

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.

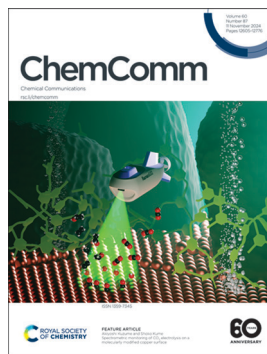
IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(87) 12605-12776 (2024)



Cover

See M. Eugenio Vázquez and Elena Pazos et al., pp. 12650–12661.
Image reproduced by permission of M. Eugenio Vázquez from *Chem. Commun.*, 2024, 60, 12650.



Inside cover

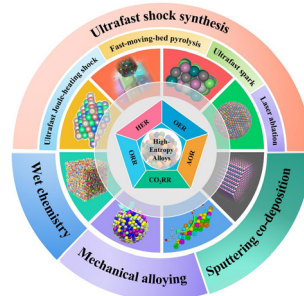
See Akiyoshi Kuzume and Shoko Kume, pp. 12662–12676.
Image reproduced by permission of Shoko Kume from *Chem. Commun.*, 2024, 60, 12662.

HIGHLIGHTS

12615

High-entropy alloy nanomaterials for electrocatalysis

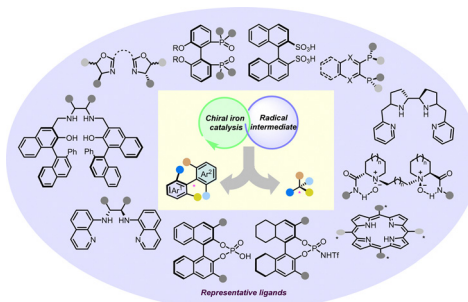
Mingjin Cui,* Ying Zhang, Bo Xu, Fei Xu, Jianwei Chen, Shaoyin Zhang, Chunhong Chen* and Zhimin Luo*



12633

Recent progress in asymmetric radical reactions enabled by chiral iron catalysts

Jun Zhang and Jie Wu*



ChemComm

**Uncover new possibilities
with outstanding
preliminary research**

**Original discoveries, fuelling
every step of scientific progress**

rsc.li/chemcomm

**Fundamental questions
Elemental answers**

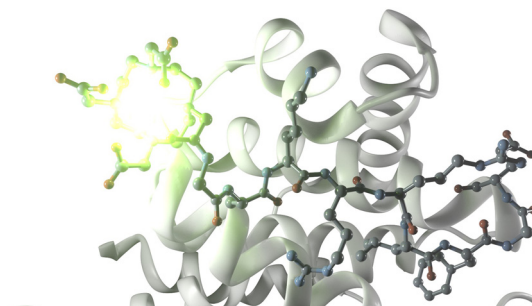


FEATURE ARTICLES

12650

Luminescent lanthanide metallopeptides for biomolecule sensing and cellular imaging

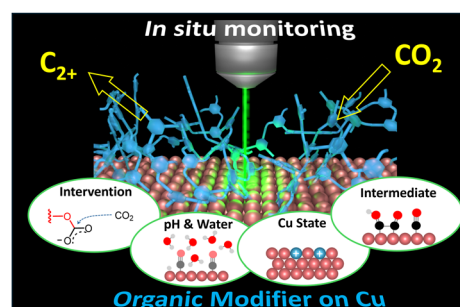
Rosalía Sánchez-Fernández, Ines Obregon-Gomez, Axel Sarmiento, M. Eugenio Vázquez* and Elena Pazos*



12662

Spectrometric monitoring of CO₂ electrolysis on a molecularly modified copper surface

