Chemical Science

rsc.li/chemical-science

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.

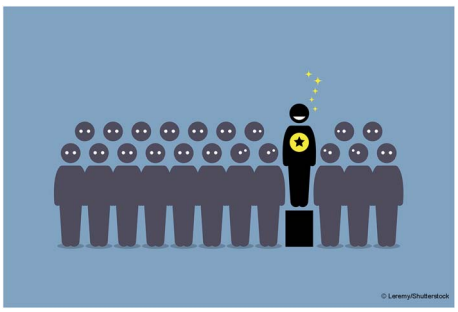
IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 16(26) 11683–12198 (2025)

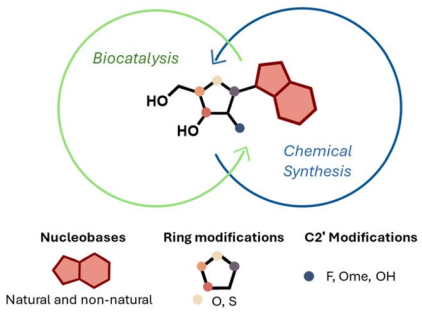
Cover
See Erwin Reisner *et al.*, pp. 11801–11808. Image reproduced by permission of Lin Su from *Chem. Sci.*, 2025, **16**, 11801. The authors acknowledge the artist Xinyue Hu from August Fireflies Studio for their contribution to the visualisation.

Inside cover
See Zhunzhun Yu, Kuangbiao Liao *et al.*, pp. 11809–11822. Image reproduced by permission of Chonghuan Zhang and Kuangbiao Liao from *Chem. Sci.*, 2025, **16**, 11809.

EDITORIAL



PERSPECTIVE



ROYAL SOCIETY OF CHEMISTRY

Environmental Science: Atmospheres

GOLD OPEN ACCESS

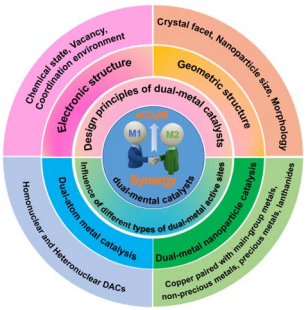
Connecting communities and inspiring new ideas

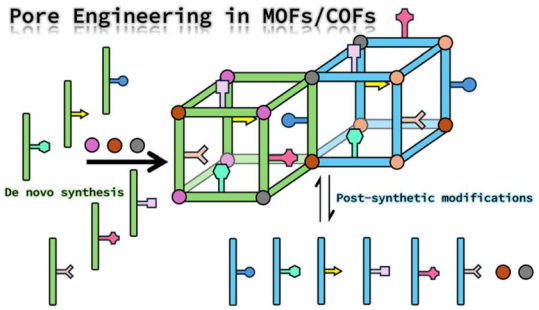
rsc.li/submittoEA

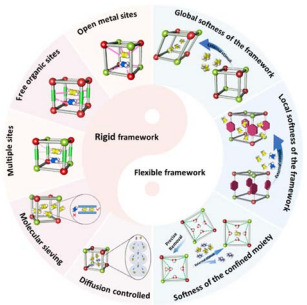
Fundamental questions
Elemental answers

Registered charity number: 207890

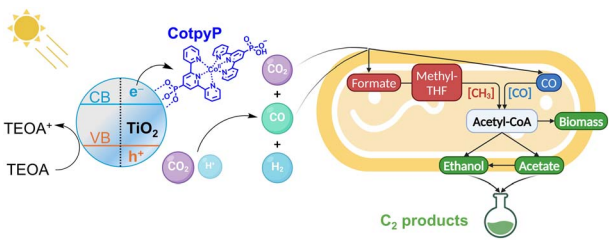
REVIEWS





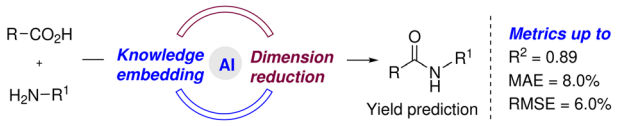


EDGE ARTICLES



EDGE ARTICLES

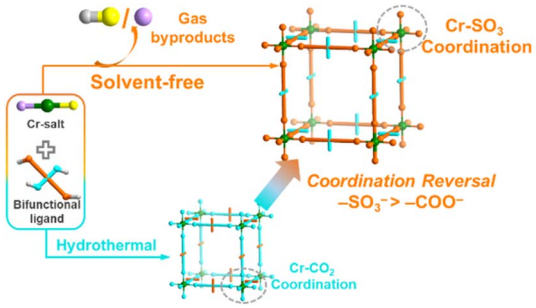
11809



Intermediate knowledge enhanced the performance of the amide coupling yield prediction model

