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IN THIS ISSUE

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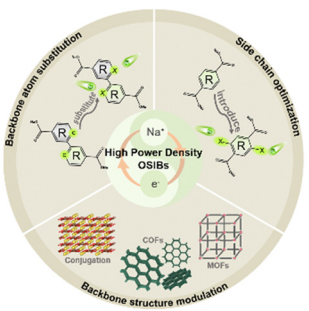
Cover
See Lin Dong *et al.*, pp. 2424–2449. Image reproduced by permission of Lin Dong from *Chem. Commun.*, 2025, **61**, 2424.

HIGHLIGHTS

2375

Organic molecular design for high-power density sodium-ion batteries

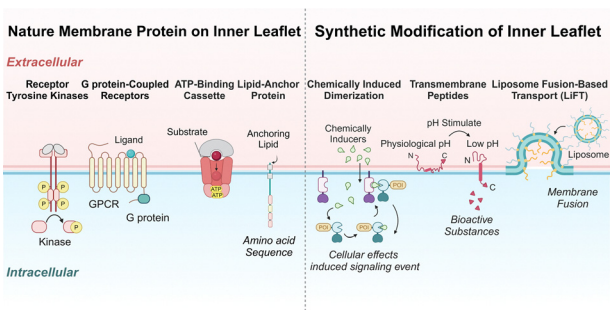
Ying Qi, Huaping Zhao and Yong Lei*



2387

Chemistries on the inner leaflet of the cell membrane

Wenxue Xie, Yuhan Kong, Cong Ren, Yujian Wen, Maben Ying and Hang Xing*



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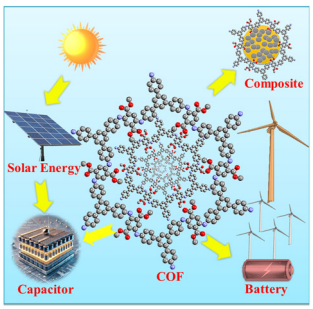
HIGHLIGHTS

2403

Covalent organic frameworks and their composites as enhanced energy storage materials

Divya Divya, Harshit Mishra and Ritambhara Jangir*

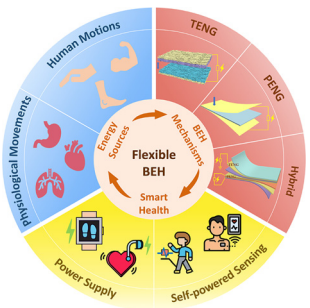


FEATURE ARTICLES

2424

Advancements in flexible biomechanical energy harvesting for smart health applications

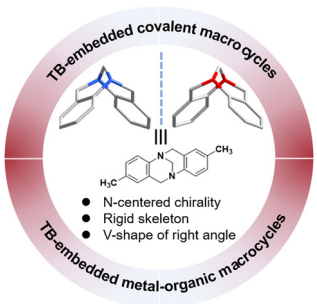
Yuxiao Wang, Mengdie Sun, Sun Hwa Kwon and Lin Dong*



2450

Tröger's base-embedded macrocycles with chirality

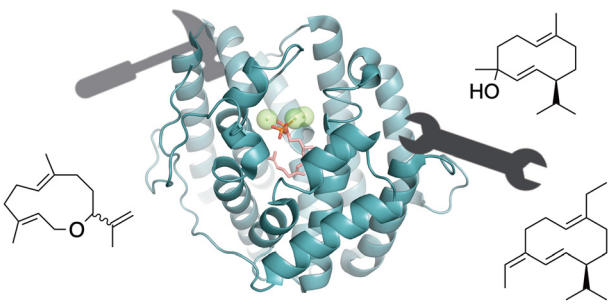
Conghao Shi, Guangzhou Xu, Heng Qiu, Yumei Li, Xiancai Lu, Juli Jiang* and Leyong Wang



2468

Engineering terpene synthases and their substrates for the biocatalytic production of terpene natural products and analogues

Luke Alan Johnson and Rudolf Konrad Allemann*



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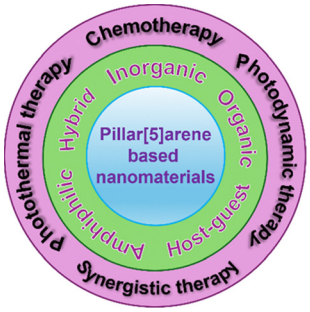
2484



