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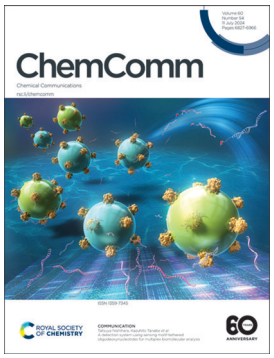
IN THIS ISSUE

ISSN 1359–7345 CODEN CHCOFS 60(54) 6827–6966 (2024)



Cover
See Tatsuya Nishihara, Kazuhito Tanabe *et al.*, pp. 6059–6062.
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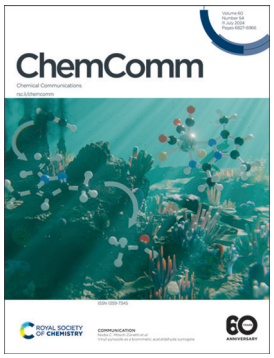

Inside cover
See Nadia C. Mösch-Zanetti *et al.*, pp. 6873–6876.
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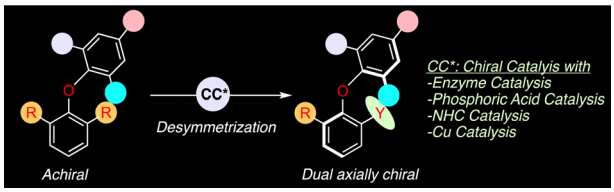
HIGHLIGHTS

6837

Evolution in the asymmetric synthesis of biaryl ethers and related atropisomers

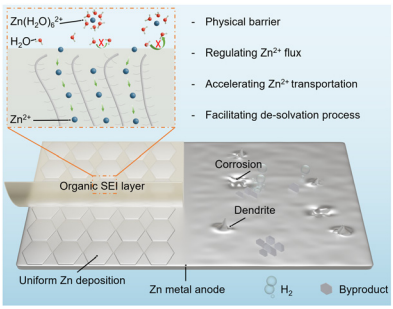
Namrata Kotwal and Pankaj Chauhan*



6847

Organic solid–electrolyte interface layers for Zn metal anodes

Ze He, Wei Huang, Fangyu Xiong, Shuangshuang Tan, Tianhao Wu, Rui Wang, Caterina Ducati,* Michael De Volder* and Qinyou An*



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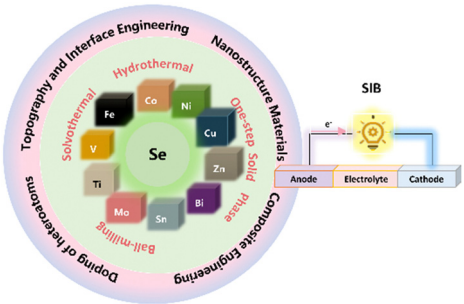
FEATURE ARTICLE

6860

Towards metal selenides: a promising anode for sodium-ion batteries

Mingjie Liu, Junling Xu, Lianyi Shao, Xiaoyan Shi,* Chunsheng Li* and Zhipeng Sun*

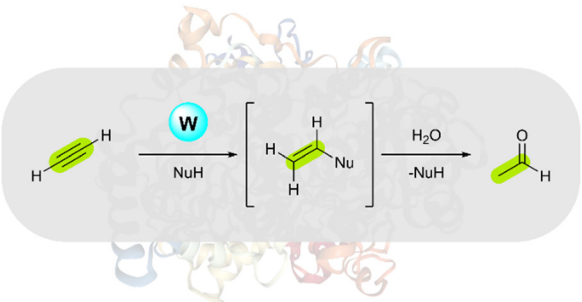


COMMUNICATIONS

6873

Vinyl-pyrazole as a biomimetic acetaldehyde surrogate

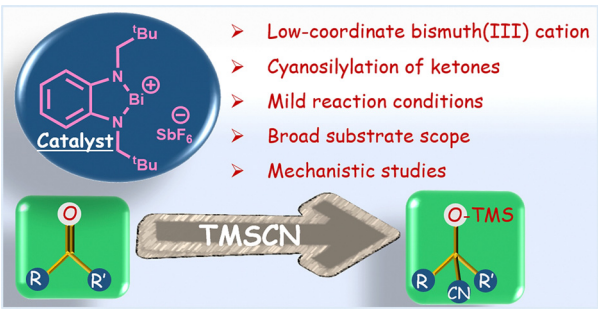
Lorenz Steiner, Miljan Z. Ćorović, Antoine Dupé and Nadia C. Mösch-Zanetti*



