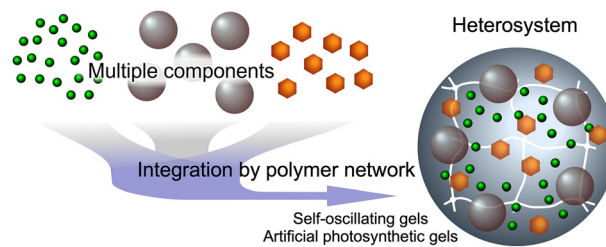
Shantanu Nandi, Kitti Franciska Szabó and Dorota Gryko*



9325

Design of metabolism-inspired hydrogels driven by emergence of function

Kosuke Okeyoshi* and Ryo Yoshida



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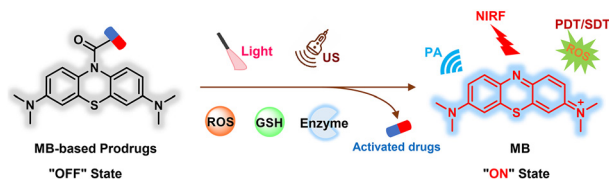
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REVIEWS

9335

Repurposing methylene blue as activatable prodrugs for precise disease theranostics

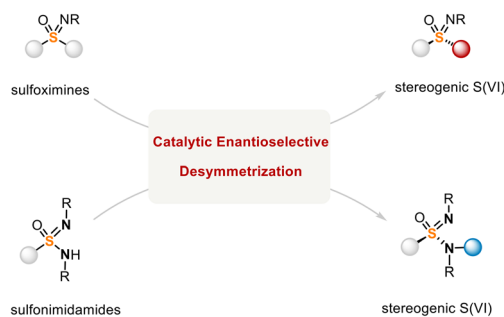
Junliang Zhou,* Liang Su, Tian-Bing Ren and Lin Yuan*



9352

Constructing stereogenic sulfur(vi) centers by catalytic desymmetrization: strategies and prospects

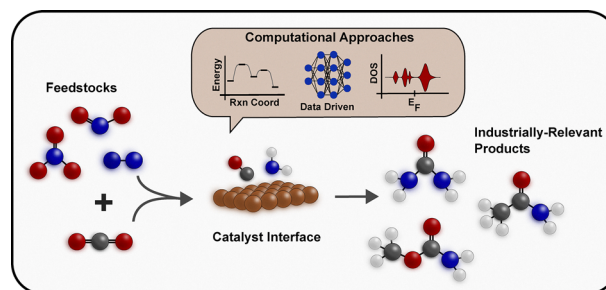
Changyu Xu, Ruiwen Zhou, Jingzhou Hu, Shipeng Luo, Liangliang Song and Liang-An Chen*



9364

Electrochemical C–N coupling: a review of mechanistic pathways and computational frameworks

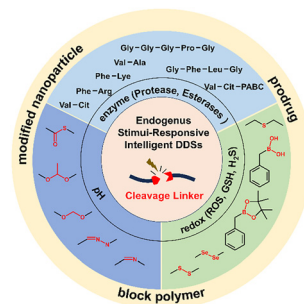
Jensie Low and Pengfei Ou*



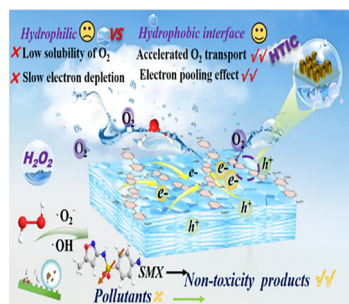
9378

Endogenous stimuli-responsive intelligent drug delivery systems: recent advances in cleavable linker design