Recent developments in pillar[5]arene-based nanomaterials for cancer therapy

Yu Dai, Wenqiang Yu, Yushan Cheng, Yao Zhou, Jiaye Zou, Yujia Meng, Feiyu Chen, Yihan Qian and Yong Yao*

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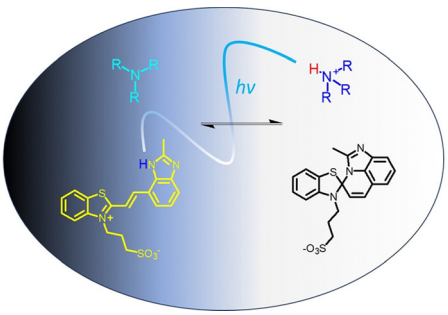
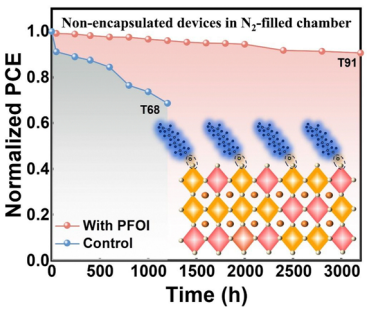


A novel metastable-state photoacid for reversible protonation of strong bases

Melyse Laud, Pavithra Liyanage and Yi Liao*

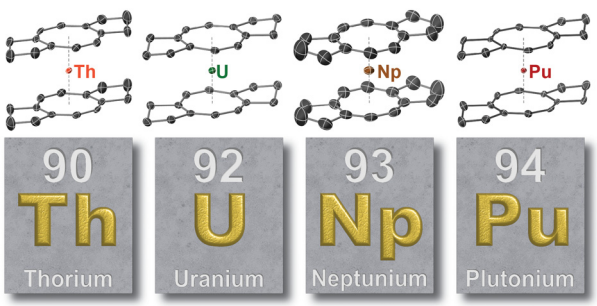
2500



Halogen-bond-mediated inhibition of ion migration for stable Sn–Pb perovskite solar cells

Shuming Zhang, Jiahui Cheng, Huijie Cao, Mingjun Ma, Cheng Li, Xiuyan Song* and Zhongmin Zhou*

2504



Synthesis and characterization of isostructural annulated actinocenes

Dominic R. Russo, Jacob A. Branson, Sheridon N. Kelly, Asmita Sen, S. Olivia Gunther, Appie Peterson, Patrick W. Smith, Erik T. Ouellette, John Arnold, Jochen Autschbach* and Stefan G. Minasian*

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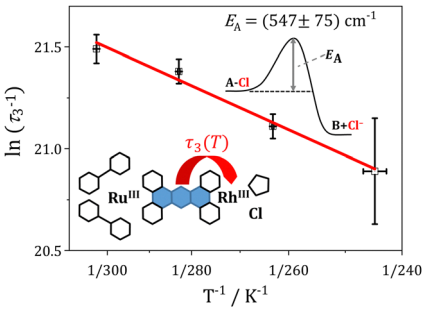
2508

Ligand labilization gates intramolecular electron transfer in molecular photocatalyst

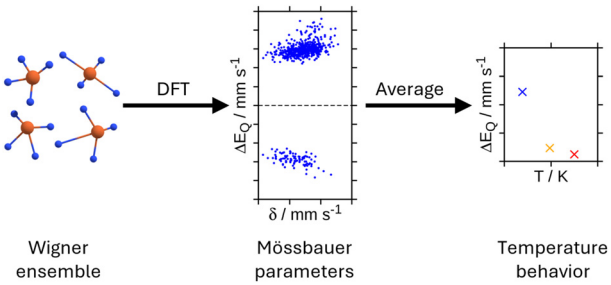
Louis Blechschmidt, Linda Zedler, Alexander K. Mengele, Sven Rau and Benjamin Dietzek-Ivanšić*



2512

The temperature dependence of Mössbauer quadrupole splitting values: a quantum chemical analysis

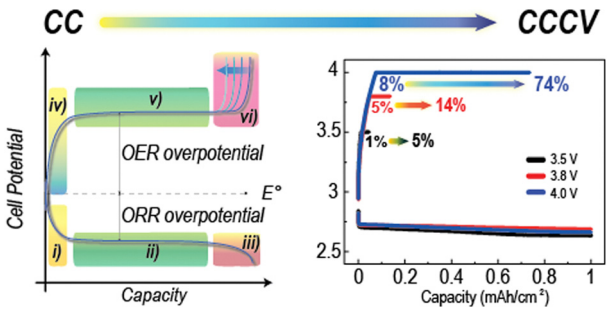
Niklas von Rhein and Vera Krewald*



2516

Exploration of potential-limited protocols to prevent inefficiencies in Li–O_2 batteries during charge