Chonghuan Zhang, Qianghua Lin, Chenxi Yang, Yaxian Kong, Zhunzhun Yu* and Kuangbiao Liao*

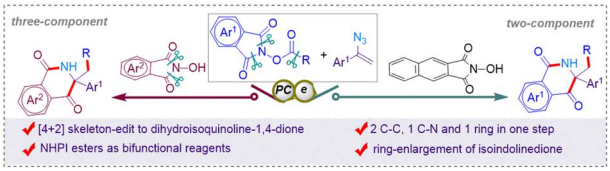
11823



Solvent-free construction of Cr(III)-sulfonate coordination polymers

Fan Yang, Xiang-Jing Kong, Tao He, Zhengqing Zhang, Ke Wang, Honglin Du, Guohong Cai, Jing Ju, Xiaoge Wang,* Jian-Rong Li,* Junliang Sun* and Chongli Zhong*

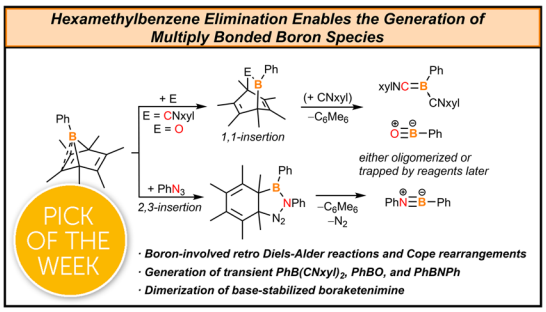
11833



Convergent and divergent synthesis of dihydroisoquinoline-1,4-diones enabled by a photocatalytic skeleton-editing [4 + 2] strategy

Hai-Wu Du, Jun-Song Jia, Xiao-Yi Chen, Zhang-Yin Yuan, Jia-Ni Lin, Yu-Long Li,* Qiong Yu* and Wei Shu*

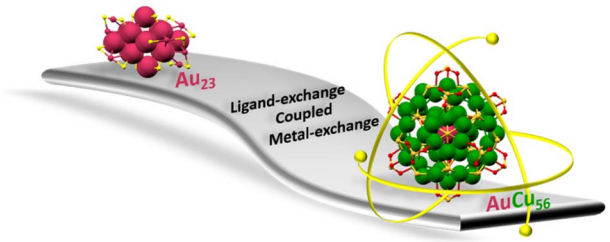
11841

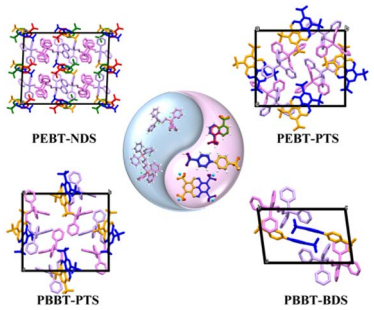


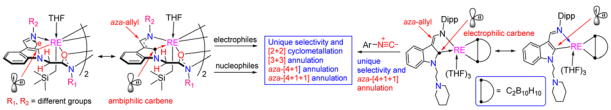
Hexamethylbenzene elimination enables the generation of transient, sterically unhindered multiply bonded boron species

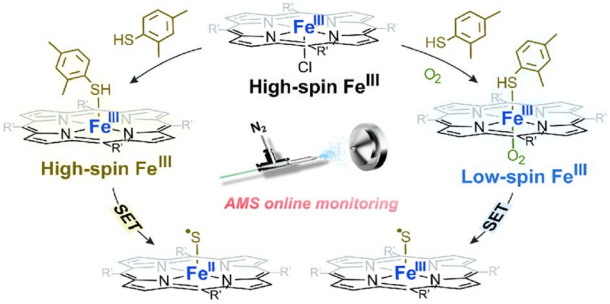
Chonghe Zhang, Philipp Dabringhaus, Bi Youan E. Tra, Robert J. Gilliard, Jr* and Christopher C. Cummins*

