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Cover

See Thomas Theis, Brojo K. S. Dhali *et al.*, pp. 12115–12118. Image reproduced by permission of Thomas Theis and Brojo K. S. Dhali from *Chem. Commun.*, 2025, **61**, 12115. Cover image enhanced using Adobe Firefly.



Inside cover

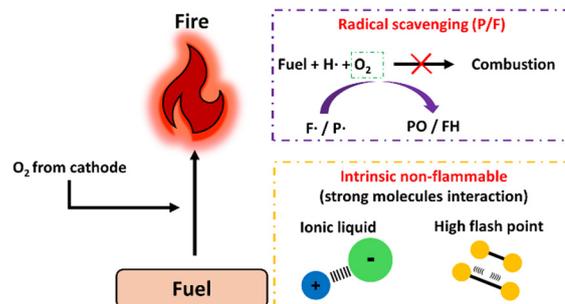
See Anna Skrzyńska, Łukasz Albrecht *et al.*, pp. 12119–12122. Image reproduced by permission of Anna Skrzyńska from *Chem. Commun.*, 2025, **61**, 12119.

HIGHLIGHTS

12056

Innovations in non-flammable and flame-retardant electrolytes for safer lithium-ion batteries

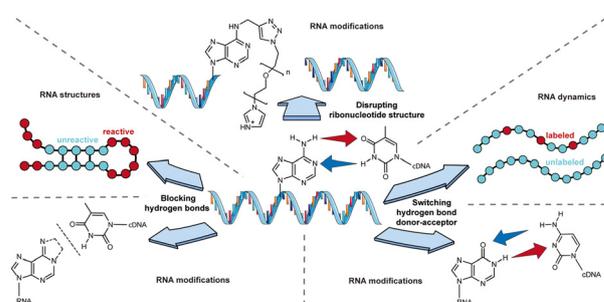
Won-Jang Cho, Yoo Jeong Huh, Soyeon Choi, Uddhav Kulkarni, Kiran P. Shejale and Gi-Ra Yi*



12069

Chemical decoding strategies for detecting RNA modifications, dynamics and structures

Xiao Shu* and Wenping Li



Environmental Science: Atmospheres

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Fundamental questions
Elemental answers