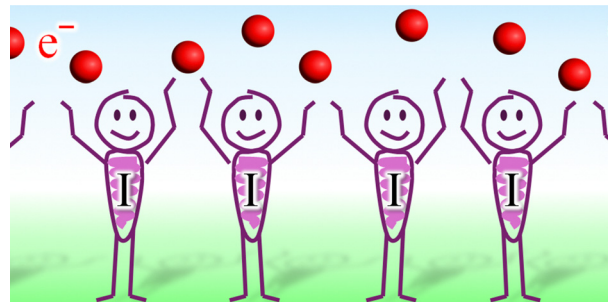
Akiyoshi Kuzume* and Shoko Kume*



12677

Rethinking polyiodides: the role of electron-deficient multicenter bonds

Matteo Savastano,* Hussien H. Osman, Angel Vegas and Francisco Javier Manjón*

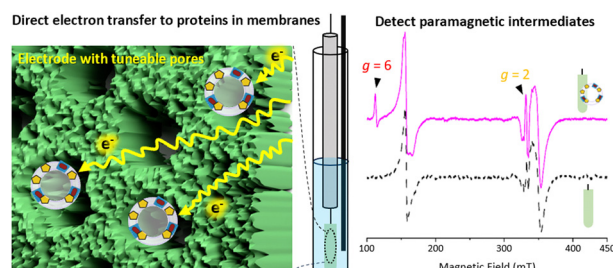


COMMUNICATIONS

12690

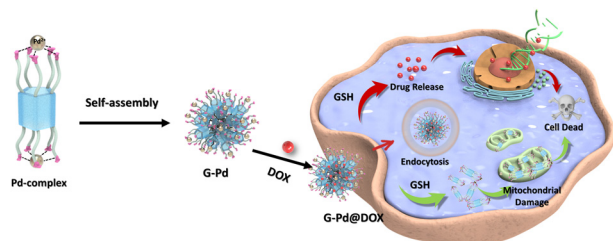
Film-electrochemical EPR spectroscopy to investigate electron transfer in membrane proteins in their native environment

Davide Facchetti, Yunfei Dang, Maryam Seif-Eddine, Blaise L. Geoghegan and Maxie M. Roessler*



COMMUNICATIONS

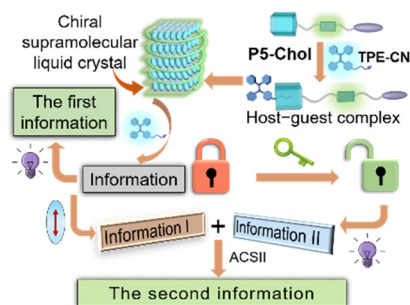
12694



Supramolecular palladium complexes based on guanidinium pillar[5]arene for cancer therapy

Yafei Wen, Xiaojiao Di, Zelong Chen, Xuxu Zhang, Zhichao Pei and Yuxin Pei*

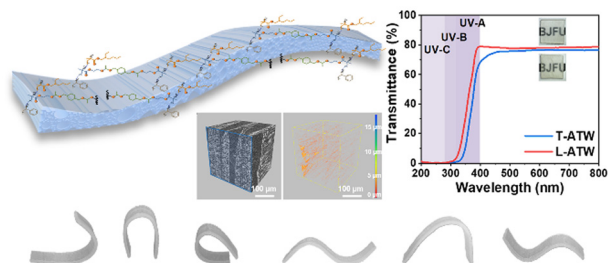
12698



A chiral supramolecular liquid crystal based on pillararene and its application in information encryption

Bicong Liang, Yujie Cheng, Jiaxin Ma, Lan Jia, Qiang Zheng, Pi Wang* and Danyu Xia*

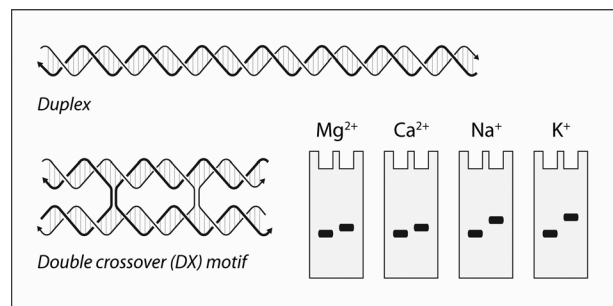
12702



Flexible, shape-editable wood-based functional materials with acetal linkages

Yi Tan, Kaili Wang, Shanshan Gong, Hui Chen, Youming Dong, Qiang Gao, Chengguo Liu* and Jianzhang Li*

12706



Differential electrophoretic mobility of synthetic DNA motifs and duplex DNA in various counter ions

