

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.

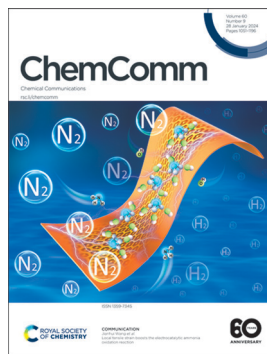
IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(9) 1051-1196 (2024)



Cover

See Jin Zhou, Yangang Wang, Hong Huang *et al.*, pp. 1100–1103.
Image reproduced by permission of Hong Huang from *Chem. Commun.*, 2024, 60, 1100.



Inside cover

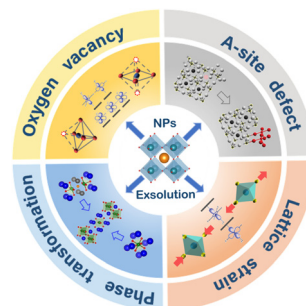
See Jianhui Wang *et al.*, pp. 1104–1107.
Image reproduced by permission of Jianhui Wang from *Chem. Commun.*, 2024, 60, 1104.

HIGHLIGHTS

1062

Metal exsolution from perovskite-based anodes in solid oxide fuel cells

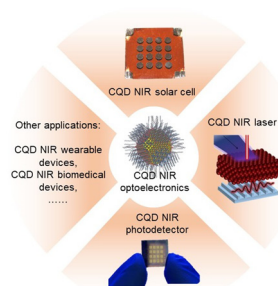
Shasha Zhu, Junde Fan, Zongbao Li, Jun Wu, Mengqin Xiao, Pengxuan Du, Xin Wang* and Lichao Jia



1072

Colloidal quantum dot materials for next-generation near-infrared optoelectronics

Lingju Meng, Qiwei Xu, Jiangwen Zhang and Xihua Wang*



EES Catalysis

GOLD
OPEN
ACCESS

Exceptional research on energy and environmental catalysis

Open to everyone. Impactful for all

rsc.li/EESCatalysis

Fundamental questions
Elemental answers

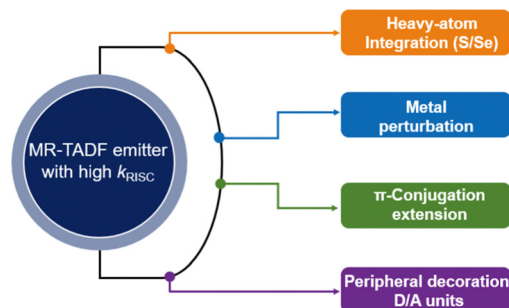


FEATURE ARTICLE

1089

Recent progress in multi-resonance thermally activated delayed fluorescence emitters with an efficient reverse intersystem crossing process

Xu-Feng Luo, Xunwen Xiao* and You-Xuan Zheng*

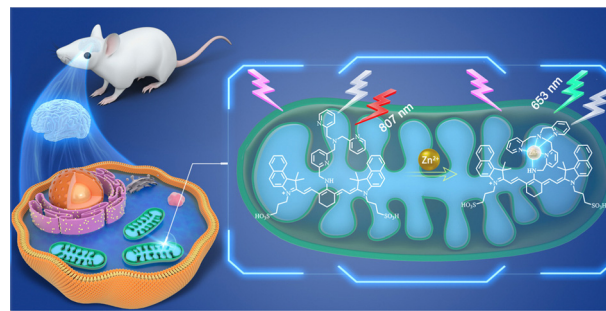


COMMUNICATIONS

1100

Revealing the elevation of Zn^{2+} in the brain of depressed mice by a ratiometric fluorescent probe with dual near-infrared emissions

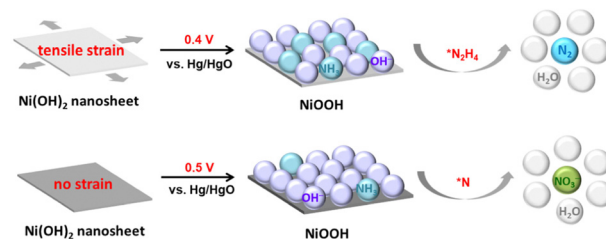
Haobin Jin, Can Ju, Chenxu Duan, Ningwen Zhang, Yongyong Cao, Qineng Xia, Jin Zhou,* Shumei Gao, Yangang Wang* and Hong Huang*