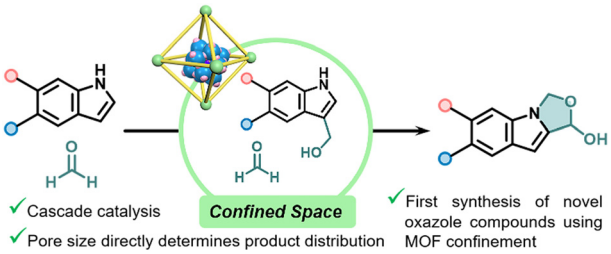
Zoé Lacour, Youngjin Ham, Laurence Brazel, Clare P. Grey* and Israel Temprano*



2520

MOF confinement enables selective synthesis of novel oxazoles from indole and formaldehyde

Deng-Yue Zheng, Jinping Gao, Yue Diao, Mian Li and Xiao-Chun Huang*



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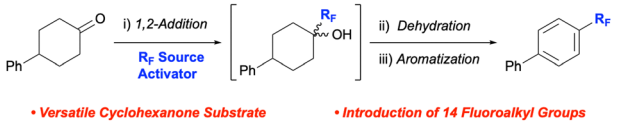
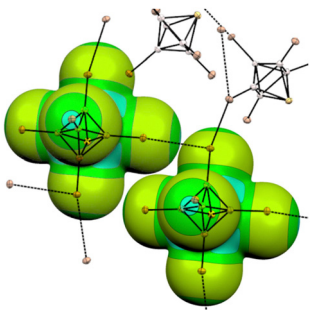


A deoxyfluoroalkylation–aromatization strategy to access fluoroalkyl arenes

Pankaj Bhattarai, Suvajit Koley, Krttika Goel and Ryan A. Altman*

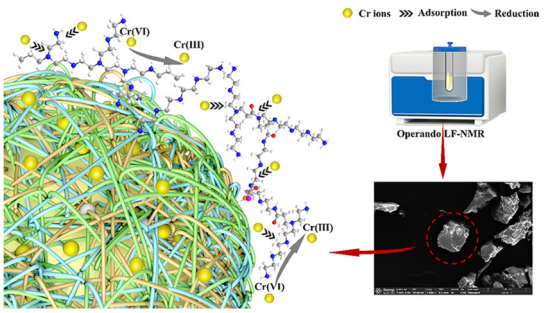
2528



The synthesis and structural aspects of the perbromo-functionalised thiaboranes *closo*-SB_nBr_n (n = 5, 9, 11): the solid-state structure of the octahedral *closo*-SB_5Br_5, governed by strong dihalogen contacts

Willi Keller,* Joachim Ballmann, Jindřich Fanfrlík and Drahomír Hnyk*

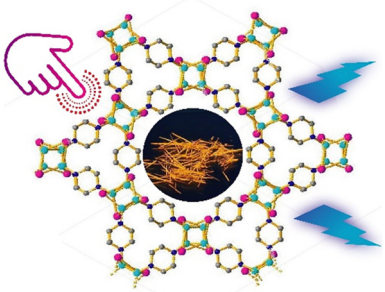
2532



Monitoring technology for Cr(VI) adsorption and reduction by *operando* NMR spectroscopy

Hang Zhou, Xiao-Meng You, Xue-Lu Wang* and Ye-Feng Yao*

2536



Inducing piezoelectric behavior in a copper iodide cubane cluster-based metal–organic framework *via* linker engineering

Sankalpa N. Panda, Prabhanjan Pradhan, Satyapriya Nath, Jeebanjyoti Mohapatra, Biplab K. Patra* and Bishnu P. Biswal*

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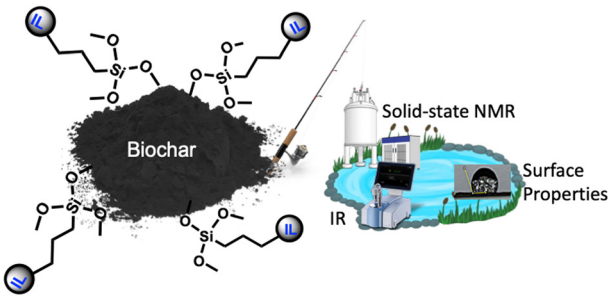
Biochar boost: revolutionizing functionalization of a difficult material