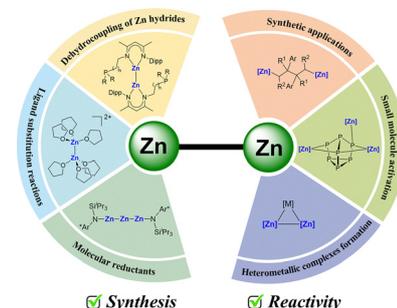


FEATURE ARTICLES

12085

Recent advances in zinc–zinc bonded complexes: synthesis and reactivity

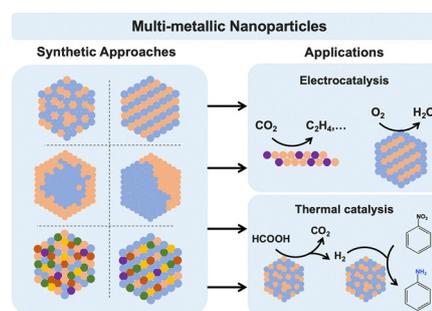
Shengjie Jiang, Shuilian Xu and Xin Xu*



12097

Multi-metallic nanoparticles: synthesis and their catalytic applications

Yuliang Chen, Ahsan Zohaib, Haobo Sun and Shouheng Sun*

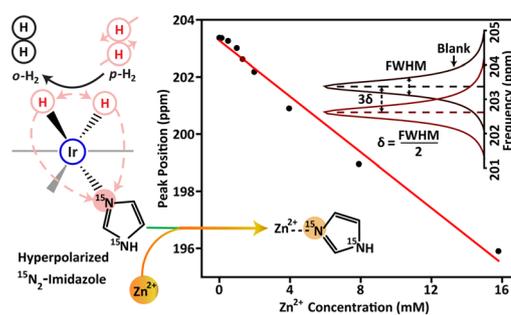


COMMUNICATIONS

12115

SABRE-SHEATH hyperpolarized $^{15}\text{N}_2$ -imidazole for Zn^{2+} sensing

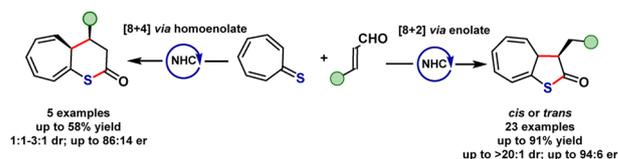
Brojo Kishor Shachib Dhali, Abubakar Abdurraheem, Mustapha Abdulmojeed, Anna Samoilenko, Megan Pike, Rielly J. Harrison, Franziska Theiss, Boyd M. Goodson, Eduard Y. Chekmenev* and Thomas Theis*



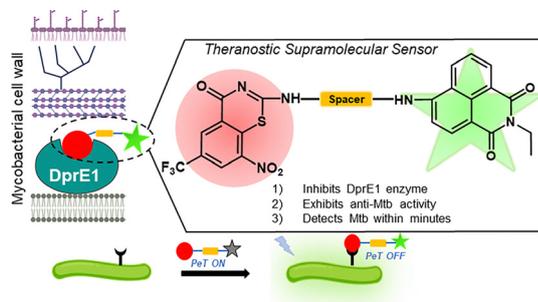
12119

Divergent hetero-[8+n] higher order cycloadditions of trophothione and enals catalyzed by N-heterocyclic carbenes

Joanna Dybowska, Artur Przydacz, Weronika Olczyk, Lestaw Sieroń, Anna Skrzyńska* and Łukasz Albrecht*



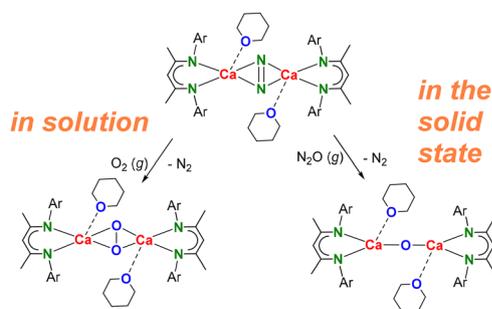
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A dual-function probe for inhibition and rapid detection of *Mycobacterium tuberculosis*

Sonal Chhabra* and Raman Parkesh*

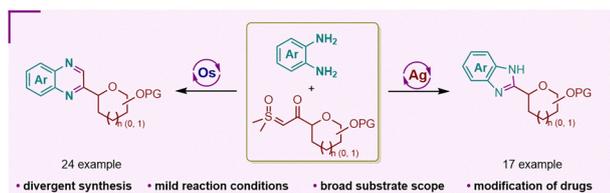
12127



Low-coordinate calcium peroxide and oxide complexes

Stefan Thum, Marcel A. Schmidt, Jens Langer and Sjoerd Harder*

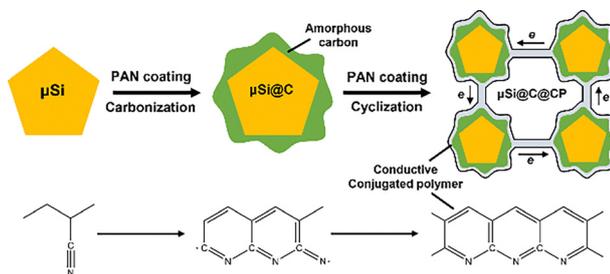
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Switchable synthesis of benzimidazole/quinoxaline C-glycosides with *o*-phenylenediamines and sulfoxonium ylide glyco-reagents

Deng-Yin Liu, Xin-Yue Hu, Cong-Zhen Zhang, Miao-Miao Wen, Xiao-Xi Ren and Xu-Ge Liu*