Akul Patel, Leah Punnoose and Arun Richard Chandrasekaran*

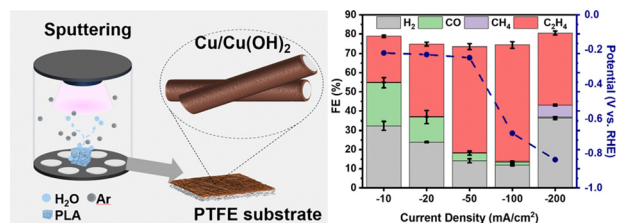


COMMUNICATIONS

12710

Hydroxylation boosted low-overpotential CO₂ reduction to ethylene for a Cu/PTFE electrode

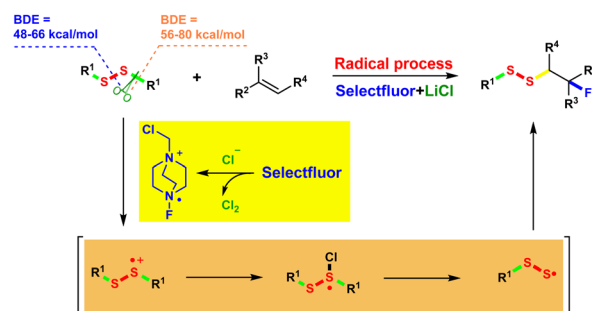
Yifeng Wang, Haoliang Huang, Shengjie Zhang, Hao Zhang, Chao Jing,* Jian-Qiang Wang* and Linjuan Zhang*



12714

Chloride Induced S–C bond selective cleavage of disulfides to access unsymmetrical β-fluorodisulfides

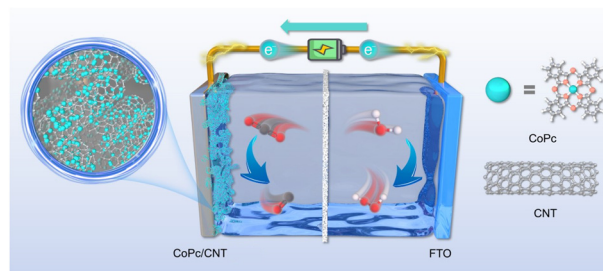
Tengfei Niu,* Jiayuan Zhang, Yunpeng He, Mei Hong, Lei Zhu and Yu Lan*



12718

Simultaneous production of CO and H₂O₂ by paired electrolysis coupling CO₂ reduction and water oxidation

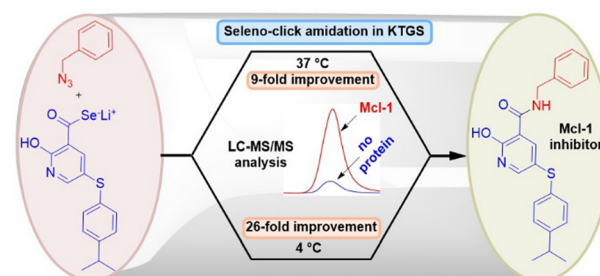
Jian-Hao Wu, Rong-Jie Guo, Jia-Wei Wang,* Fu-Jun Niu,* Lie-Jin Guo* and Gangfeng Ouyang*



12722

Chemoselective seleno-click amidation in kinetic target-guided synthesis

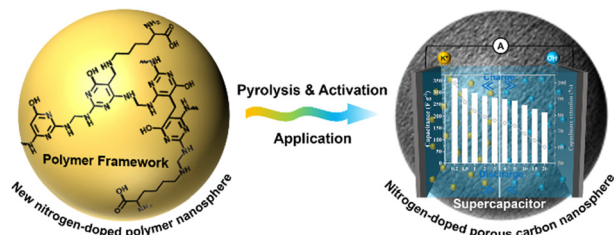
Lili Huang, Prakash T. Parvatkar, Alicia Wagner, Sameer S. Kulkarni and Roman Manetsch*



COMMUNICATIONS

12726

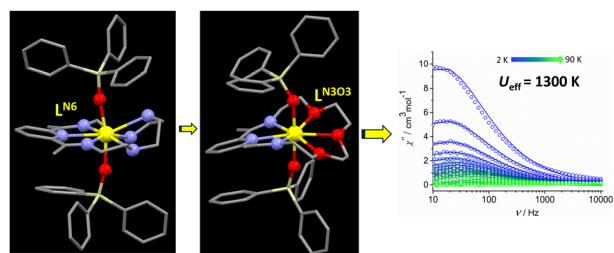
A brand-new nitrogen-doped porous carbon for supercapacitors