6877

Synthesis and catalytic application of a donor-free bismuthenium cation

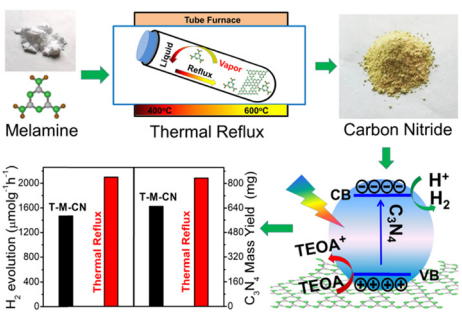
Nilanjana Sen, Pallavi Sarkar, Yadram Meena, Srinu Tothadi, Swapan K. Pati* and Shabana Khan*



6881

Thermal reflux to synthesise C_3N_4 nanostructures with high yield and enhanced photocatalytic activity in hydrogen evolution

Yihang He, Mingliang Wu and Kunquan Hong*



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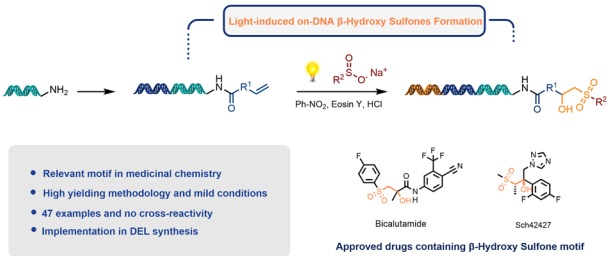
6885



Light-induced β-hydroxy sulfone synthesis in DNA-encoded libraries

Lijun Xue, Jiaqing Yu, Ying Zhong, Junyun Chen, Chao Li, Kexin Yang, Nicolas Duchemin* and Yun Jin Hu*

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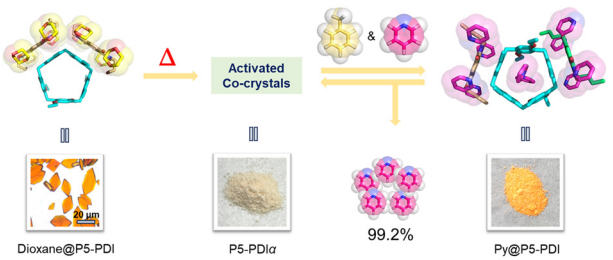

Vapochromic separation of toluene and pyridine azeotropes using adaptive macrocycle co-crystals

Bin Li,* Yun Wang, Yuan Wang, Yue Liu, Lu Wang, Zhi-Yuan Zhang and Chunju Li*

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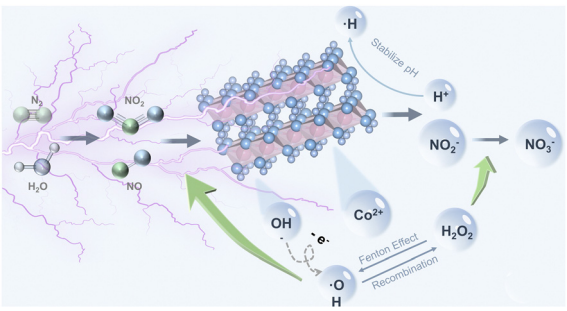

Solution plasma-cobalt hydroxide-enabled nitrogen fixation

Yangwenting Ou, Jinglun Du, Changhua Wang,* Qi Wu, Shuang Liang, He Ma and Xintong Zhang*

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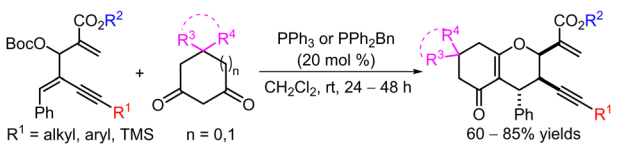