12135



A conjugated conductive polymer coating towards a robust micro-Si anode for lithium storage

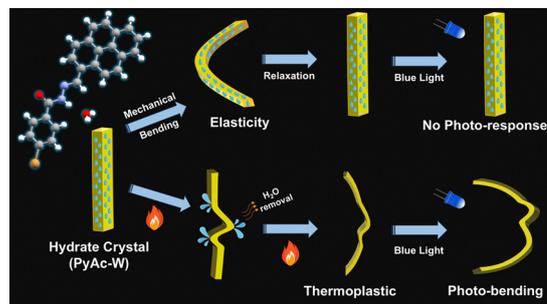
Chao Song, Jiecheng Huang and Zhiyu Wang*



12139

Water-driven modulation of multiresponsive properties in acylhydrazone-based crystals

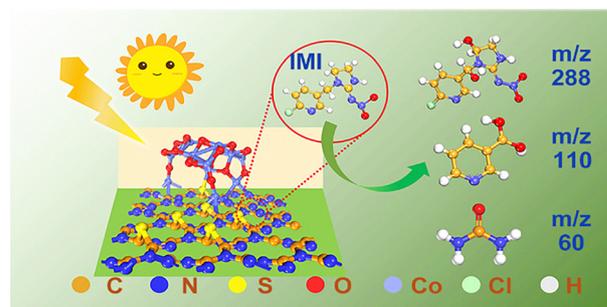
Deepak Manoharan, Aritra Bhowmik,
Manish Kumar Mishra* and Soumyajit Ghosh*



12143

Bulk-interface engineering of a CoO_x/SCN heterostructure for synergistically enhanced photocatalytic degradation of the imidacloprid insecticide

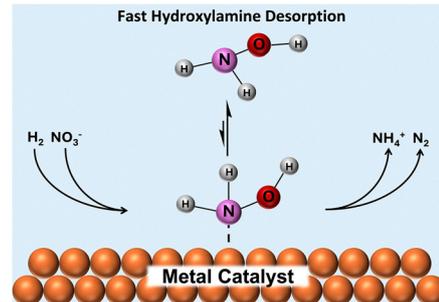
Guangxue Pan, Yan Zhang, Mengmeng Liu, Zhuwei Cao,
Yi Zheng and Sheng Ye*



12147

Hydroxylamine: an overseen intermediate that brings into question nitrogen selectivity in metal-catalyzed nitrate and nitrite reduction

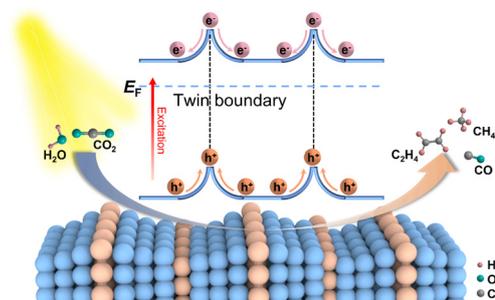
Janek Betting, Leon Lefferts* and Jimmy Faria Albanese*



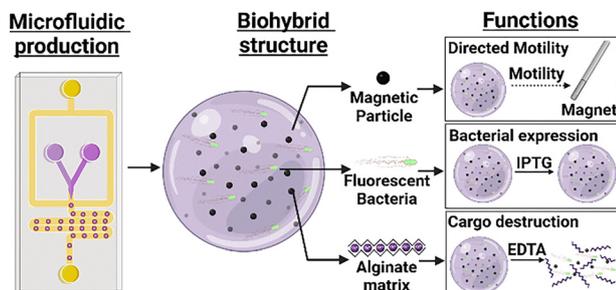
12151

Engineering twin $\text{Cu}_{0.3}\text{Zn}_{0.7}\text{S}$ for CO_2 photocatalytic reduction to ethylene

