

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.

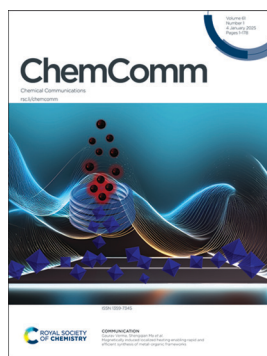
IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(1) 1-178 (2025)



Cover

See Miki Imanishi *et al.*, pp. 69–72. Image reproduced by permission of Miki Imanishi from *Chem. Commun.*, 2025, 61, 69.



Inside cover

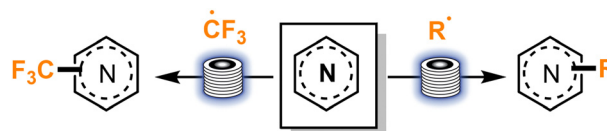
See Gaurav Verma, Shengqian Ma *et al.*, pp. 73–76. Image reproduced by permission of Shengqian Ma from *Chem. Commun.*, 2025, 61, 73.

HIGHLIGHTS

13

Recent developments in the photoredox catalyzed Minisci-type reactions under continuous flow

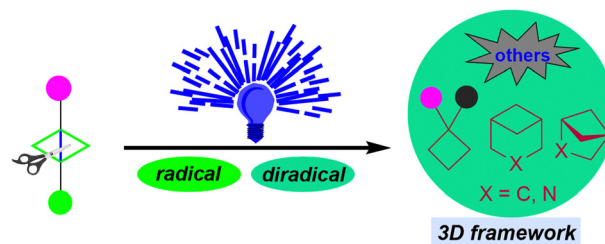
Serena Pillitteri, Erik V. Van der Eycken and Upendra K. Sharma*



23

Recent advances in photochemical strain-release reactions of bicyclo[1.1.0]butanes

Xiang Zhou, Ye Hu, Yao Huang and Yang Xiong*



Advance your career in science

with professional recognition that showcases
your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment
to attaining excellence in
your field

Gain the recognition you deserve

Achieve a professional
qualification that inspires
confidence and trust

Unlock your career potential

Apply for our professional
registers (RSci, RSciTech)
or chartered status
(CChem, CSci, CEnv)

Apply now

rsc.li/professional-development

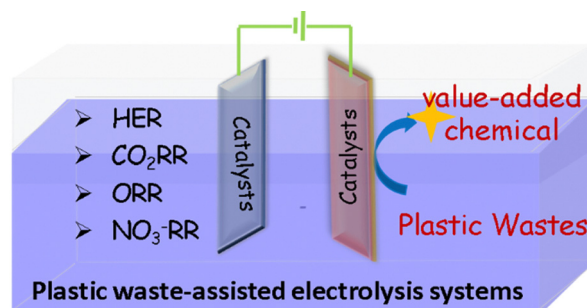


FEATURE ARTICLES

33

Electroreforming of plastic wastes for value-added products

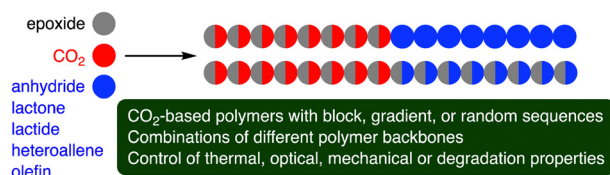
Ying Li, Lang Liu, Li Quan Lee and Hong Li*



46

Terpolymerization reactions of epoxides, CO₂, and the third monomers toward sustainable CO₂-based polymers with controllable chemical and physical properties

