

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 60(71) 9451-9632 (2024)



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

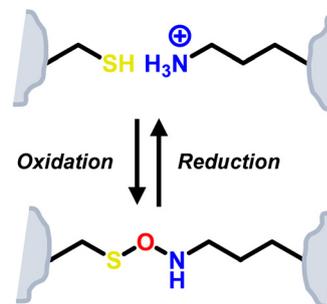
See Matthew D. Lloyd *et al.*, pp. 9463–9471. Image shows a NOS bridge observed in the crystal structure of *Clostridium botulinum* neurotoxin serotype A2 cell binding domain. Image reproduced by permission of Matthew D. Lloyd, Kyle S. Gregory and K. Ravi Acharya from *Chem. Commun.*, 2024, 60, 9463.

HIGHLIGHTS

9463

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

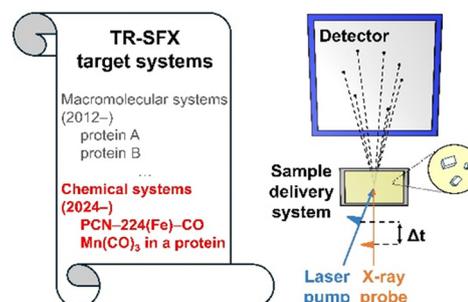
Matthew D. Lloyd,* Kyle S. Gregory and K. Ravi Acharya



9472

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

Jungho Moon, Yunbeom Lee and Hyotcherl Ihee*



ChemComm

Uncover new possibilities
with outstanding
preliminary research

Original discoveries, fuelling
every step of scientific progress

rsc.li/chemcomm

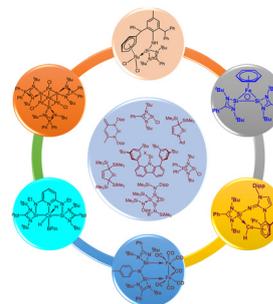
Fundamental questions
Elemental answers

FEATURE ARTICLES

9483

Recent progress in transition metal complexes featuring silylene as ligands

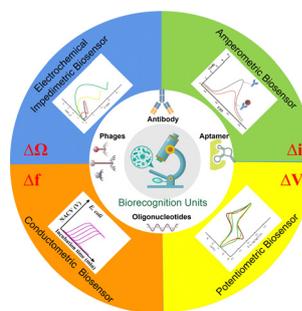
Zohreh Hendi, Madhusudan K. Pandey, Saroj Kumar Kushvaha and Herbert W. Roesky*



9513

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

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

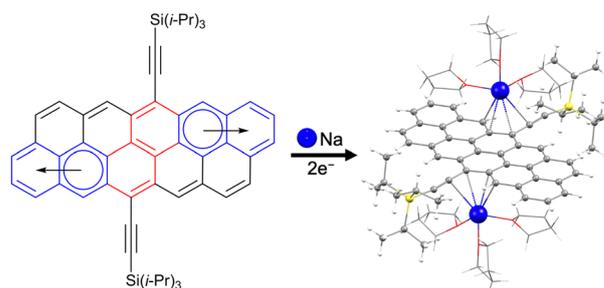


COMMUNICATIONS

9526

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

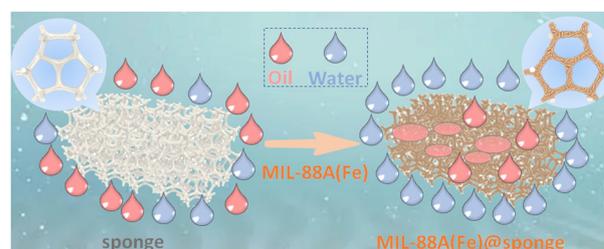
Matthew Pennachio, Zheng Wei, Masashi Mamada, Michel Frigoli* and Marina A. Petrukhina*