Hang Zhao, Hao Song, Zhefei Pan, Xun Zhu,
Dingding Ye, Yang Yang, Hong Wang, Qiang Liao and
Rong Chen*



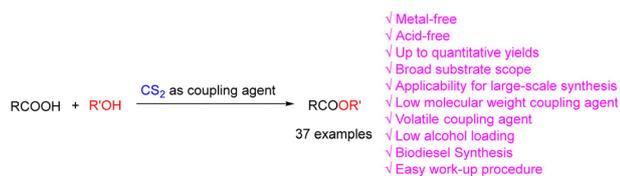
12155



Microfluidic generation of bacterial biohybrids for magnetic guidance and content release

Nina O'Toole, Matthew E. Allen, Claudia Contini* and Yuval Elani*

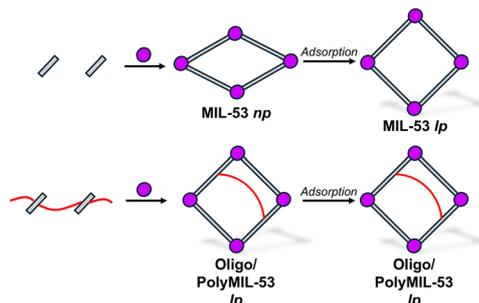
12159



Esterification of carboxylic acids using carbon disulfide (CS₂) as a coupling agent

A. Ziyaei Halimehjani* and Z. Marjani

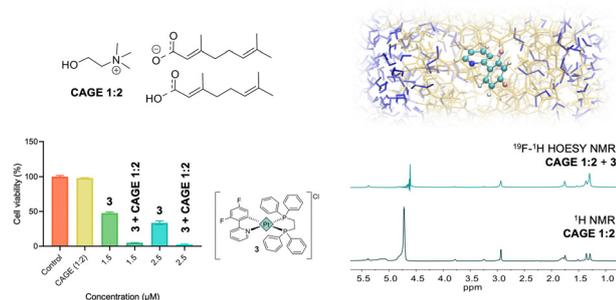
12163



Permanently porous oligoMOFs and polyMOFs of MIL-53

Debobroto Sensharma and Seth M. Cohen*

12167



Choline–geranate (CAGE) ionic liquids potentiate the anticancer activity of platinum-based drugs

Marta Costa Verdugo, Giulia Sierri, Laura Hernandez-Fernandez, Elena Formoso, José I. Miranda, Francesco Saverio Sica, Alejandro H. Orrego, Alba González, Elixabete Rezabal, Francesca Re and Luca Salassa*

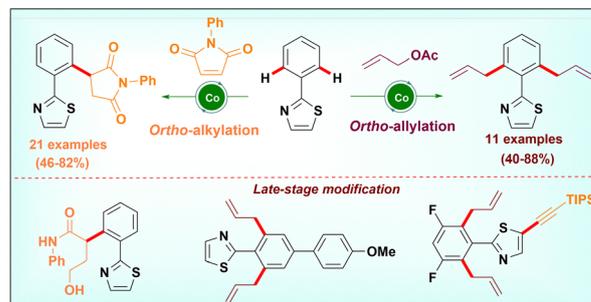


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Cobalt(III)-catalyzed C–H functionalization of 2-arylthiazoles with maleimides or allyl acetate

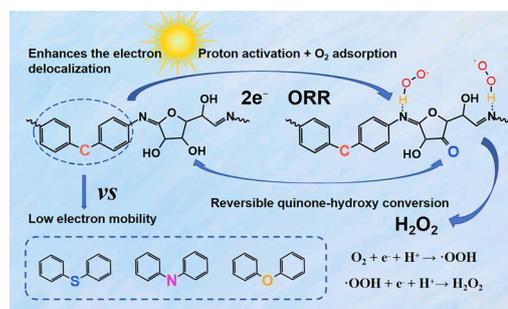
Pengfei Zhou, Guibin Wan, Zhihan Yuan, Aoran Guan, Zongwu Wei, Taoyuan Liang, Jun Jiang* and Zhuan Zhang*



