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IN THIS ISSUE

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Cover
See Herbert W. Roesky *et al.*, pp. 9483–9512. Image reproduced by permission of Herbert W. Roesky from *Chem. Commun.*, 2024, **60**, 9483.

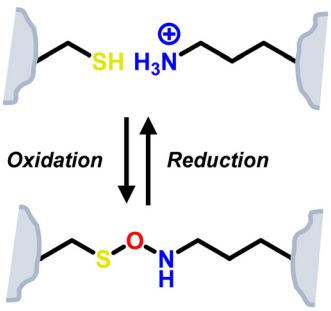
Inside cover
See Matthew D. Lloyd *et al.*, pp. 9463–9471. Image shows a NOS bridge observed in the crystal structure of *Clostridium botulinum* neurotoxin serotype A2 cell binding domain. Image reproduced by permission of Matthew D. Lloyd, Kyle S. Gregory and K. Ravi Acharya from *Chem. Commun.*, 2024, **60**, 9463.

HIGHLIGHTS

9463

Functional implications of unusual NOS and SONOS covalent linkages found in proteins

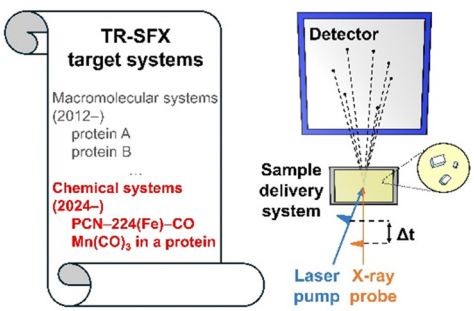
Matthew D. Lloyd,* Kyle S. Gregory and K. Ravi Acharya



9472

Time-resolved serial femtosecond crystallography for investigating structural dynamics of chemical systems

Jungho Moon, Yunbeom Lee and Hyotcherl Ihee*



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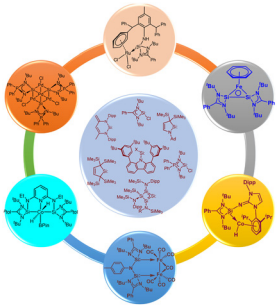
FEATURE ARTICLES

9483

Recent progress in transition metal complexes featuring silylene as ligands

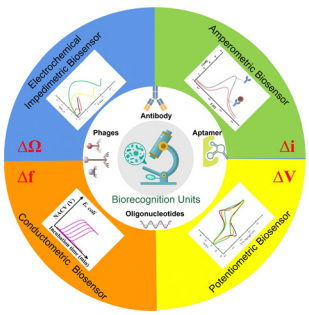
Zohreh Hendi, Madhusudan K. Pandey, Saroj Kumar Kushvaha and Herbert W. Roesky*



9513

Electrochemical biosensors for clinical detection of bacterial pathogens: advances, applications, and challenges

Shengyong Ding, Xiaodi Chen, Bin Yu and Zhiyuan Liu*

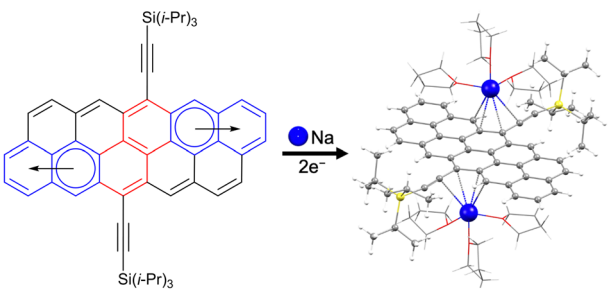


COMMUNICATIONS

9526

Chemical reduction of π-expanded functionalized pentacene: cooperation of side group in alkali metal binding

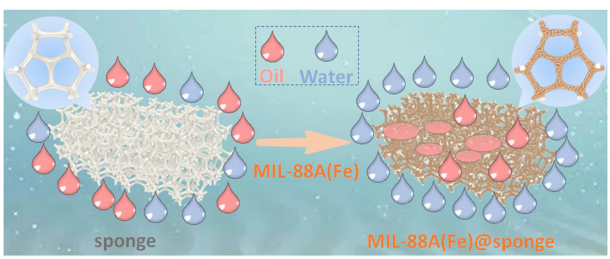
Matthew Pennachio, Zheng Wei, Masashi Mamada, Michel Frigoli* and Marina A. Petrukhina*



9530

High throughput production of a self-floating MIL-88A(Fe)@polyurethane sponge for efficient oil/water separation