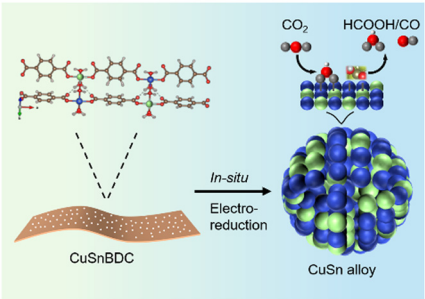
Sara M. K. Cheema,* Celine M. Schneider, Jean-François Morin, Pascale Chevallier, T. Jane Stockmann, Francesca M. Kerton and Stephanie L. MacQuarrie



2544

***In situ* formed CuSn alloy from multivariate metal–organic frameworks for tunable CO_2 electroreduction**

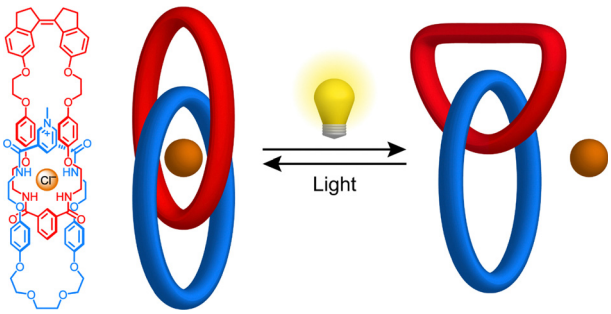
Xuheng Li, Chen Qin, Chunli Wang, Fuping Pan* and Kai-Jie Chen*



2548

A photoswitchable [2]catenane receptor

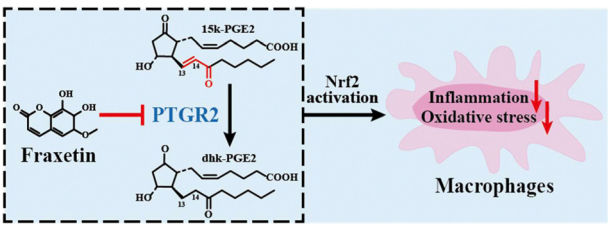
Jorn de Jong, Maxime A. Siegler and Sander J. Wezenberg*



2552

Chemical proteomic profiling reveals prostaglandin termination enzyme PTGR2 as a key molecular target of natural coumarin fraxetin

Songyao Kang, Zhiwei Cai, Yuqing Wang, Qing Yin, Ang Dai, Zhou Zhang, Juan Shi, Jie Lian, Shuo Song, Yu Fu, Fangrui Zhong, Yangyang Bian, Fangyuan Zhao,* Jianhua Liu* and Weining Zhao*



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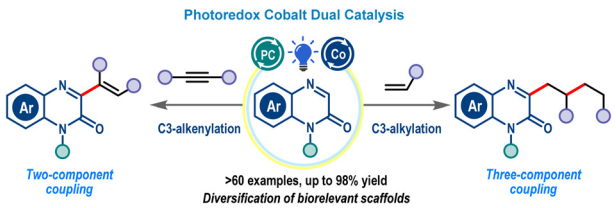
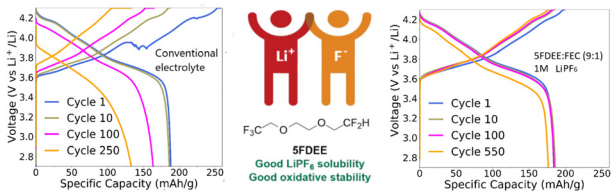


Photoredox cobalt dual catalysis toward C3-functionalization of quinoxalinones with alkenes and alkynes

Karunamayee Mondal, Mahima Pilania, Karthikeyan Jayabalan and Mahiuddin Baidya*

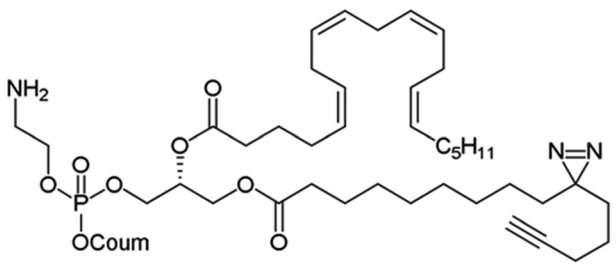
2560



Terminally fluorinated ether as a solvent for high-performance lithium metal battery electrolyte