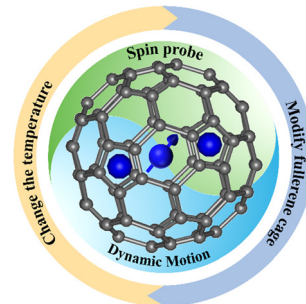
Koichi Nakaoka and Tadashi Ema*



61

Spin probe for dynamics of the internal cluster in endohedral metallofullerenes

Yingjian Zhang and Taishan Wang*

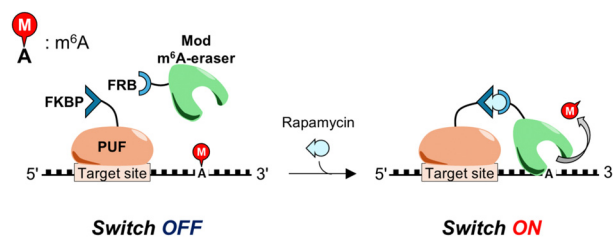


COMMUNICATIONS

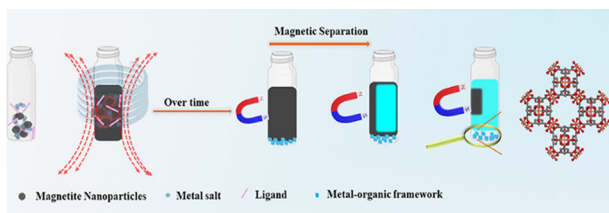
69

Highly sequence-specific, timing-controllable m⁶A demethylation by modulating RNA-binding affinity of m⁶A erasers

Kenko Otonari, Yuri Asami, Kosuke Ogata, Yasushi Ishihama, Shiroh Futaki and Miki Imanishi*



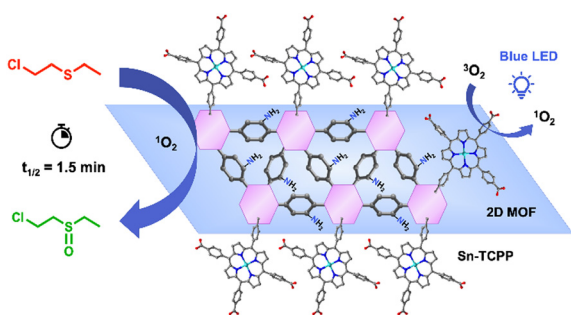
73



Magnetically induced localized heating enabling rapid and efficient synthesis of metal–organic frameworks

Mansi Kapoor, Saikumar Dussa, Narendra B. Dahotre, Gaurav Verma* and Shengqian Ma*

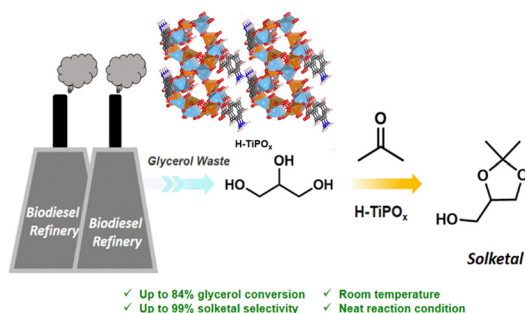
77



Metalloporphyrinic metal–organic frameworks for enhanced photocatalytic degradation of a mustard gas simulant

Alisa S. Quon, Doroteo Manriquez, Anna Nguyen, Edgar K. Papazyan, Pavithra Wijeratne, Lun An, Long Qi, Matthew J. Tang, Austin D. Ready, Omar K. Farha* and Yangyang Liu*

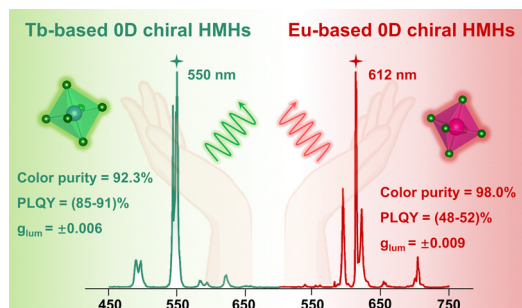
81



A new microporous organic–inorganic hybrid titanium phosphate for selective acetalization of glycerol

Bhabani Malakar, Sudip Bhattacharjee, Nhat Quang Minh Tran, Tan Le Hoang Doan, Thang Bach Phan, Sayantan Chongdar and Asim Bhaumik*

85



Efficient circularly polarized luminescence from zero-dimensional terbium- and europium-based hybrid metal halides