Xiao-Hong Yi, Guang-Chi Liu, Hong-Yu Chu, Ya Gao, Chong-Chen Wang* and Peng Wang



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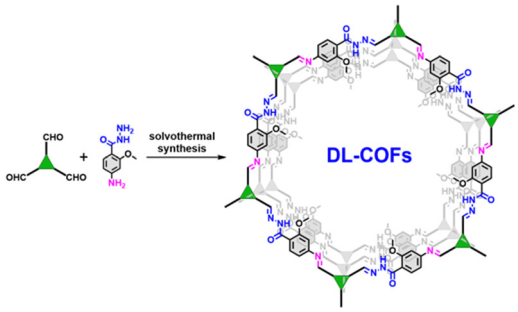
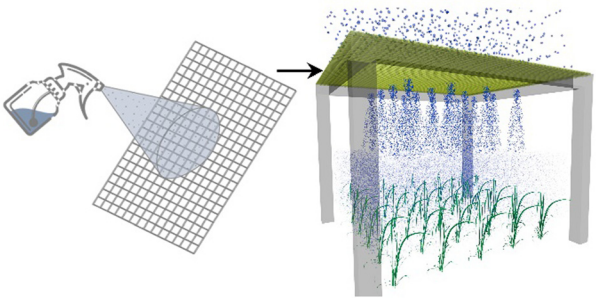
9534



Construction of imine–hydrazone dual linkage covalent organic frameworks

Yubao Lan, Yufeng Gong, Xiaoya Pang, Yanjun Feng, Yi Ran, Huixia Guo and Xiaoquan Lu*

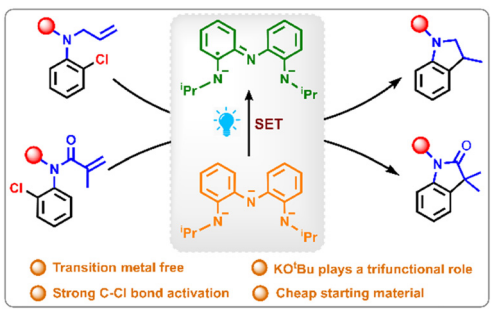
9538



A smart roof that transforms raindrops into agricultural spraying

Tao Shen, Can Gao, Xile Deng,* Shijie Liu, Zhuoxing Liu, Jia Peng, Jie Ma, Lianyang Bai, Lei Jiang and Zhichao Dong*

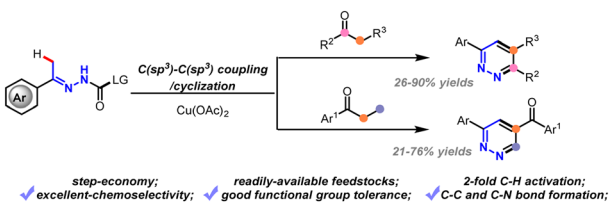
9542



Photochemical pincer-catalyzed reductive cyclisation towards indolines and oxindoles

Vikramjeet Singh, Nidhi Sinha and Debashis Adhikari*

9546



Synthesis of polysubstituted pyridazines *via* Cu-mediated C(sp^3)–C(sp^3) coupling/annulation of saturated ketones with acylhydrazones

Honggui Zhou, Zhefeng Li, Juehong Chen, Si Zhou, Xinyu Wang, Linwei Zhang, Jiuxi Chen and Ningning Lv*

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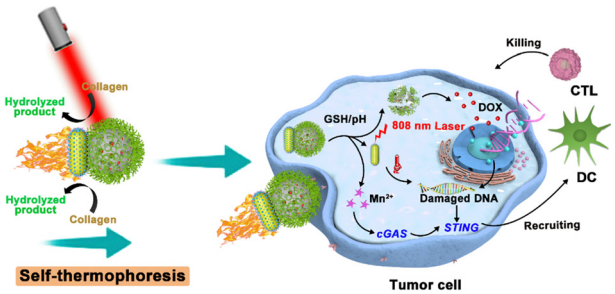
9550

A near-infrared light-driven Janus nanomotor for deep tumor penetration and enhanced tumor immunotherapy

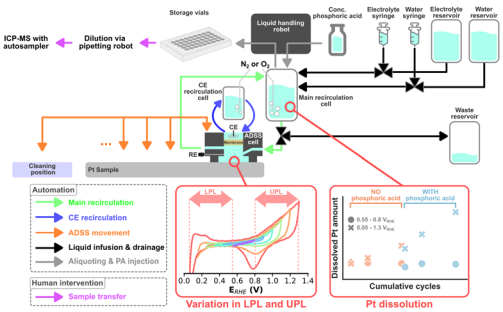
Ke Ma, Zelong Chen, Kai Liang, Yuxin Pei and Zhichao Pei*