En Li, Chenyang Wang, Changhe Pang, Bin Yu* and Jiumeng Zhang*



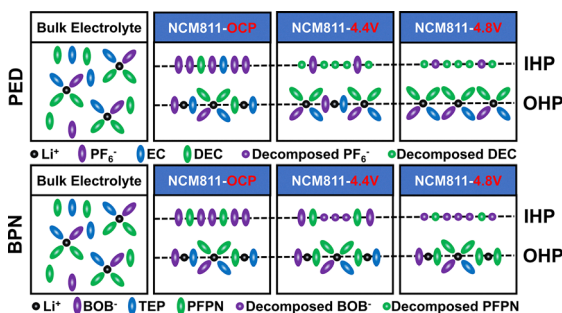
9391



Synergistic effect of Zn–N coordination inducing enhanced hydrophobicity and dipole activation for efficient photocatalytic ROS evolution

Xiaojuan Bai,* Jiaqian Dong and Wenzhi Zhang

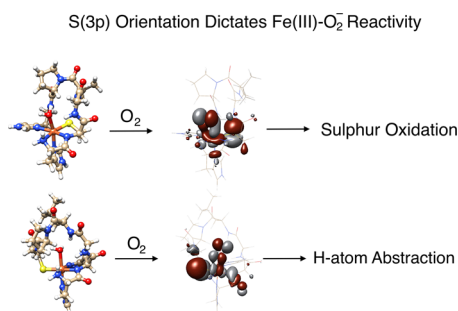
9395



Regulating cathode electrical double layer via electrolyte engineering for stable cycling of NCM811 cathode at 4.8 V

Rui Qu, Anran Zhang, Wenxi Hu, Ruize Gao, Meilong Wang, Jin Han* and Ya You*

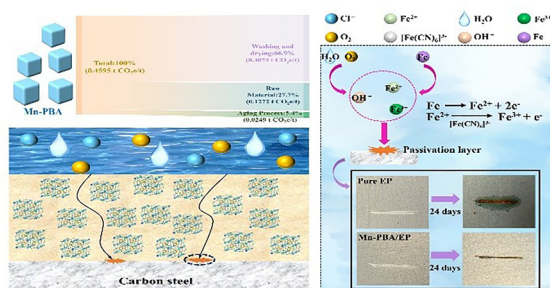
9400



Metallopeptide-based mimics suggest substrate orientation directs sulphur oxidation vs. hydrogen atom abstraction reactions in mononuclear non-haem iron dioxygenases

Jason Shearer,* Sara Bassiri, Kendal W. Southwell and Dovydas Vasiliauskas

9405



Cost-effective nanocubic Prussian blue analogues for enhanced active-barrier epoxy coatings

Xinyue Zhang, Chunmei Zhang,* Mairemu Maihaiti, Kang Ye, Xingzhi He, Lingqian Ye, Minjie Shi,* Jun Yang and Edison Huixiang Ang*

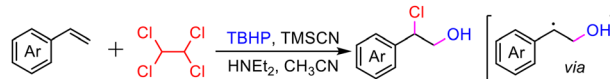


COMMUNICATIONS

9410

Anti-Markovnikov radical hydroxychlorination of alkenes enabled by amine-promoted chlorine radical generation

Renhua Su, Duoduo Xiao,* Yanfu Jiang, Xian Jiang, Jiantao Zhang,* Yaju Chen and Weibing Liu*

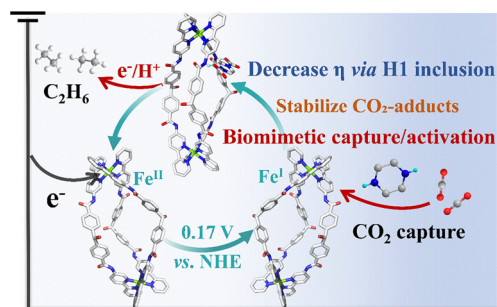


- TBHP as OH source
- TCE as Cl source
- Anti-Markovnikov regioselectivity
- Transition-metal-free
- Late-stage functionalization of drug molecular scaffolds

9414

A bioinspired metal–organic helicate drives electrocatalytic ethane production from carbon dioxide

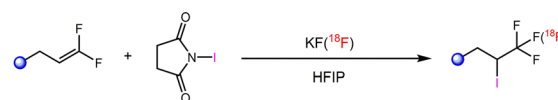
Liu Gao, Jinfeng Wang, Kesheng Shen, Xu Jing* and Chunying Duan