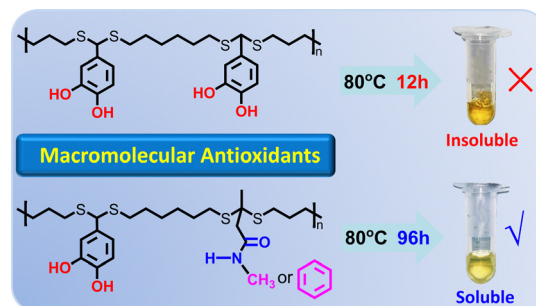
Yan Zhang, Yi Wei,* Chen Li, Yuxuan Wang, Yulian Liu, Meiyong He, Zhishan Luo, Xiaoyong Chang, Xiaojun Kuang and Zewei Quan*



89

Linear phenolic polymers with amide stabilized catechol moieties

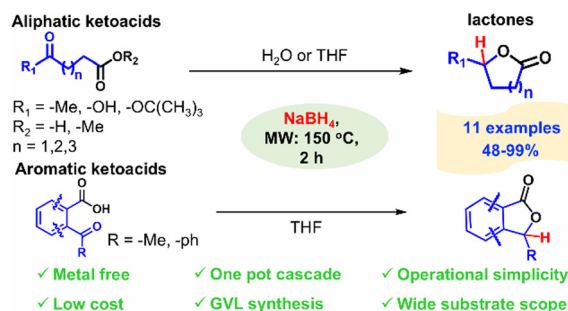
Jie Wang, Rui Wang, Yan Gao, Baoxia Wang, Shuqi Dong* and Liang Yuan*



93

One-pot synthesis of lactones from ketoacids involving microwave heating and sodium borohydride: application in biomass conversion

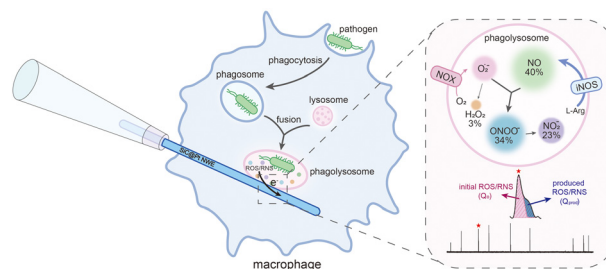
Raina Sharma, Arun Kumar Solanki and Govindasamy Jayamurugan*



97

Nanosensor quantitative monitoring of ROS/RNS homeostasis in single phagolysosomes of macrophages during bactericidal processes

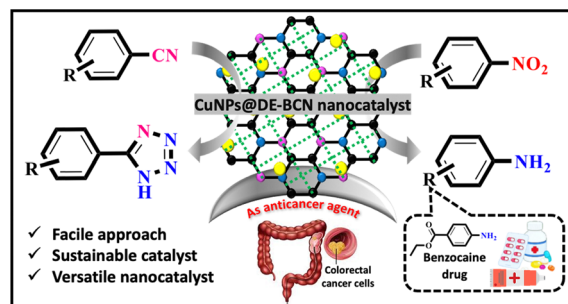
Bing-Yi Guo, Yu-Ting Qi, Hui-Qian Wu, Ru-Yan Zha, Li-Jun Wang, Xin-Wei Zhang* and Wei-Hua Huang*



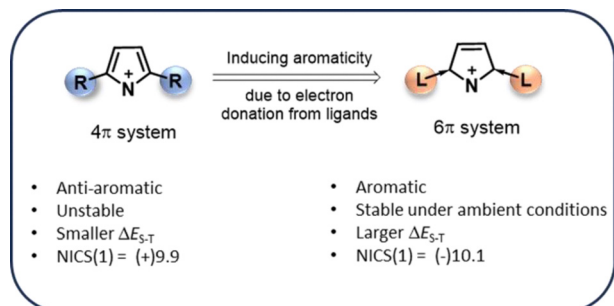
101

Catalyst to cure: applications of a new copper-based nanocatalyst in organic synthesis and cancer treatment

Harini G. Sampatkumar, Srushti S. Gundaknal, Byresh Gowda, Sudhanva M. S., Siddalingeshwar V. Doddamani, B. S. Sasidhar, Alejandro Bugarin* and Siddappa A. Patil*