9554

Automated monitoring of electrocatalyst corrosion as a function of electrochemical history and electrolyte formulation

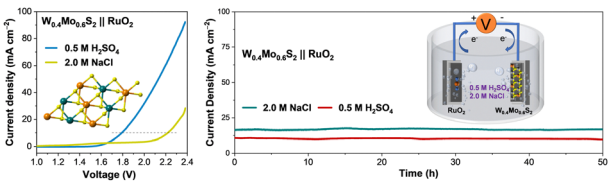
Ken J. Jenewein,* Kevin Kan, Dan Guevarra, Ryan J. R. Jones, Yungchieh Lai, Santosh K. Suram, Joel A. Haber, Serhiy Cherevko and John M. Gregoire*



9558

Defect-rich $W_{1-x}Mo_xS_2$ solutions for efficient H_2 evolution in acidic electrolytes

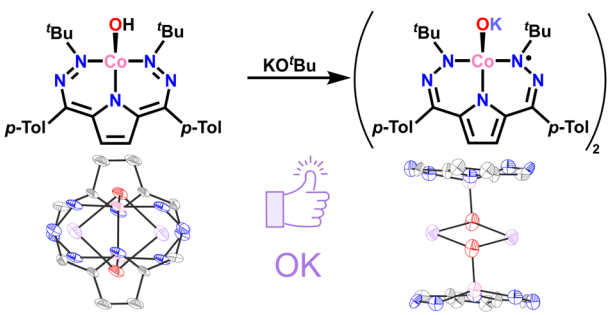
Zongge Li,* Zhicheng Liu, Danni Wang, Wenjun Kang, Haibo Li and Guoxin Zhang*



9562

Synthesis of a potassium capped terminal cobalt–oxido complex

Sophie W. Anferov, Alexandra Krupinski and John S. Anderson*



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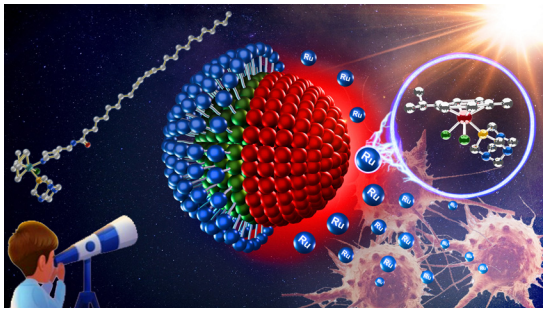
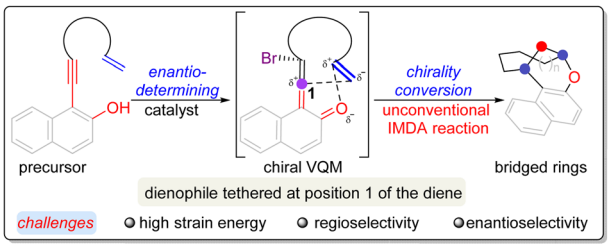


RAPTA-coordinated polydiacetylene self-assembly: A chameleon-like prodrug with a dual-lock strategy for real-time release monitoring of metallodrug

Chezhiyan Sumithaa, Karnan Sugantharam, Aswathy Karanath-Anilkumar, Ganesh Munuswamy-Ramanujam and Mani Ganeshpandian*

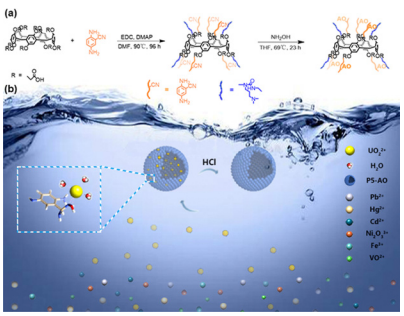
9570



Catalytic asymmetric construction of bridged bicyclo[*m*.3.1] rings using an intramolecular Diels–Alder reaction

Kai Li, Zhengxing Zhao, Wenling Qin, Yidong Liu* and Hailong Yan*

9574



Hollow spherical nano-traps using pillararene-based polymer for efficient uranium extraction from seawater

Qiang He, Jiehai Peng, Yumei Wang, Guodong Sheng, Na Chang, Kui Du,* Yue Sun and Haitao Wang*

9578

Palladium-catalyzed *syn*-alkynylarylation of internal alkynes: rapid access to all-carbon tetrasubstituted alkenes