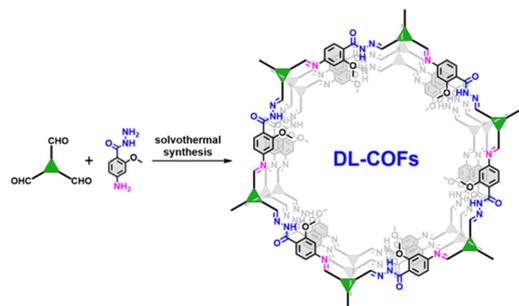
9530

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



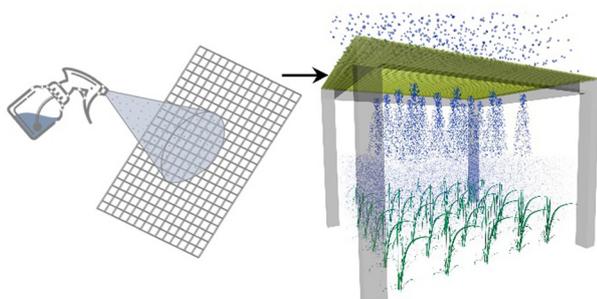
9534



Construction of imine–hydrazone dual linkage covalent organic frameworks

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

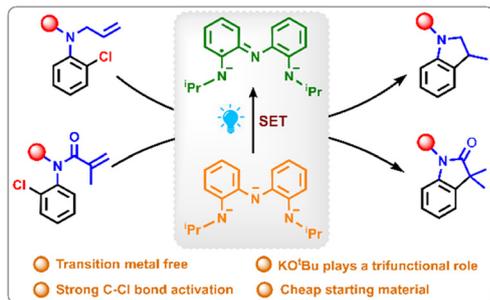
9538



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*

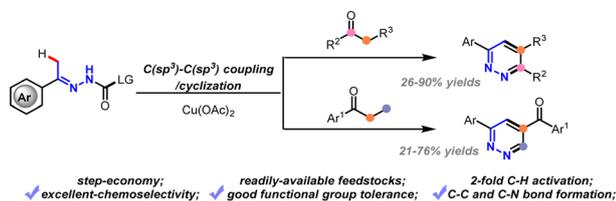
9542



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(sp³)-C(sp³) coupling/annulation of saturated ketones with acylhydrazones

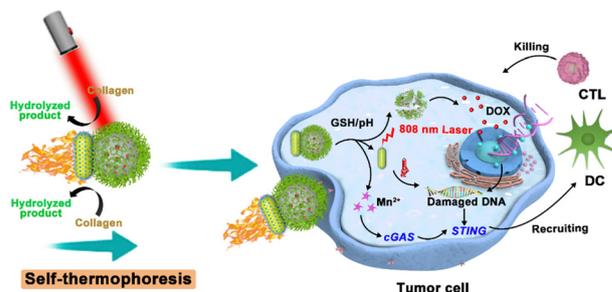
Honggui Zhou, Zhefeng Li, Juehong Chen, Si Zhou, Xinyu Wang, Linwei Zhang, Jiuxi Chen and Ningning Lv*



9550

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

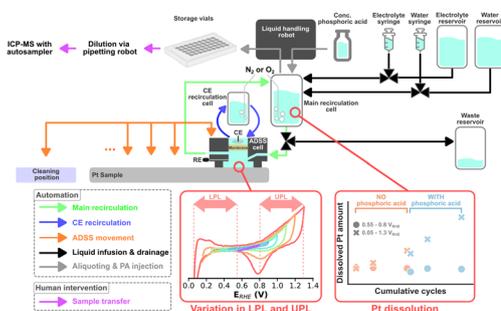
Ke Ma, Zelong Chen, Kai Liang, Yuxin Pei and Zhichao Pei*



9554

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

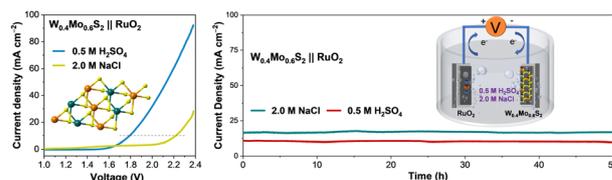
Ken J. Jenewein,* Kevin Kan, Dan Guevarra, Ryan J. R. Jones, Yungchieh Lai, Santosh K. Suram, Joel A. Haber, Serhiy Cherevko and John M. Gregoire*



9558

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

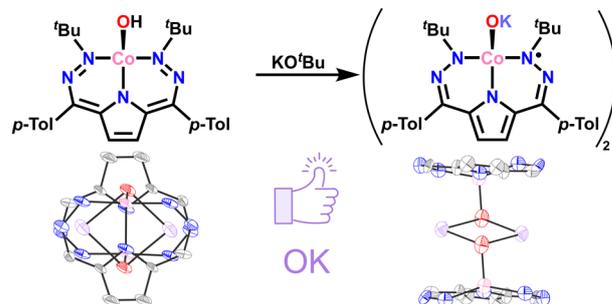
Zongge Li,* Zhicheng Liu, Danni Wang, Wenjun Kang, Haibo Li and Guoxin Zhang*