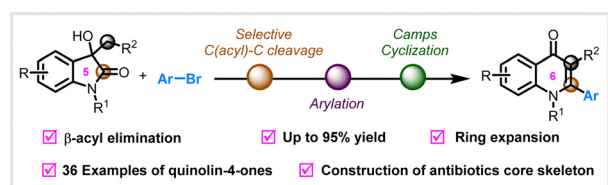
105



Stabilizing 4π electron pyrrolyl cations by inducing aromaticity

Astha Gupta, Mohammad Ovais Dar, Tejender Singh, Gurudutt Dubey, Subash C. Sahoo and Prasad V. Bharatam*

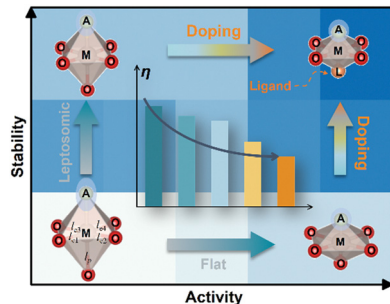
109



Ring expansion of 3-hydroxyoxindoles to 4-quinolones via palladium-catalyzed C–C(acyl) bond cleavage

Zhi-Cong Huang, Zhi-Ling Ruan, Hui Xu and Hui-Xiong Dai*

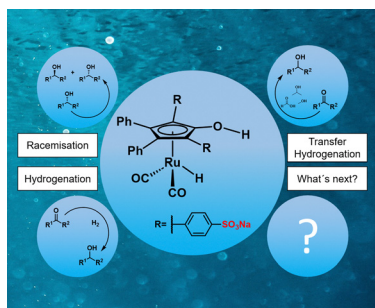
113



The effect of a distorted MO₆ octahedral unit on the activity and stability for the oxygen evolution reaction

Haixiang Yang, Xinran Ning, Wenjun Yan, Hua Gui Yang and Haiyang Yuan*

117



Synthesis and catalytic testing of the first hydrophilic derivative of Shvo's catalyst

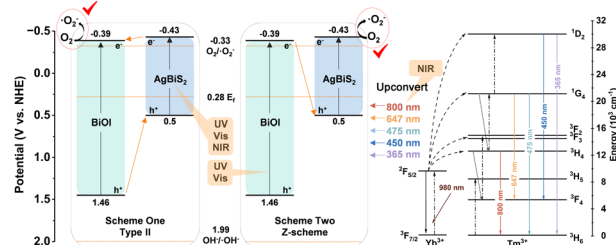
Justus Diekamp, Annika Schmidt, Julian J. Holstein, Carsten Strohmann and Thomas Seidensticker*



121

An innovative BiOI@AgBiS₂@NaYF₄:Yb, Tm ternary heterostructure for efficient solar energy harvesting towards tetracycline hydrochloride degradation

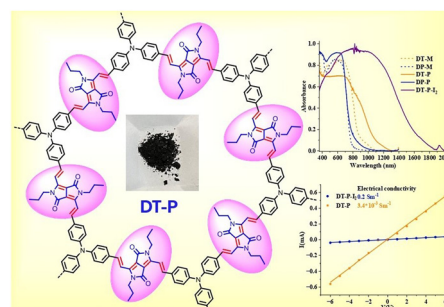
Jinyuan Zhang, Qincan Ma, Junhao Ma, Shuang Fu, Ziyang Ren, Xianzhong Lin* and Yueli Zhang*



125

Near-IR absorbing tetraene-linked π -conjugated porous polymers for energy storage and electrical conductivity

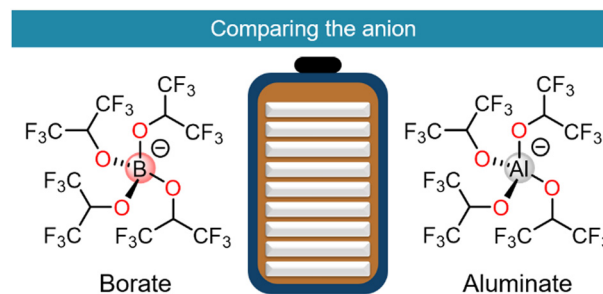
Vinutha K. Venkatareddy, Hamidreza Parsimehr, Anna Ignaszak* and Rajeswara Rao M*