EDGE ARTICLES



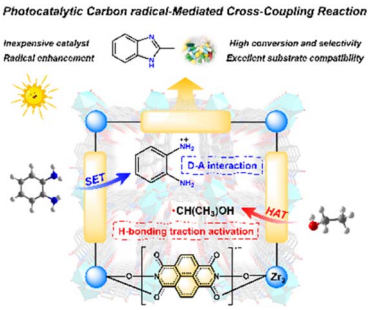


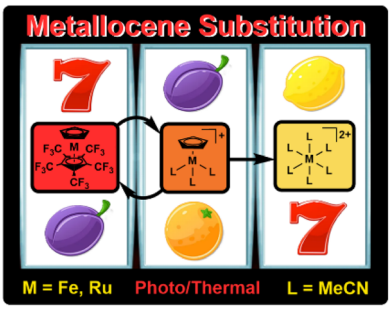


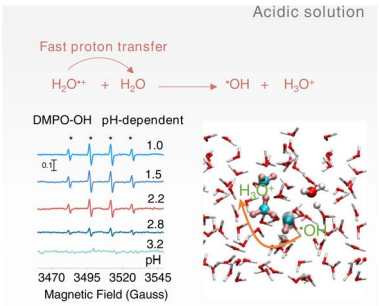


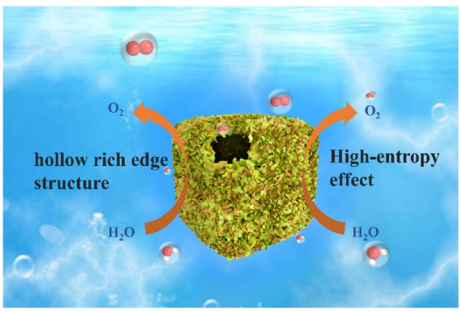
EDGE ARTICLES

EDGE ARTICLES



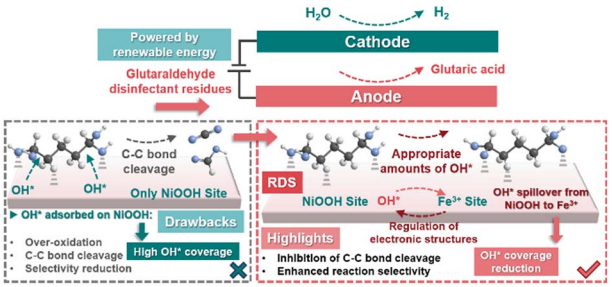






EDGE ARTICLES

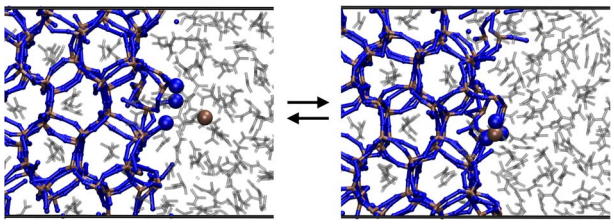
11970



Industrial electrooxidation of glutaraldehyde waste to glutaric acid *via* tailoring OH* coverage

Jiani Han, Yaodong Yu, Yingying Wei, G. A. Bagliuk, Jingqi Chi, Jianping Lai* and Lei Wang*

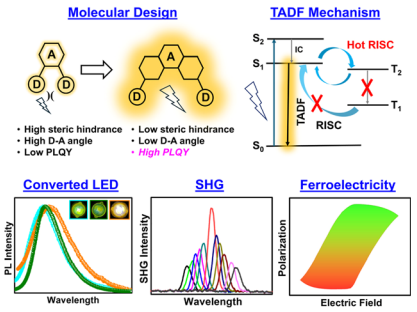
11979



Thermodynamic insights into the self-assembly of zeolitic imidazolate frameworks from computer simulations

Emilio Méndez and Rocio Semino*

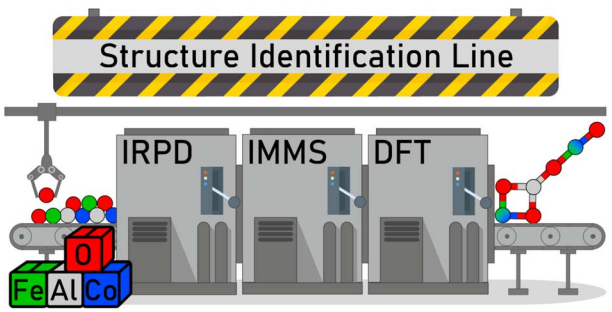
11989



Steric hindrance modulated efficient thermally activated delayed fluorescence with non-linear optical, ferroelectric and piezoelectric properties

Madhusudan Dutta, Abhijit Chatterjee, Nilotpal Deka, Riteeka Tanwar, Vishnu Mishra, Arindam Saha, Pankaj Mandal,* Ramamoorthy Boomishankar* and Partha Hazra*