Phosphine-catalyzed (3+3) annulation of cinnamaldehyde-derived Morita–Baylis–Hillman carbonates with dinucleophiles

Yue Ren, Wangyu Shi, Yi Tang and Hongchao Guo*

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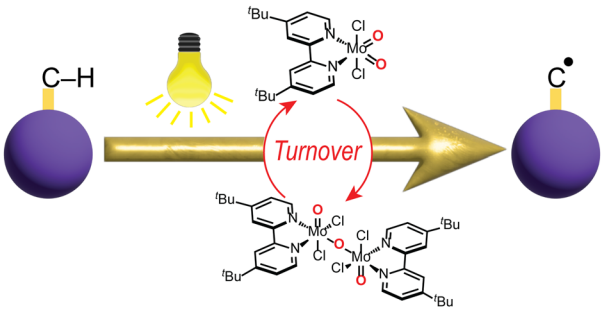
6901

Direct photocatalytic C–H functionalization mediated by a molybdenum dioxo complex

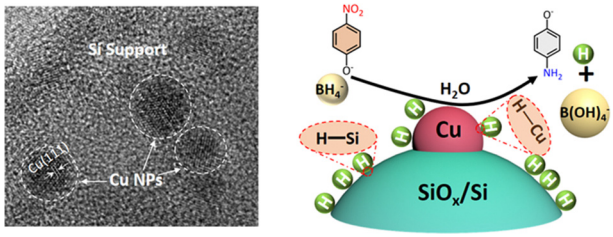
Courtney L. Baumberger, Victoria Z. Valley and Matthew B. Chambers*



6905

Facile synthesis of Cu-based catalysts from Cu_3Si and their catalysis properties study

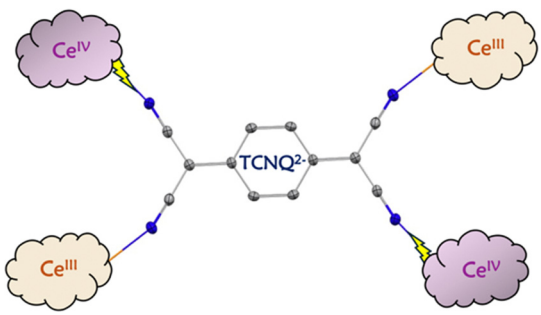
Yonghui Li, Xianhui Liu, Guangfu Zu, Zhiwei Yang, Xiao Huang and Shaozhou Li*



6909

Assembly of a trapped valent $Ce^{III/IV}$–TCNQ complex through metal–ligand redox cooperativity

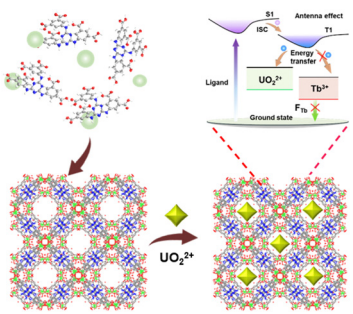
Himanshu Gupta, Brett D. Vincenzini, Alexandra M. Bacon and Eric J. Schelter*



6913

Site-recognition boosted the sensing performance of terbium-based organic frameworks for UO_2^{2+} detection

Kexuan Li, Yuan-Jun Tong, Qian Liu, Shiyu Peng, Xinying Gong, Dongmei Wang and Zhengjun Gong*



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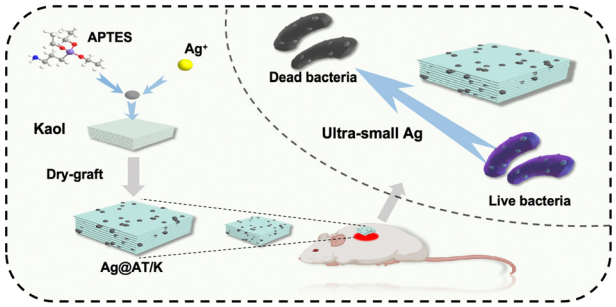

Kaolinite-mediated synthesis of ultra-small silver nanoparticles with high antimicrobial activity