1104

Local tensile strain boosts the electrocatalytic ammonia oxidation reaction

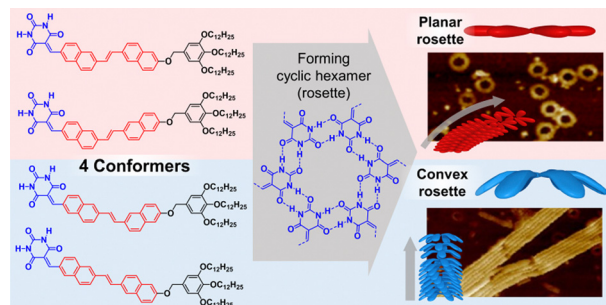
Yongzhen Jin, Yang Liu, Ruyan Wu and Jianhui Wang*



1108

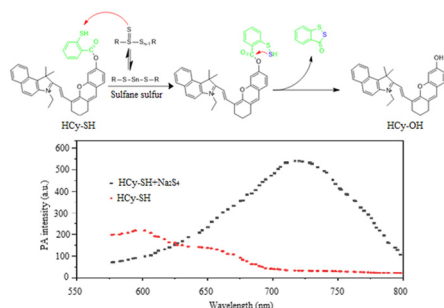
Toroid-rod supramolecular polymorphism derived from conformational isomerism of a π -conjugated system

Chie Otsuka, Saki Imai, Takahiro Ohkubo and Shiki Yagai*



COMMUNICATIONS

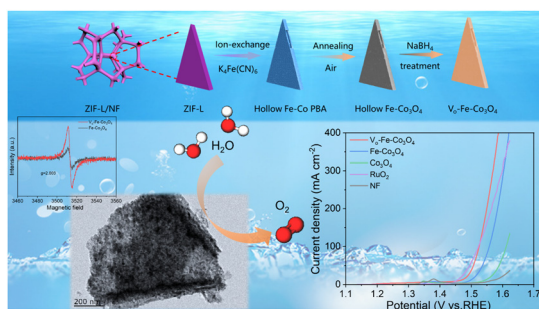
1112



Visualization diagnosis of acute cerebral ischemia via sulfane sulfur-activated photoacoustic imaging

Cheng Song, Lejuan Liao, Yidong Bin, Zongyi He, Jing Hua, Shulin Zhao* and Hong Liang*

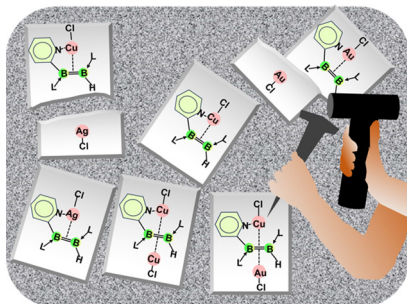
1116



Oxygen vacancy modulated Fe-doped Co₃O₄ hollow nanosheet arrays for efficient oxygen evolution reaction

Qianyun He, Lei Han and Kai Tao*

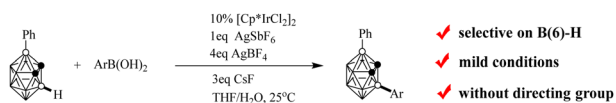
1120



Stepwise and selective synthesis of chelating, multimetallic and mixed-metal π -diborene complexes

Dario Duwe, Koushik Saha, Lukas Endres, Tobias Brückner, Rian D. Dewhurst, Maximilian Dietz, Krzysztof Radacki, Felipe Fantuzzi and Holger Braunschweig*

1124



Iridium-catalyzed selective arylation of B(6)-H of 3-aryl-o-carboranes with arylboronic acid via direct B-H activation

Han-Bo Yang, Yan Guo, Ke Cao,* Qi-Jia Jiang, Chao-Chao Teng, Dao-Yong Zhu and Shao-Hua Wang