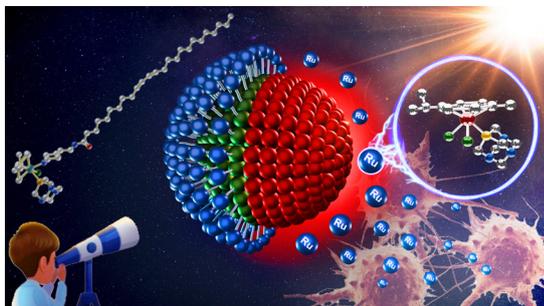
9562

Synthesis of a potassium capped terminal cobalt-oxido complex

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



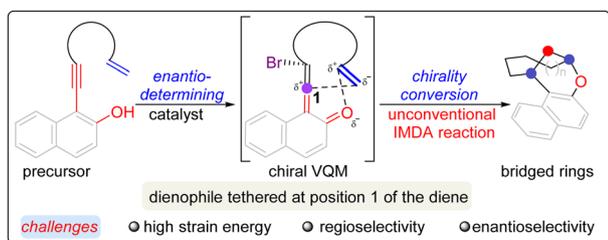
9566



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*

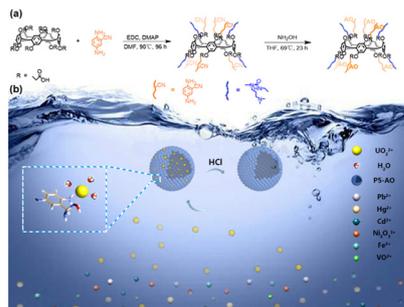
9570



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*

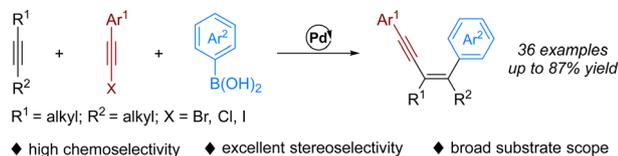
9574



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*-alkynylation of internal alkynes: rapid access to all-carbon tetrasubstituted alkenes

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

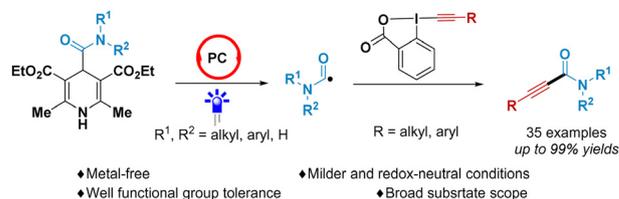


COMMUNICATIONS

9582

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

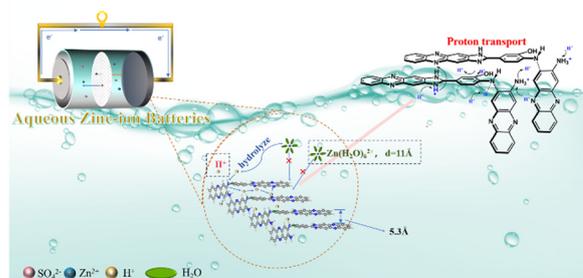
Yurong Duan, Kai Zhang, Tongtong Xing, Yubin Bai, Jinfeng Li, Xiaojun Yang, Yu Zhao* and Qiuyu Zhang



9586

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

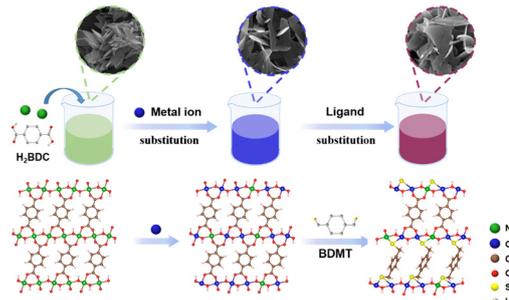
Wenlong Zhang, Suyan Niu, Yao Wang, Zhenyu Wang, Yiming Wang, Na Ju, Xinyu Liu, Yinggang Jia* and Hongbin Sun*



9590

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

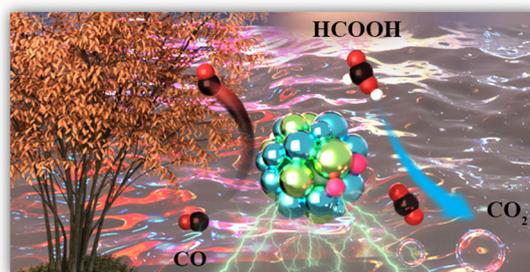
Huayu Wang, Jie Bai, Qingqing He, Yanxin Liao and Lingyun Chen*