Menghan Qu, Menghan Yu,* Tianqi Liao and Huaming Yang*

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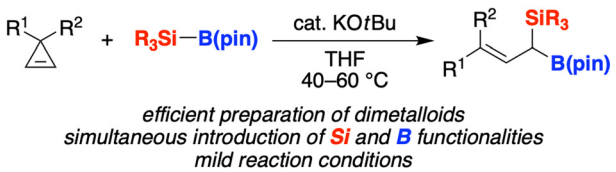

Synthesis of (1-silyl)allylboronates by KO*t*Bu-catalyzed ring-opening *gem*-silylborylation of cyclopropenes

Ikuya Fujii, Haruka Hirata, Hirokazu Moniwa and Ryo Shintani*

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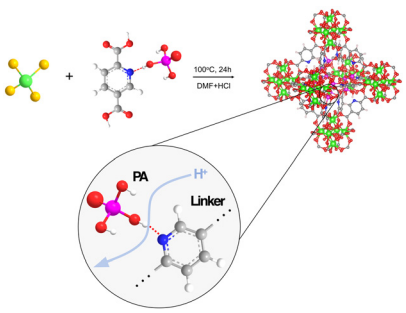

Bottom-up synthesis of ion-pair-bridged metal–organic framework for H^+ conduction

Keiichiro Maegawa,* Hayata Okamoto, Kazuhiro Hikima, Go Kawamura, Atsushi Nagai and Atsunori Matsuda*

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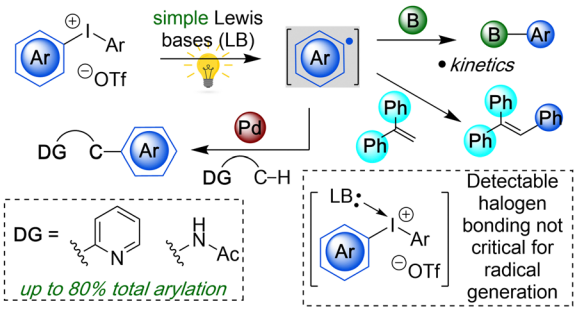

Exogenous photocatalyst-free aryl radical generation from diaryliodonium salts and use in metal-catalyzed C–H arylation

Jonathan Galicia, Nicholas R. McDonald, Christopher W. Bennett, Jiajun He, Mark D. Glossbrenner and Erik A. Romero*

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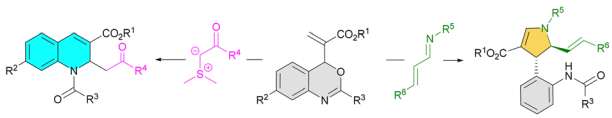
Catalyst-free reaction of 2-(4*H*-benzo[*d*][1,3]oxazin-4-yl)acrylates: synthesis of 1,2-dihydroquinolines and 2,3-dihydropyrroles

Tao Wang, Zhongyue Lu and Pengfei Li*



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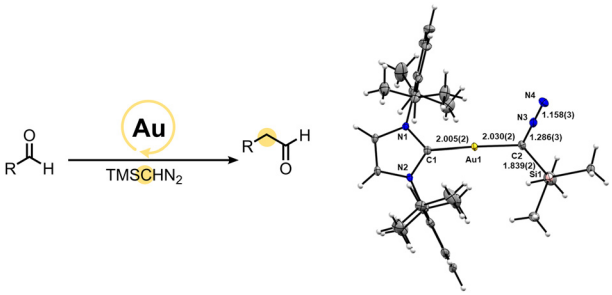
Gold(I)-catalyzed homologation of aryl aldehydes with trimethylsilyldiazomethane

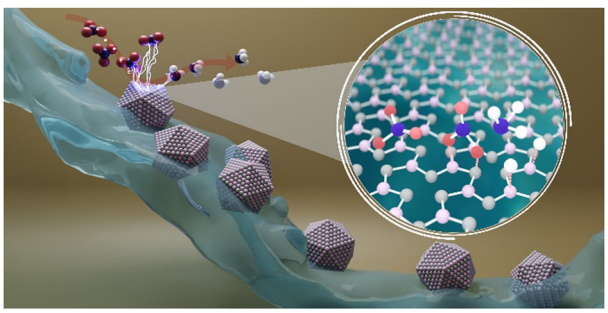
Abolghasem 'Gus' Bakhoda



6941

Ni_2P active site ensembles tune electrocatalytic nitrate reduction selectivity

Emily Nishiwaki, Peter S. Rice, Ding-Yuan Kuo, Florence Y. Dou, Anthony Pyka, Bryce Reid, Hao A. Nguyen, Eric M. Stuve, Simone Raugei and Brandi M. Cossairt*