Fabrication of novel nitrogen-doped porous carbon nanospheres for high-performance supercapacitors

Yingxin Hu, Tianwei Wang, Wenjin Yan, Caicheng Song,*
Rongwen Lu,* Shufen Zhang and Daosheng Liu*

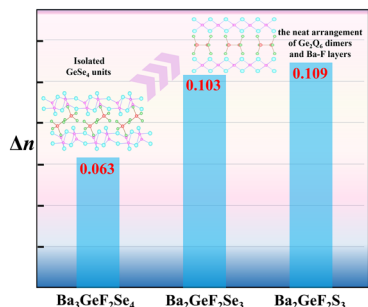
12730



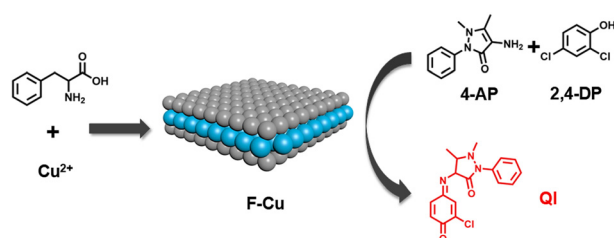
Unveiling new [1+1] Schiff-base macrocycles towards high energy-barrier hexagonal bipyramidal Dy(III) single-molecule magnets

Alexandros S. Armenis, Arpan Mondal, Sean R. Giblin,
Catherine P. Raptopoulou, Vassilis Psycharis,
Dimitris I. Alexandropoulos, Jinkui Tang,
Richard A. Layfield* and Theodoros C. Stamatatos*

12734

 $\text{Ba}_2\text{GeF}_2\text{Q}_3$ (Q = S, Se) and $\text{Ba}_3\text{GeF}_2\text{Se}_4$: new F-based chalcogenides with enhanced birefringenceKaixuan Li, Hongping Wu,* Hongwei Yu, Zhanggui Hu,
Jiyang Wang and Yicheng Wu

12738



A two-dimensional coordination polymer with high laccase-like activity for sensitive colorimetric detection of thiram

Songxue Han, Lili Xu, Youxing Fang* and Shaojun Dong*

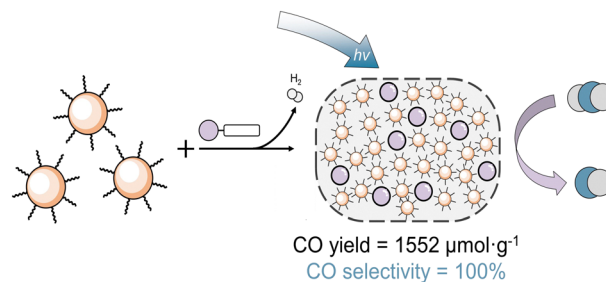


COMMUNICATIONS

12742

Controlled synthesis of silver/silicon hybrid nanostructures enables enhanced photocatalytic CO₂ reduction

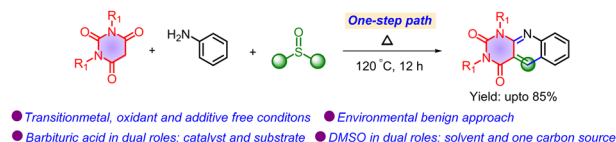
Huai Chen,* Xuebiao Deng, Meiqi Lin, Huiqing Yuan, Ban Lan* and Yangyang Xiong*



12746

Autocatalytic and DMSO-promoted regioselective synthesis of pyrimidine-fused quinolines from anilines and barbituric acids

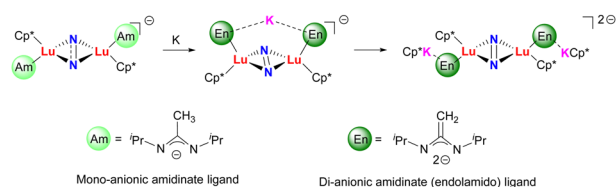
Pushpendra Yadav, Deblina Chatterjee, Suman Bhowmick, Khushboo Tiwari, Annapurna Awasthi and Dharmendra Kumar Tiwari*