Alexander A. Hizbullin, Irina V. Kutovaya, Gayane A. Kirakosyan, Dmitry A. Cheshkov, Victoria A. Nikitina, Stanislav S. Fedotov and Olga I. Shmatova*

2564



Trifunctional lipid derivatives: PE's mitochondrial interactome

Alix Thomas, Rainer Müller, Scotland Farley, Ana Kojic, Frank Stein, Per Haberkant and Carsten Schultz*

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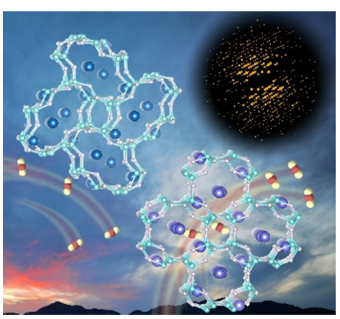

Revealing the CO_2 adsorption blocking mechanism in flexible low-silica small-pore zeolites *via* three-dimensional electron diffraction

Jian Guo, Chenyang Nie, Shitai Li, Nana Yan,* Peng Guo* and Zhongmin Liu

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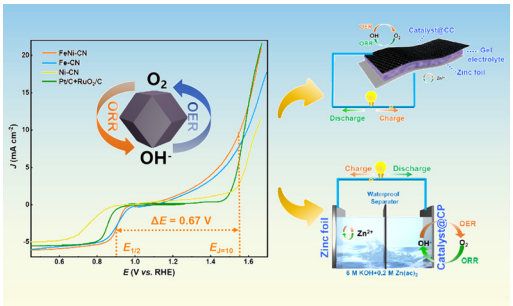
Optimizing the electronic synergy of atomically dispersed dual-metal sites for high-efficiency oxygen evolution/reduction reaction

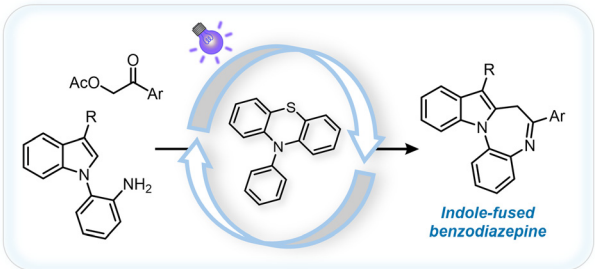
Yue Wang, Xueting Feng, Ziang Shang, Xintong Li, Chao Ma, Guanzhen Chen, Ying Zhao, Shaoheng Wu* and Yunhu Han*



2576

Synthesis of indole-fused benzodiazepine derivatives by photocatalyzed cascade reaction

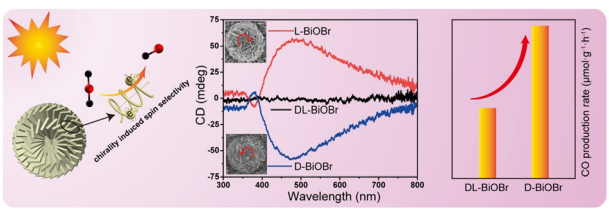
Tatsushi Oishi, Tatsuhiro Uchikura and Takahiko Akiyama*



2580

Enhancement of photocatalytic CO_2 reduction in BiOBr through chirality-induced electron spin polarization regulation

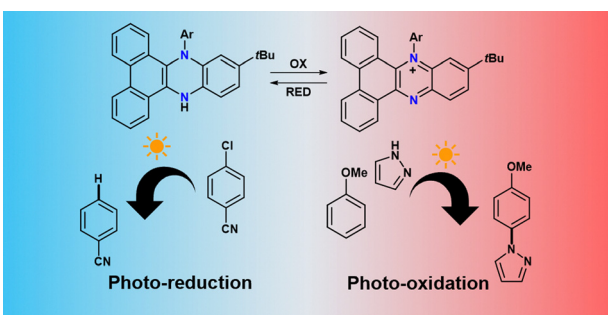
Yong Pu, Tianyue Wang, Chang Lin, Dun Wang, Zhongxin Liu, Yue Tian* and Jieqiong Wang*



2584

***N*-Monoarylated dihydrophenazines in reduced and oxidized states as efficient organo-photocatalysts**

Maurizio Prato* and Jacopo Dosso*



CORRECTION

2588

Correction: C–H functionalization of tetramethylsilane employing a borylnitrene

Matthias Müller, Cäcilia Maichle-Mössmer and Holger F. Bettinger*

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