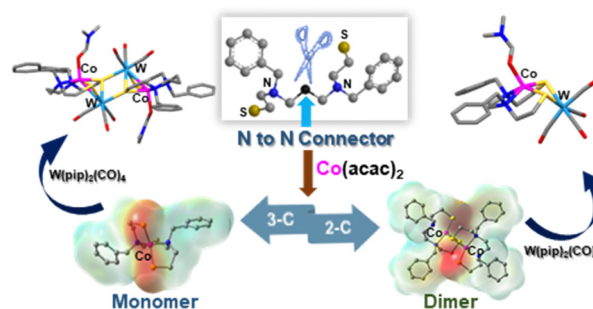


COMMUNICATIONS

1128

A single carbon atom controls the geometry and reactivity of $\text{Co}^{\text{II}}(\text{N}_2\text{S}_2)$ complexes

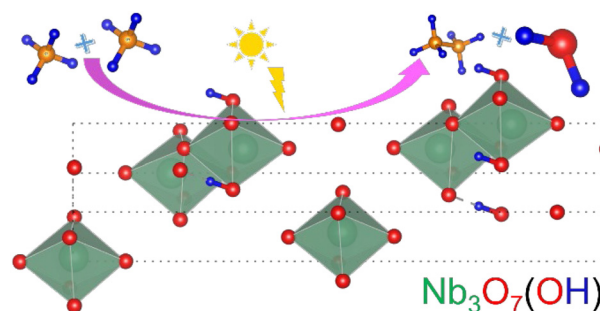
Manish Jana, Manuel Quiroz and Marcetta Y. Darensbourg*



1132

Engineering surface lattice hydroxyl groups toward highly efficient photocatalytic methane coupling

Zili Ma, Yihong Chen, Chao Gao* and Yujie Xiong*



1136

Photo-triggered C-arylation of active-methylene compounds with diazonium salts via an electron donor–acceptor (EDA) complex

Shikha Pandey, Arsala Kamal, Ambuj Kumar Kushwaha, Himanshu Kumar Singh, Suresh Kumar Maury and Sundaram Singh*

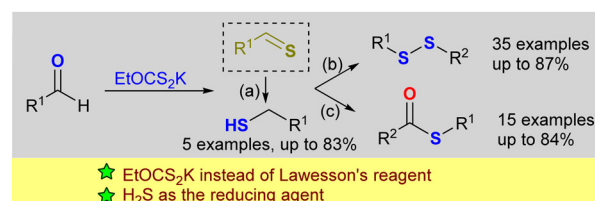


- ✓ Visible-light
- ✓ Diazonium-salt
- ✓ Active-methylene compounds
- ✓ Catalyst-Free
- ✓ Greener approach
- ✓ Electron donor-acceptor (EDA)

1140

Potassium xanthate-promoted reductive sulfuration reaction: from aldehydes to thiol, disulfide, and thioester derivatives

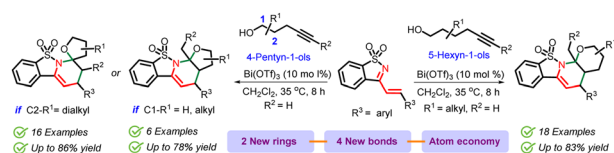
Yingqi Feng, Jinli Nie, Sijie Xie, Ziqing He, Huanliang Hong, Jian Li, Yubing Huang, Lu Chen and Yibiao Li*



- ★ EtOCS₂K instead of Lawesson's reagent
- ★ H₂S as the reducing agent



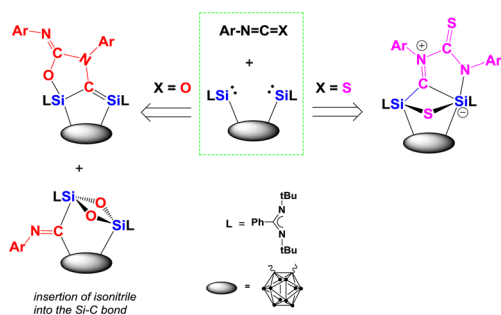
1144



Divergent access to polycyclic spiro- and fused-N,O-ketals through Bi(OTf)₃-catalyzed [4+2]-annulation of cyclic N-sulfonyl ketimines and alkynols