129

Borates vs. aluminates: comparing the anion for lithium-ion batteries

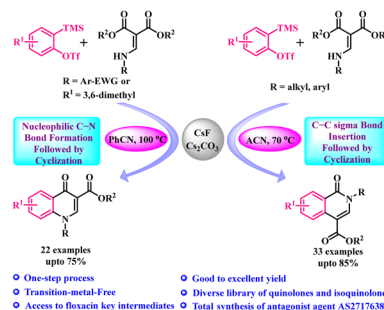
Darren M. C. Ould, Megan E. Penrod, Jessica B. McConnell, Mohammed A. Zabara, Astrid H. Berge, Christopher A. O'Keefe, Andrew D. Bond, Svetlana Menkin, Clare P. Grey* and Dominic S. Wright*



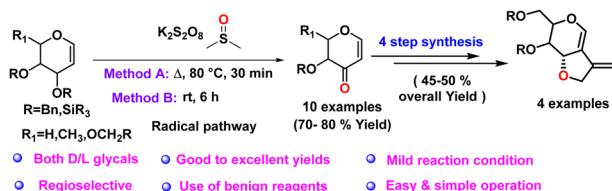
133

Functionalized quinolones and isoquinolones via 1,2-difunctionalization of arynes: synthesis of antagonist agent AS2717638 and floxacin key intermediates

Sachin D. Mahale, Anamika Prasad and Santosh B. Mhaske*



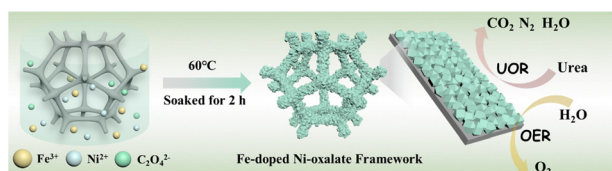
137



DMSO–K₂S₂O₈ mediated iodine-free conversion of glycal C-3 ether to 3-enopyranones: synthesis of furo[3,2-c] pyrans

Bisma Rasool, Sanchari Kundu, Irshad Ahmad Zargar and Debaraj Mukherjee*

141



An Fe-doped Ni-based oxalate framework with a favorable electronic structure for electrocatalytic water and urea oxidation

Chunzi Yang, Ming Zhao, Chunmei Zhang, Shan Zhang,* Dongdong Zhu* and Chunxian Guo*

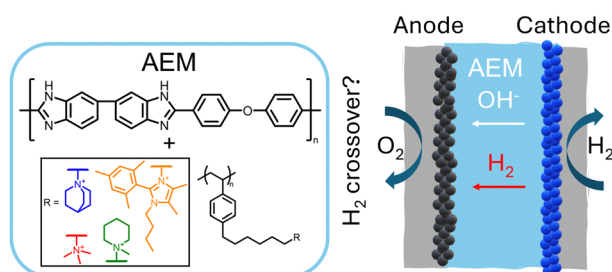
145



Defluorinative thio-functionalization: direct synthesis of methyl-dithioesters from trifluoromethylarenes

Marcus Söderström, Esther Olaniran Håkansson and Luke R. Odell*

149



Cationic groups in polystyrene/O-PBI blends influence performance and hydrogen crossover in AEMWE

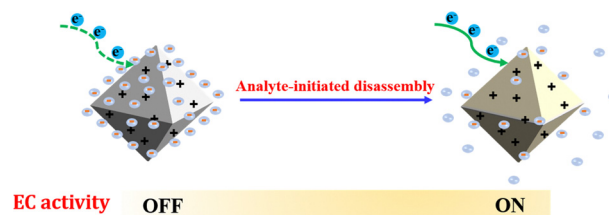
Linus Hager,* Maximilian Schrodt, Manuel Hegelheimer, Julian Stonawski, Pradipkumar Leuaa, Christodoulos Chatzichristodoulou, Andreas Hutzler, Thomas Böhm, Simon Thiele and Jochen Kerres*