9419

HFIP-Promoted [¹⁸F] trifluoromethylation via iodofluorination of gem-difluoroalkenes

Yuzhang, Yifan Ren, Junbin Han* and Xiaojun Zeng*

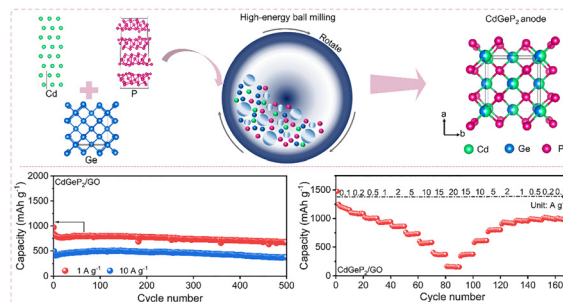


- Mild conditions
- Excellent regioselectivity
- 28 examples for ¹⁹F, 9 examples for ¹⁸F

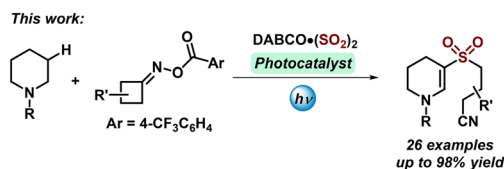
9424

Mechanically alloyed CdGeP₂ coupled with optimized conductive frameworks for ultrafast lithium storage

Zedong Li, Wei Pan, Yuanxia Zhang, Hongming Zhang, Haipeng Wang, Pengfei Hou, Xinxin Wang, Jingjing Chen, Chenlong Dong* and Zhiyong Mao*



9429

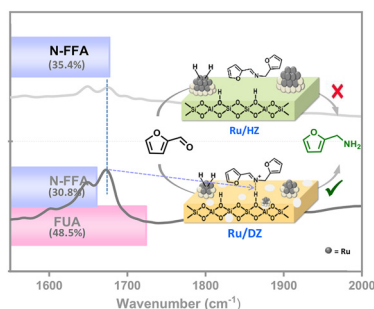


- ◆ sulfur dioxide insertion process ◆ mild reaction conditions ◆ no additional oxidant
- ◆ synthesis of β-sulfonylated piperidines ◆ broad functional group tolerance

A photo-induced three-component reaction of *N*-aryl piperidines, sulfur dioxide, and cycloketone oxime esters

Ze Wang, Mengxia Yu, Shaoyu Li,* Jie Wu* and Shengqing Ye*

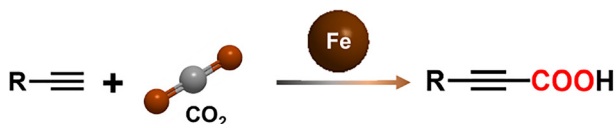
9433



Rational engineering of Brønsted acid sites for product-specific and accelerated furfurylamine formation

Supan, Kanika Saini and Shunmugavel Saravanamurugan*

9437

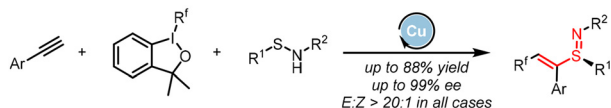


Fe(0)-catalyzed alkyne carboxylation with CO₂ involving spin crossover

Huili Wang, Qiqi Zhang, Haizhu Yu,* Kane Jacob, Azzedine Bousseksou,* Philippe Hapiot, Jean-Luc Pozzo* and Didier Astruc*

9442

Enantioselective Three-component Radical Relay Alkenylation of Sulfenamides



- ◆ Three-component radical relay reaction ◆ Good functional group compatibility
- ◆ Good chemo-, regio- and stereoselectivity ◆ Detailed mechanism studies