Ashwini K. Nakate, Priyanka Kataria, Pooja I. Sambherao, Gamidi Rama Krishna and Ravindar Kontham*

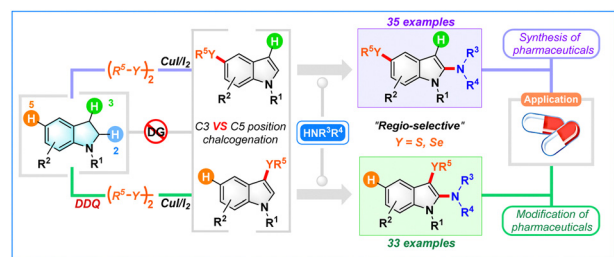
1148



Synthesis of SiN/SiS-heterocycles via the reactions of a bis-silylene with isocyanate/isothiocyanate molecules

Rui Liu, Kartik Chandra Mondal, Chenfeng Wang, Sonam Suthar, Zijie Fang, Darui Zuo and Yan Li*

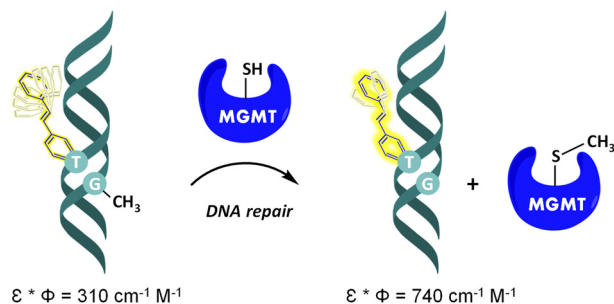
1152



Iodine-dependent oxidative regioselective amino-chalcogenation of indolines

Xiaoxiang Zhang, Chenrui Liu, Wanxing Wei, Zhuan Zhang and Taoyuan Liang*

1156



Fluorescent molecular rotors detect O⁶-methylguanine dynamics and repair in duplex DNA

William Copp, Ashkan Karimi, Tianxiao Yang, Alba Guarné and Nathan W. Luedtke*

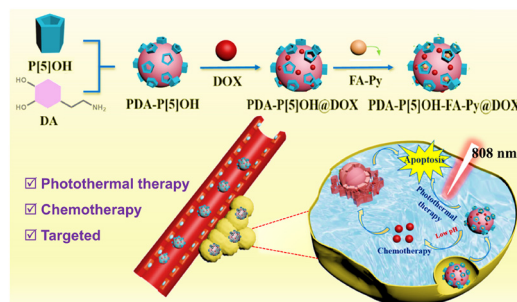


COMMUNICATIONS

1160

Polydopamine modified by pillar[5]arene *in situ* for targeted chemo-photothermal cancer therapy

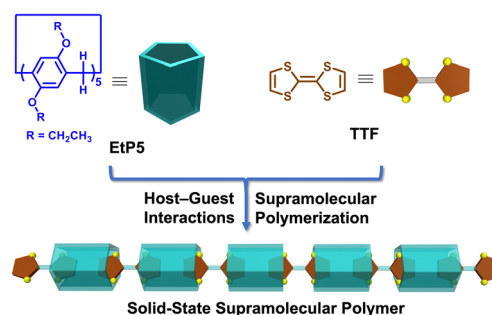
Ruowen Tang, Lei Zhou, Yu Dai, Yang Wang,* Yan Cai, Tingting Chen and Yong Yao*



1164

Constructing a solid-state supramolecular polymer based on host–guest recognition between perethylated pillar[5]arene and tetrathiafulvalene

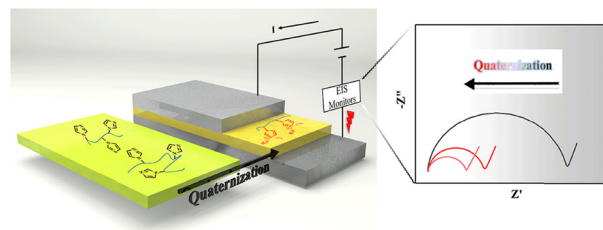
Xueru Zhao, Bin Hua and Li Shao*



1168

On-site portable detection of gaseous methyl iodide using an electrochemical method