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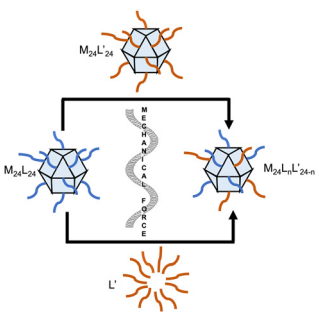
Solvent-free mechanochemistry for the preparation of mixed-ligand cuboctahedral porous coordination cages

Jahidul Hoq and Eric D. Bloch*



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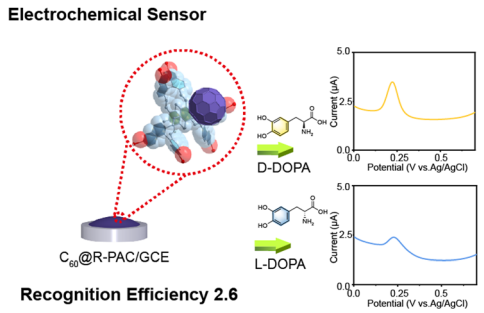
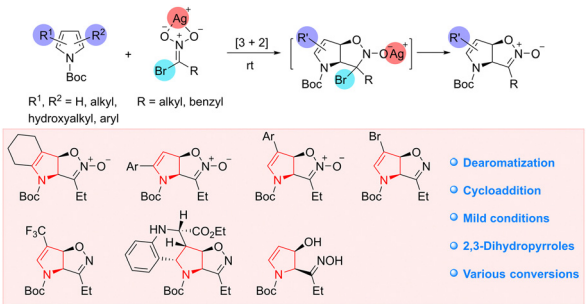


A porous aromatic cage-based electrochemical sensor for enantioselective recognition of DOPA

Junning Kou, Ziyu Zhu, Jianzhu Jiang, Li Chen, Kunhao Zhang,* Guogang Shan,* Xinlong Wang,* Zhongmin Su and Chunyi Sun*

6953



Dearomative pyrrole (3+2) reaction with geminal bromonitroalkane: synthesis of 2,3-dihydropyrroles

Lin Shi, Lidong Liu, Xingyu Lei, Yihan Wang, Yeguang Fang* and Peng Jiao*

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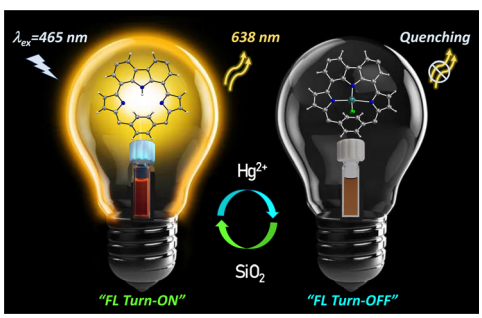

Carbazole-embedded *p*-benziporphyrinoid: synthesis, structure and a reversible chemodosimeter for mercury(II) ions

Athira Naniyil, Naveen Koroth Valappil, Alex P. Andrews and Sabapathi Gokulnath*

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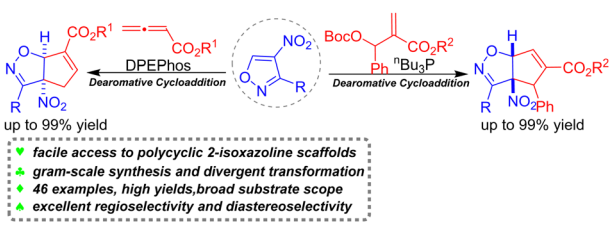

Phosphine-catalyzed dearomative [3+2] cycloaddition of 4-nitroisoxazoles with allenoates or Morita–Baylis–Hillman carbonates

Yongjun He, Tian-Juan He, Xiufang Cheng, Yibo Wei, Huamin Wang* and Ying-Wu Lin*

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