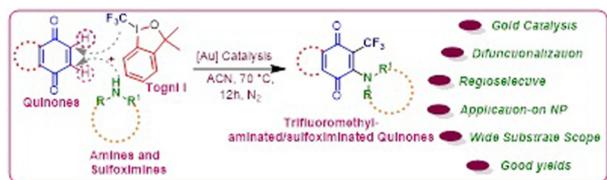
9594

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*



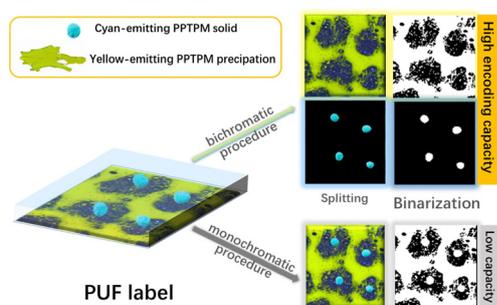
9598



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

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*

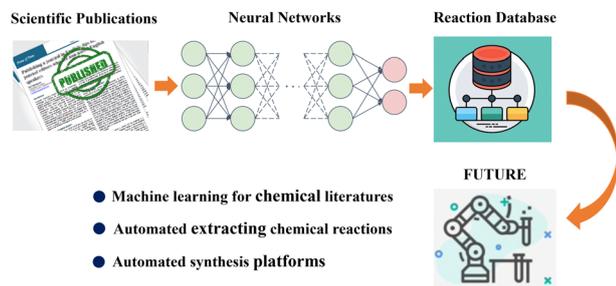
9606



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*

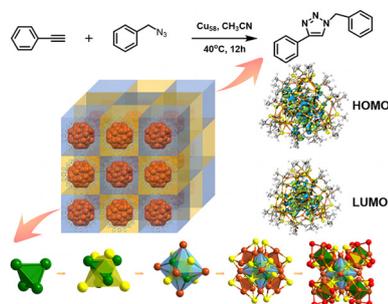


COMMUNICATIONS

9614

[Cu₅₈(SeC₆H₅)₂₄(Dppe)₆Se₁₆]²⁺ assembled from tetrahedra and octahedra: synthesis, characterization, structure and catalytic properties

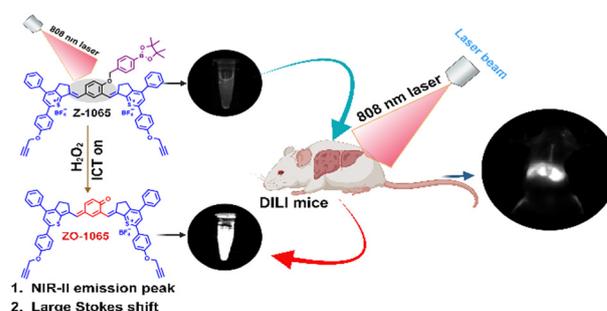
Tao Yang, Jianmei Jia, Lin Xiong,* Shan Jin* and Manzhou Zhu



9618

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

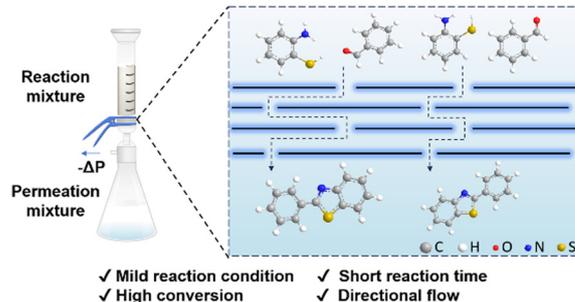
Huiyu Chen, Hui Zhou,* Xinyue Zhang, Yancheng Ding, Xiaolong Zhang, Qinjin Xu, Ben Wang, Chao Yin* and Quli Fan



9622

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

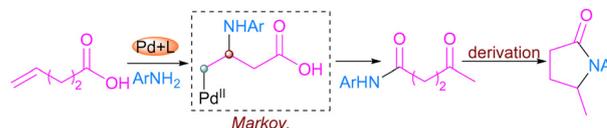
Xinxin Cui, Haoran Shi, Shuai Pang, Xiang Li, Yue Long,* Xiqi Zhang,* Kai Song* and Lei Jiang



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*