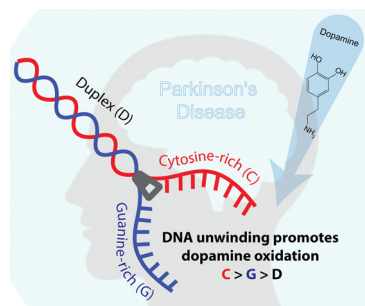
Xiao-Lan Yang, Qiu-Hong Zhu, Guo-Hao Zhang, Jie Fu, Shuang-Long Wang, Lijian Ma, Song Qin, Guo-Hong Tao* and Ling He*



1172

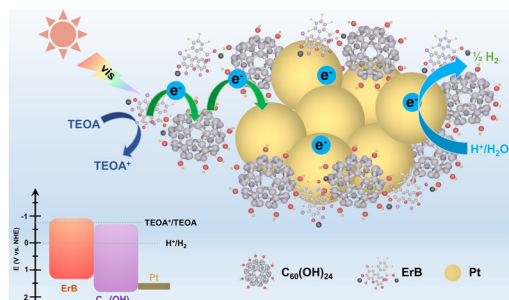
Dopamine oxidation promoted by human telomeric DNA models in the presence of a Cu(II) terpyridine chelate

Yu Bao, Wenqin Zhou, Wenhui Miao, Guoqing Jia* and Can Li*



COMMUNICATIONS

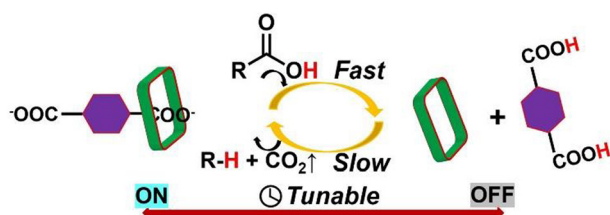
1176



Water-soluble fullerene-mediated electron transfer in molecular systems toward enhanced solar hydrogen production

Tongliang Liu, Fang Wang, Zhengguo Zhang and Shixiong Min*

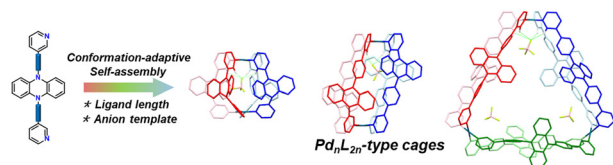
1180



Tunable cyclic operation of dissipative molecular switches based on anion recognition

Xin Zhang,* Lijun Mao, Rongjing He, Yanting Shi, Lingyi Li, Shuo Li, Chenghao Zhu, Yanjing Zhang and Da Ma*

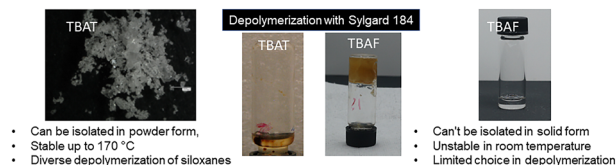
1184



Self-assembly of conformation-adaptive dihydrophenazine-based coordination cages

Meng-Xiang Wu, Qiong-Yan Hong, Minghui Li, Wei-Ling Jiang, Bin Huang, Shuai Lu, Heng Wang, Hai-Bo Yang, Xiao-Li Zhao* and Xueliang Shi*

1188



A robust depolymerization route for polysiloxanes

Matthew J. Warner, Jessica W. Kopatz, David P. Schafer, Jessica Kustas, Patricia S. Sawyer, Anne M. Grillet, Brad H. Jones* and Koushik Ghosh*



CORRECTIONS

1192

Correction: The eutectic point in choline chloride and ethylene glycol mixtures

Hannah J. Hayler and Susan Perkin*

1193

Correction: Critical role of hydrogen bonding between microcrystalline cellulose and g-C₃N₄ enables highly efficient photocatalysis

Zhaoqiang Wang, Guixiang Ding, Juntao Zhang, Xianqing Lv, Peng Wang, Li Shuai, Chunxue Li,* Yonghao Ni* and Guangfu Liao*