Copper-catalyzed three-component radical relay alkenylation of sulfenamides

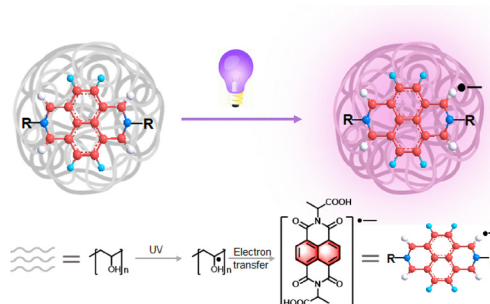
Renkang Wei, Jing Zhong, Qian Wang, Yixin Wang, Hequan Yao* and Aijun Lin*



9447

Photochromism *via* reversible transformation of photoinduced chiral free radicals

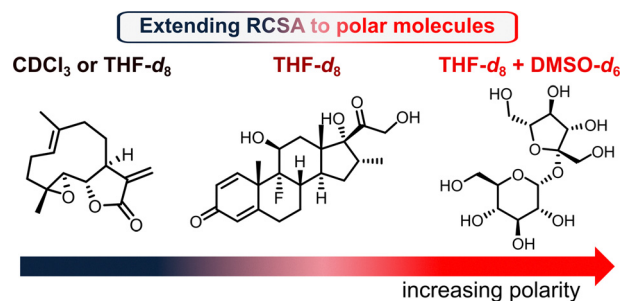
Xiaoyang Zhang, Shengwen Bao, Chenfeng He, Shan Li, Guoquan Zhou, Yunhui Wan,* Ying Liu,* Danfeng Ye* and Liangliang Zhu



9451

RCSA-based relative stereochemical analysis of polar molecules in PBLG liquid crystalline medium

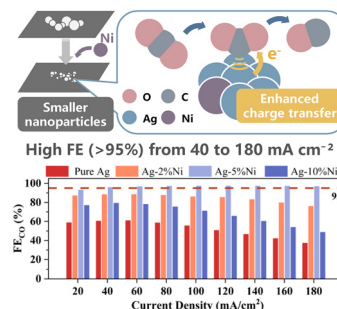
Chang Qi, Mikhail Reibarkh* and Xiao Wang*



9455

Stability and degradation mechanisms of silver–nickel nanoparticle catalysts for electrochemical CO₂ reduction

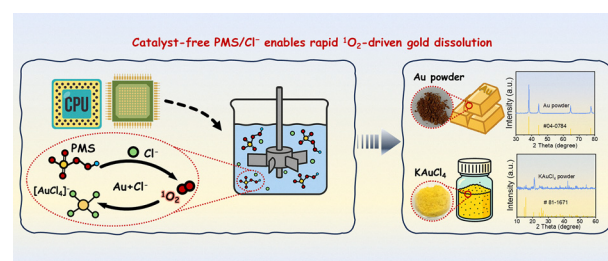
Yan Wang, Rui Xue, Nan Wang, Lu Ma, Yiming Chen, Qingquan Yang, Xiaohui Yan, Zulipiya Shadike,* Shuiyun Shen* and Junliang Zhang*



9459

Unlocking value from waste: peroxymonosulfate oxidation for the valorization of precious metals into high-value products

Fanping Wang, Tianyu Zhang, Aijuan Han and Junfeng Liu*

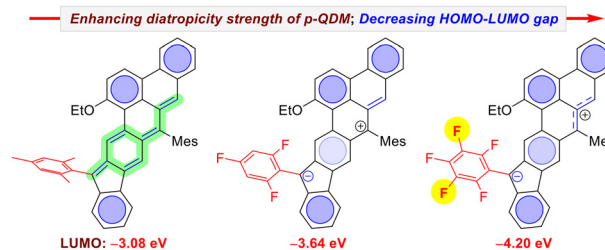


COMMUNICATIONS

9481

Substituent-induced modulation of proaromaticity in benzo-fused fluoreno-phenalene exhibiting a low-lying LUMO