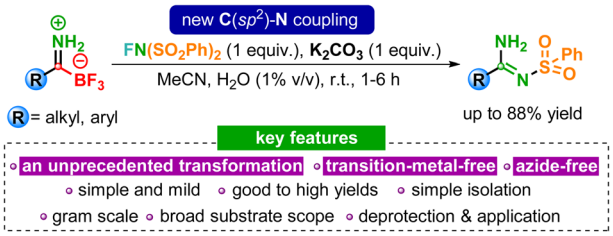
11999

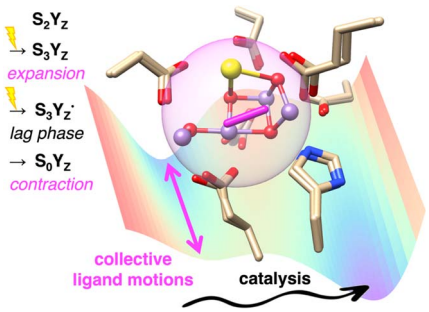


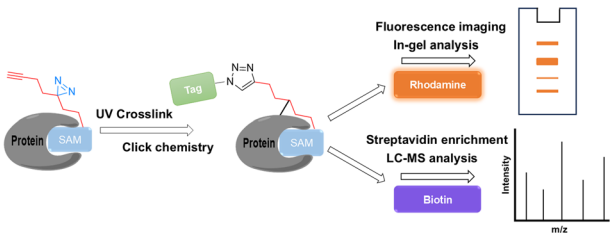
Unexpected structural isomers of $AlFe_2O_4^+$ and $AlCo_2O_4^+$: vibrational spectroscopy and ion mobility combined with quantum chemistry

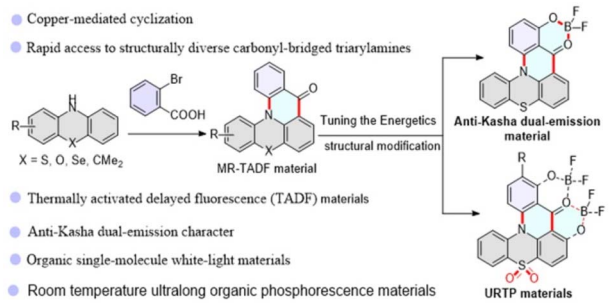
Winni Schwedland, Tatiana C. Penna, Henning Windeck, Fabian Müller, Stephen Leach, Joachim Sauer,* Xavier R. Advincula, Fabian Berger,* Nanako Ishida, Keijiro Ohshimo, Fuminori Misaizu,* Ya-Ke Li, Arghya Chakraborty, Francine Horn and Knut R. Asmis*

EDGE ARTICLES



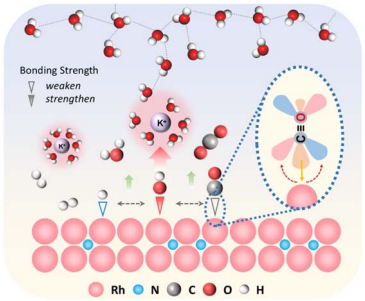


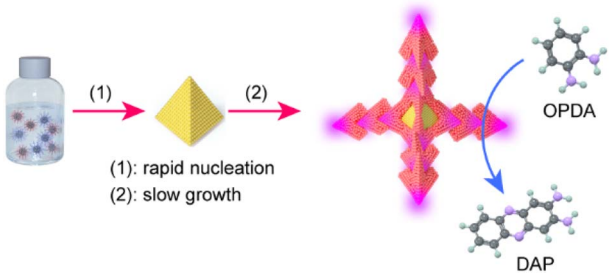


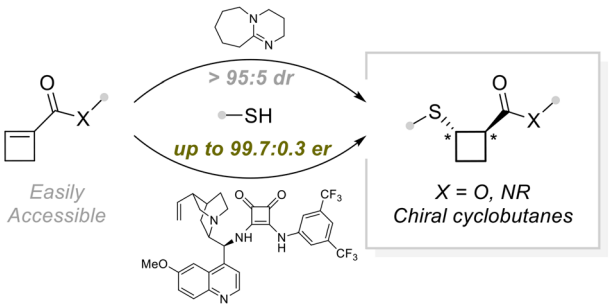


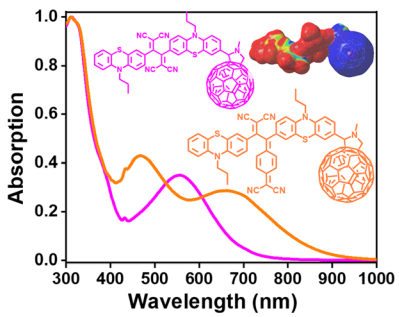
EDGE ARTICLES

EDGE ARTICLES









EDGE ARTICLES

EDGE ARTICLES