12750

A (C₅Me₅)/enolamido lutetium dinitrogen complex promoted by deprotonation on the amidinate ligand

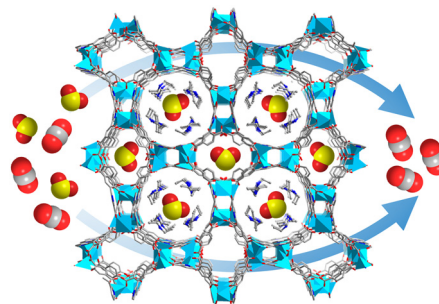
Xiao Chen, Hanhua Xu, Zhenfeng Xi and Junnian Wei*



12754

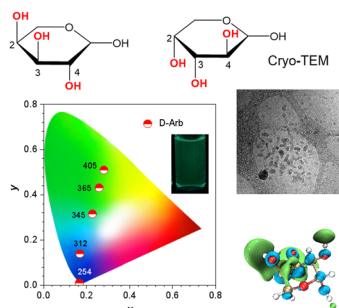
Metal–organic framework with pore contraction and modification by diethylammonium cations for record SO₂/CO₂ separation

Mei Yang, Wenke Yuan, Xiu-Yuan Li,* Bo Liu and Huifang Zhou*



COMMUNICATIONS

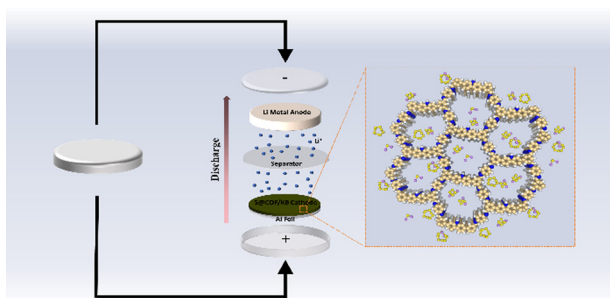
12758



Elucidation of the photoluminescence mechanism and determination of the configuration content of arabinose isomer solution by fluorescence analysis

Qing Zhou,* Jun Wang, Xiaoping Lei, Chuchu Li, Qingfeng Wu and Jingzhi Sun

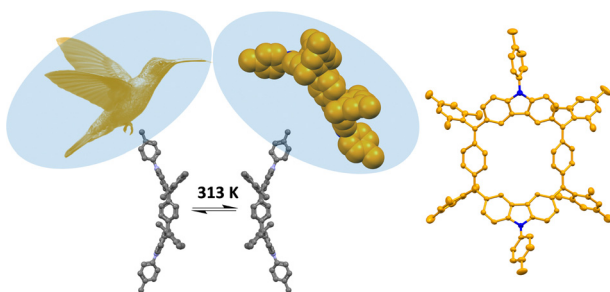
12762



Two-dimensional carbazole-based COFs for high-performance lithium-sulfur batteries

Yuchen Xiao, Shanyue Wei, Xuan Wang, Jia Liu, Xiaowei Wu,* Yiming Xie and Can-Zhong Lu*

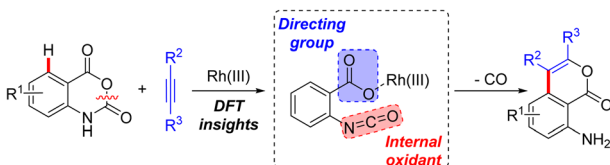
12766



Boat-to-boat conformation inversions of cyclobis[7,8-(*para*-quinodimethane)-3,7-(9-(*p*-tolyl)-9*H*-carbazole)] in the neutral and tetracationic state

Zekun Tong and Shaoqiang Dong*

12770



Isatoic anhydride as a masked directing group and internal oxidant for Rh(III)-catalyzed decarbonylative annulation through C-H activation: insights from DFT calculations

Yanshu Luo, Maosheng Zhang and Yuanzhi Xia*