12175

Chain-section engineering enables electron delocalization for efficient photocatalytic H₂O₂ synthesis in D-glucuronolactone-derived polymers

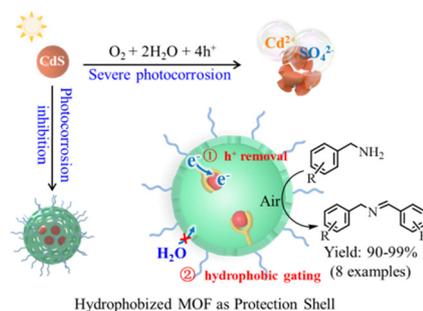
Yu Liu, Jiawei Lu, Shichen Cui, Haijiao Xie, Jianning He* and Qingyao Wu*



12179

A hydrophobized metal–organic framework as a protection shell to stabilize CdS quantum dots for sunlight-driven aerobic oxidation

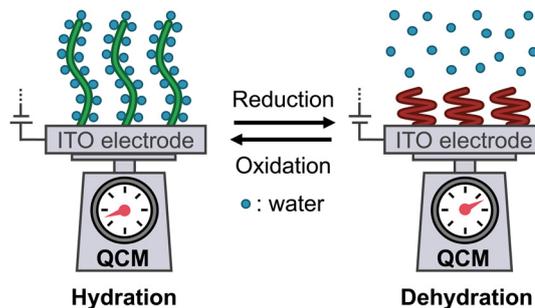
Zewei Liu, Zepeng Yu, Shu Li, Jun Pang, Yuzhu Wang, Zhiqiang Wu, Sijie Liu and Rong Tan*



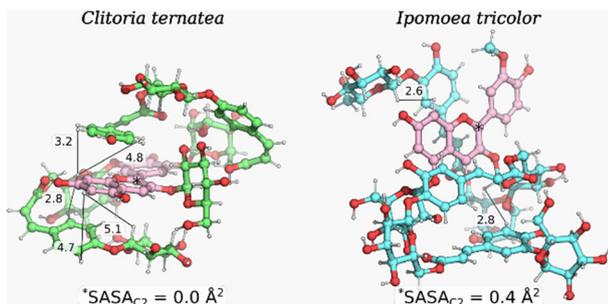
12183

Redox-associated phase transition of a marginally stable synthetic polymer

Takafumi Enomoto,* Keita Terui, Shunsuke Yagi, Aya M. Akimoto and Ryo Yoshida*



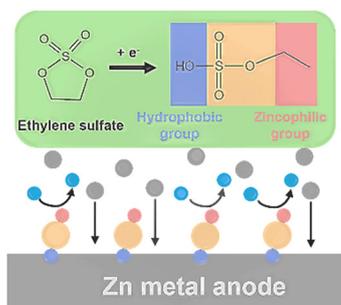
12187



Achieving a dramatic blue colour stability in anthocyanins bearing acylated sugars in position 3',5'

Joana Oliveira,* João T. S. Coimbra, Victor Freitas, Peiqing Yang, Nuno Basilio and Fernando Pina*

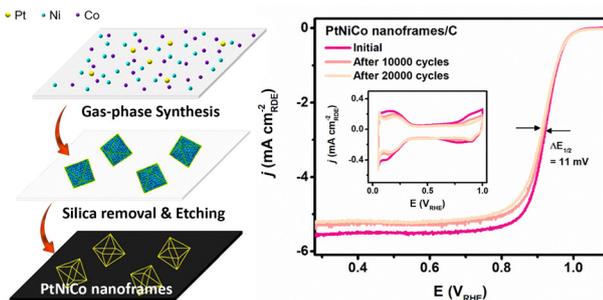
12191



In situ formation of zincophilic–hydrophobic layers using self-assembling additives for stabilizing zinc metal anodes