153

Analyte-initiated disassembly of electrochromic metal–organic framework-based nanocomposites for smart colorimetric sensing

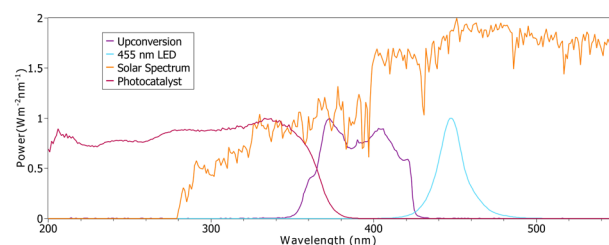
Min Zhou, Shan Huang, Pengcheng Huang* and Fang-Ying Wu*



157

Utilising triplet–triplet annihilation upconversion for overall photocatalytic water splitting

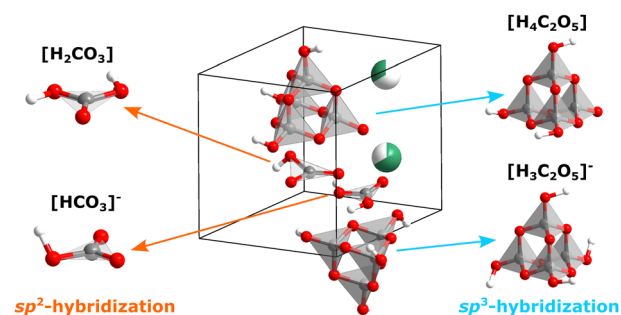
E. Madbak, D. J. Osborn, T. Small, T. Ishwara, T. W. Schmidt, K. Domen and G. F. Metha*



161

Single crystal diffraction study of Ba[H₄C₄O₁₀][H₃C₄O₁₀][H₂CO₃][HCO₃], a hydrous mixed sp²/sp³-carbonate

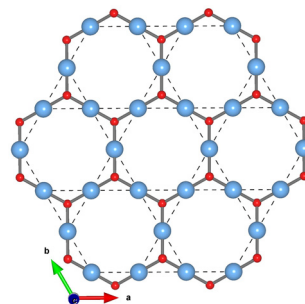
Dominik Spahr,* Elena Bykova, Lkhamsuren Bayarjargal, Victor Milman, Hanns-Peter Liermann and Björn Winkler



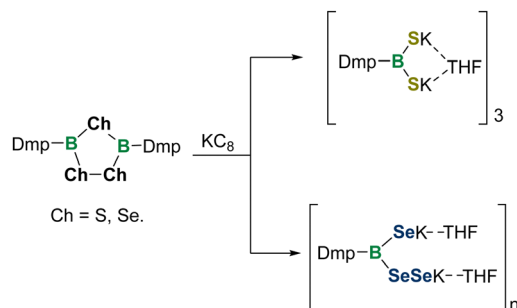
165

Two new tellurite compounds ACu₃Te₂O₈ (A = Ca, Cd) with ferromagnetic spin-1/2 kagomé layers

Guozhao Wang, Wenya Xiang, Zhiying Zhao, Meiyang Cui and Zhangzhen He*



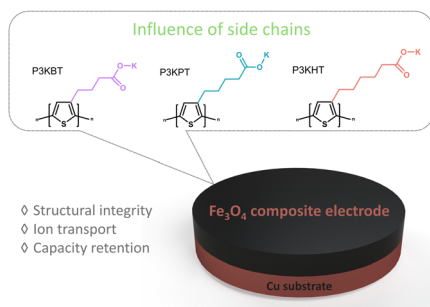
169



Crystalline potassium boryl dithiolate and diselenolate

Yuyang Dai, Yu Wang, Liliang Wang,* Fan Qi,*
Qianli Li and Lingbing Kong*

173



Polythiophene side chain chemistry and its impact on advanced composite anodes for lithium-ion batteries

Han Li, Haoze Ren, Zeyuan Sun, Siyu Qin,
Armando Rodriguez Campos, Esther S. Takeuchi,
Amy C. Marschlok, Kenneth J. Takeuchi and
Elsa Reichmanis*