Ruize Ma, Xinni Qiu, Huanfeng Jiang and Wanqing Wu*

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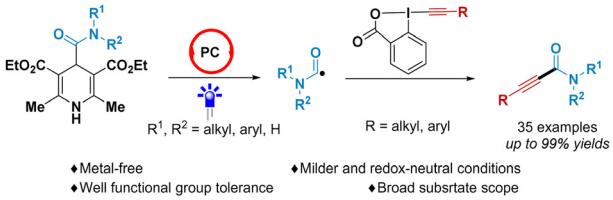
9582

Metal-free photoinduced generation and alkynylation of carbamoyl radicals: a facile synthesis of alkynyl amides

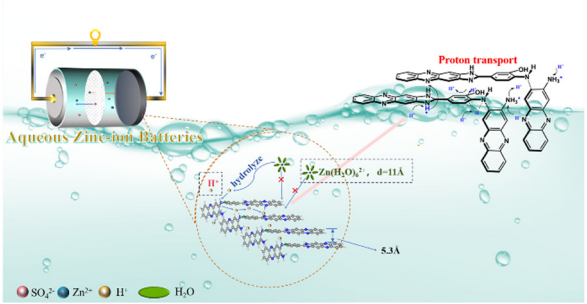
Yurong Duan, Kai Zhang, Tongtong Xing, Yubin Bai, Jinfeng Li, Xiaojun Yang, Yu Zhao* and Qiuyu Zhang



9586

Using –NH and –OH rich organic cathodes to explore proton transport in aqueous zinc-ion batteries

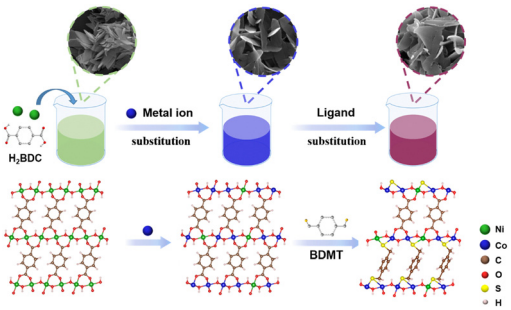
Wenlong Zhang, Suyan Niu, Yao Wang, Zhenyu Wang, Yiming Wang, Na Ju, Xinyu Liu, Yinggang Jia* and Hongbin Sun*



9590

Metal ion and organic ligand disubstituted bimetallic metal–organic framework nanosheets for high-performance alkaline zinc-based batteries

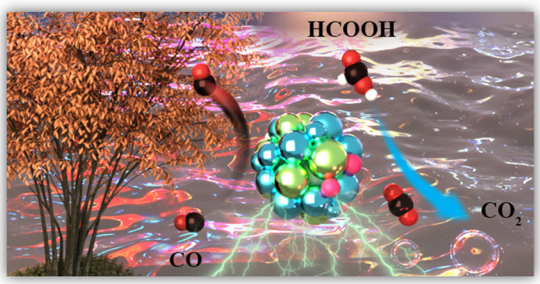
Huayu Wang, Jie Bai, Qingqing He, Yanxin Liao and Lingyun Chen*



9594

Polyphosphide anion-mediated simultaneous P, Au co-alloying with Pd for anti-poisoning formic acid oxidation

Yilan Chen, Jian Dong, Shuke Huang, Jun Li and Chenyang Zhao*



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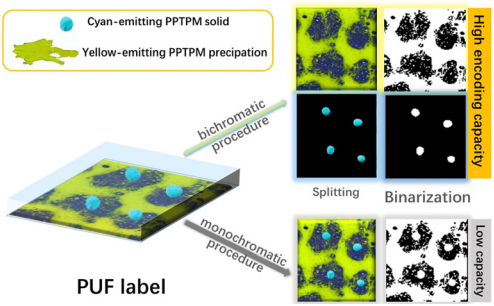
9598

2,3-Difunctionalization of quinones: a gold-catalyzed cascade approach for trifluoromethyl-amination or sulfoximination

Alpa Sharma, Vijaya Govande, Shivangani Mahajan and Sanghapal D. Sawant*

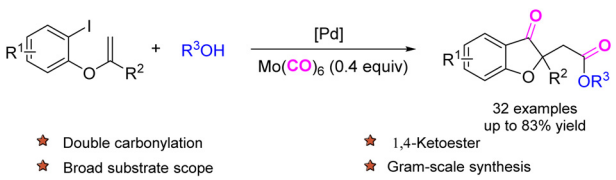
9602



Robust two-color physically unclonable patterns from controlled aggregation of a single organic luminophore