Zhengquan Xiao, Zihan Xu, En Gao and Shilin Wu*

12195



Synthesis and characterization of ultra-small octahedral PtNiCo skeletons with high activity for the oxygen reduction reaction

Minseok Ko, Mrinal Kanti Kabiraz, Yuseong Heo, Daehee Yang, Yeongseop Lee, Sang Hoon Joo, Young-Min Kim, Sang-Il Choi* and Won Seok Seo*

12199



Divalent transition metal ion intercalated hydrated V₂O₅ nanosheet cathodes for ultra-long cycling aqueous zinc-ion batteries

Jie Bai, Wenting Ji, Mengda Xue, De Li,* Huayu Wang and Lingyun Chen*

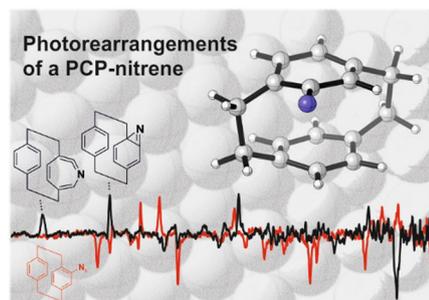


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12203

Photochemical rearrangements of a [2.2]paracyclophane-based nitrene studied by vibrational CD spectroscopy

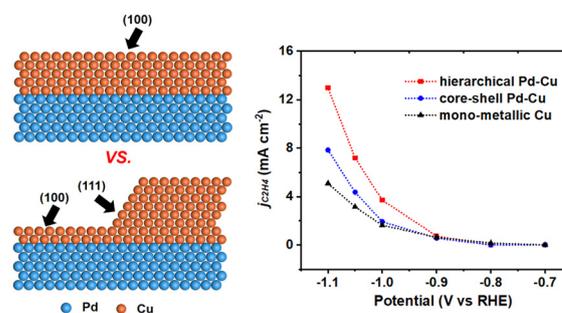
Frederike Beyer and Christian Merten*



12207

Architecture engineering and lattice modulation of exposed Cu (100)/(111) surfaces for efficient electrochemical CO₂ reduction

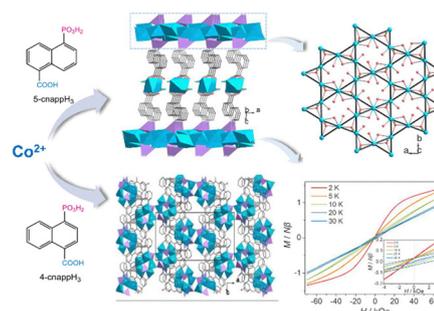
Zhen He, Hanwen Cheng, Hao Liu, Tengfei Xiong, Chengming Wang,* Xiaobin Liao* and Lingwen Liao*



12211

Metal-organic framework containing Co₃(μ₃-OH)-based kagomé layers showing long-range weak ferromagnetic ordering

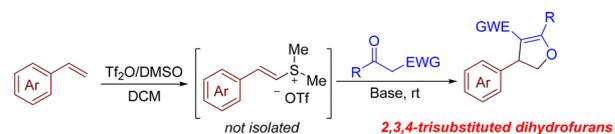
Yan Xu, Qian-Qian Su, Bei Liu, Wen-Tao Sun, Song-Song Bao, Su-Zhi Li and Li-Min Zheng*



12215

Sulfonium triggered one-pot synthesis of dihydrofurans via [3+2] annulation of alkenes and active methylene compounds

Li Yang, Jin-Long Wang, Jia Shu, Xiang-Qin Xu, Shan-Shan Tang and Long-Yong Xie*



- Transition-metal-, & strong oxidant-free
- Readily available substrates
- Mild reaction conditions
- Tf₂O/DMSO as an efficient activating system
- One-pot reaction
- Regioselective 2,3,4-trisubstituted dihydrofuran products