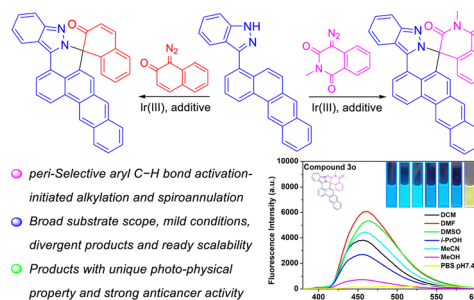
Sakshi Sahewal, Suman Sharma, Dibyendu Mallick and Soumyajit Das*



9486

peri-Selective C–H activation-initiated spiroannulation leading to spirocyclic compounds with unique photophysical properties and strong anticancer activity

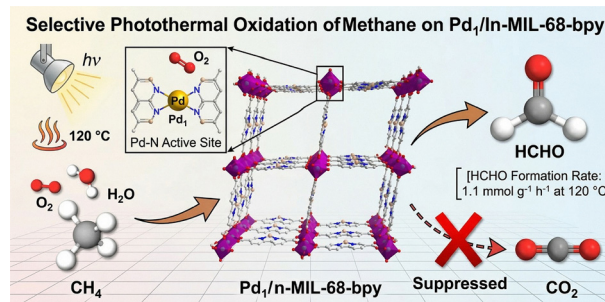
Qianting Zhou, Jiayi Zou, Haiyun Xu, Yijun Gong,* Chunhua Ma, Xinying Zhang* and Xuesen Fan*



9491

Single atom Pd anchored on In-MIL-68-bpy for selective photothermal catalytic methane oxidation to formaldehyde

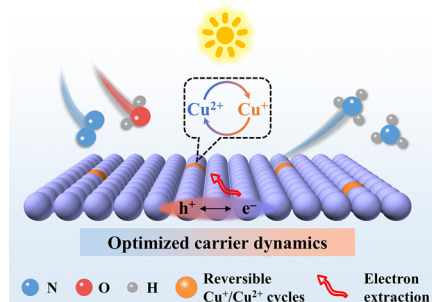
Shengrong Zhou, Zitong Bao,* Sai Chen, Xuetao Tian, Hui Song, Guangzhao Li and Hongwei Zhang*



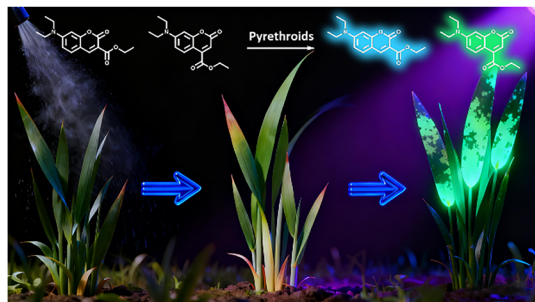
9495

Reversible Cu⁺/Cu²⁺ cycles enable enhanced carrier separation for efficient photocatalytic ammonia synthesis

Weiwei Shao, You Yang, Yang Shen, Chengbin Zhang, Yuanyuan Wang, Yingfei Hu, Yang Wu, Jun Hu, Junfa Zhu, Hangmin Guan,* Xiaolong Zu, Xiaodong Li* and Xingchen Jiao*



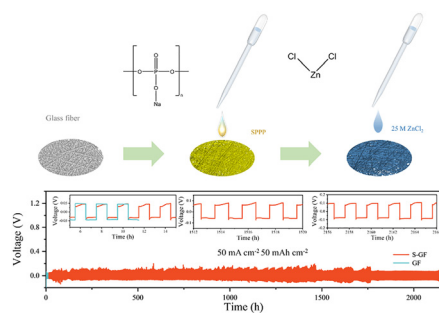
9500



An aggregation state transition strategy for fluorescence imaging of pyrethroid residues

Na Gu, Yan Wang, Zhengying Chen, Hongke Bie, Huili Wang, Xuedong Wang* and Chunyang Chen*

9504



A sodium polyphosphate-induced gel interfacial layer enables a stable Zn anode under harsh conditions

Yue Shen, Yongkang Wang, Xiao Liu, Xingru Chen, Jiyu Sun, Beibei Yang,* Qiang Huang,* Yongzheng Zhang, Hongbin Lu* and Duan Bin*