Haiyan Chen, Shaoju Li, Lei Xu, Mingjun Wang and Shayu Li*

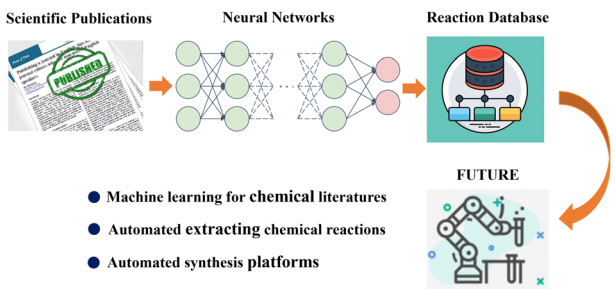
9606



Pd-catalyzed CO-free double carbonylation for the synthesis of 1,4-ketoesters with $Mo(CO)_6$ as the carbonyl source

Wenting Guo, Houhong Gong, Wei Yuan, Hualan Zhou, Li Tao and Jing Zhu*

9610



A chemical reaction entity recognition method based on a natural language data augmentation strategy

Xiaowen Zhang, Yang Li, Chaoyi Li, Jingyuan Zhu, Zhiqiang Gan, Lei Wang,* Xiaofei Sun* and Hengzhi You*

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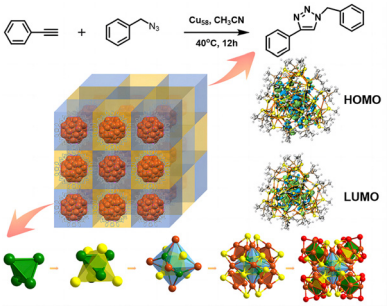
9614

$[Cu_{58}(SeC_6H_5)_{24}(Dppe)_6Se_{16}]^{2+}$ assembled from tetrahedra and octahedra: synthesis, characterization, structure and catalytic properties

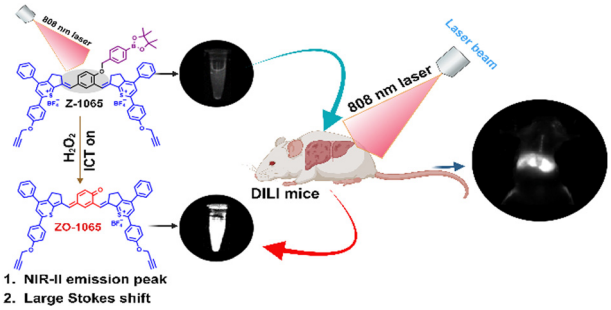
Tao Yang, Jianmei Jia, Lin Xiong,* Shan Jin* and Manzhou Zhu



9618

A novel NIR-II fluorescent probe for hydrogen peroxide detection in drug-induced liver injury

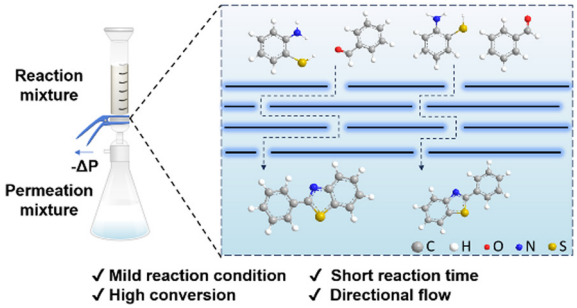
Huiyu Chen, Hui Zhou,* Xinyue Zhang, Yancheng Ding, Xiaolong Zhang, Qinqin Xu, Ben Wang, Chao Yin* and Quli Fan



9622

Synthesis of benzothiazole compounds based on 2D graphene oxide membrane nanoreactors

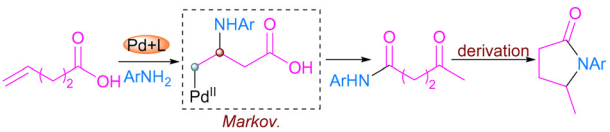
Xinxin Cui, Haoran Shi, Shuai Pang, Xiang Li, Yue Long,* Xiqi Zhang,* Kai Song* and Lei Jiang



9626

Pd-catalyzed Markovnikov selective oxidative amination of 4-pentenoic acid

Lihua Mao, Chao Liu, Xiangwen Tan, Biao Yao, Jiahao Wu, Wanqing Wu and Huanfeng Jiang*



CORRECTION

9630

Correction: Radiopharmaceutical-activated silicon naphthalocyanine nanoparticles towards tumor photodynamic therapy

Tingting Wang, Jingchao Li, Xun Zhang, Chengao Li, Jiang Ming, Jian Li, Dongsheng Zhang, Jun Yang, Nian Liu* and Xinhui Su*

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