

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(4) 355-458 (2024)



Cover

See Zhi-Jiang Jiang, Zhanghua Gao *et al.*, pp. 384–387.
Image reproduced by permission of Zhi-Jiang Jiang from *Chem. Commun.*, 2024, 60, 384.



Inside cover

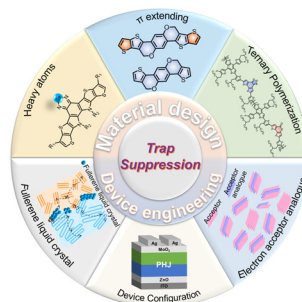
See Zhigang Wang *et al.*, pp. 388–391.
Image reproduced by permission of Zhigang Wang from *Chem. Commun.*, 2024, 60, 388.

FEATURE ARTICLES

364

Trap suppression in ordered organic photovoltaic heterojunctions

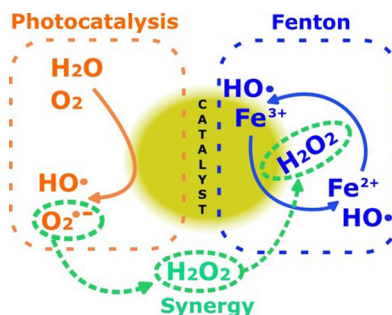
Dan He, Yawen Li, Fuwen Zhao* and Yuze Lin*



374

Controversial mechanism of simultaneous photocatalysis and Fenton-based processes: additional effect or synergy?

Olivier Monfort,* Arshitha Madhusudhan and Martin Motola



Fuelling your energy research



Energy & Environmental Science

Agenda-setting research in energy science and technology

Chair of the Editorial Board

Jenny Nelson, Imperial College London, UK

Impact factor 2021: 39.714, median time to first decision (peer reviewed articles only): 46 days*.

rsc.li/ees



EES Catalysis

Exceptional research on energy and environmental catalysis

Editor-in-Chief

Shizhang Qiao, University of Adelaide, Australia

Median time to first decision (peer reviewed articles only): 24 days*.

rsc.li/ees-catalysis



Sustainable Energy & Fuels

Driving the development of sustainable energy technologies through cutting edge research

Editor-in-Chief

Garry Rumbles, National Renewable Energy Laboratory and University of Colorado Boulder, USA

Impact factor 2021: 6.813, median time to first decision (peer reviewed articles only): 28 days*.

rsc.li/sustainable-energy



Energy Advances

Embracing research at the nexus of energy science and sustainability

Editor-in-Chief

Volker Presser, Leibniz Institute for New Materials, Germany

Median time to first decision (peer reviewed articles only): 32 days*.

rsc.li/energy-advances

Submit your work today

rsc.li/energy

*Visit rsc.li/metrics-explainer for more information

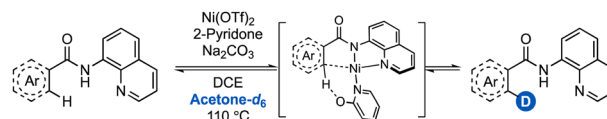
Registered charity number: 207890

COMMUNICATIONS

384

Nickel-catalyzed regioselective hydrogen isotope exchange accelerated by 2-pyridones

Zhi-Jiang Jiang,* Si-Han Xu, Yuhang Su, Erxun Hu, Jiawei Han, Jian-Fei Bai, Bencan Tang, Jia Chen and Zhanghua Gao*

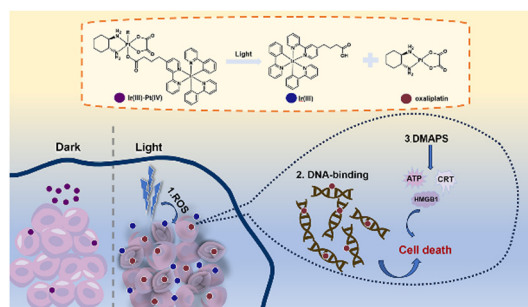


- Regioselective labelling at *ortho*- or β -positions
- 2-Pyridone accelerated reversible C-H activation via CMD pathway
- D₂O suppressed reaction activity

388

Highly photoactive Ir(III)–Pt(IV) heterometallic conjugates for anticancer therapy

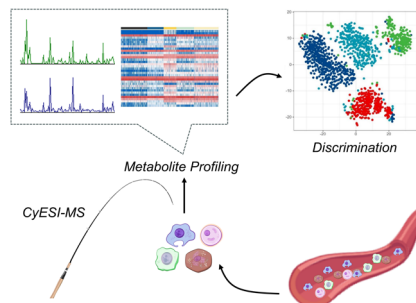
Wangman Hu, Rongzhi Liu, Kai Zheng and Zhigang Wang*



392

Single-cell metabolite profiling enables information-rich classification of lymphocyte types and subtypes

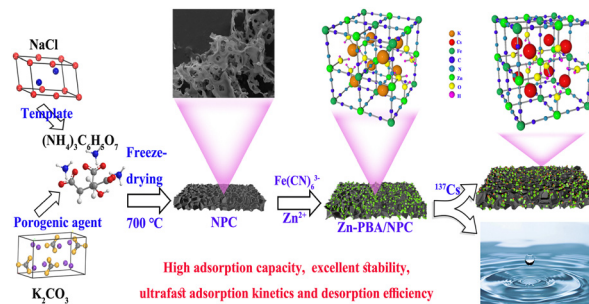
Siyuan Pan, Changyi Liu, Huan Yao, Xingyu Pan, Jinhang Li, Jinlei Yang, Murong Du, Peng Liu,* Sichun Zhang* and Xinrong Zhang

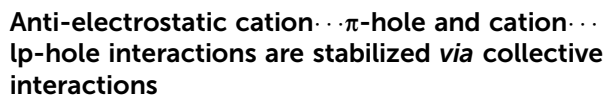


396

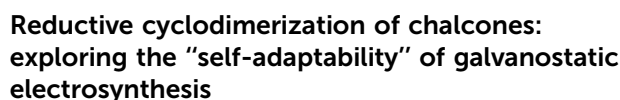
Engineering a defect-rich Prussian blue analog composite for enhanced Cs⁺ removal performance

Zhenwei Wei, Weilian Zhao, Jiayin Hu,* Tianlong Deng and Nan Zhang*

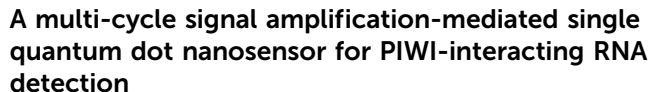




404



408



412



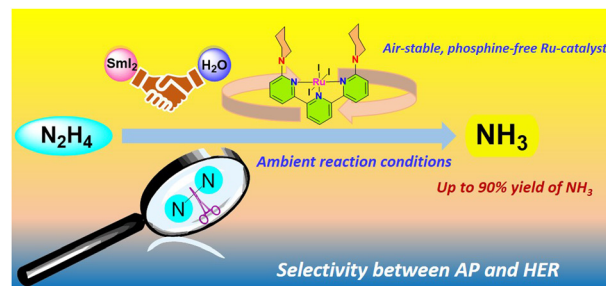
Dawid Pakulski,* Verónica Montes-García,
Włodzimierz Czepa, Dawid Marcinkowski, Haijun Peng,
Tomasz Chudziak, Adam Gorczyński, Wojciech Kukutka,
Cataldo Valentini, Violetta Patroniak, Paolo Samori* and
Artur Ciesielski*

COMMUNICATIONS

416

Ammonia synthesis by the reductive N–N bond cleavage of hydrazine using an air-stable, phosphine-free ruthenium catalyst

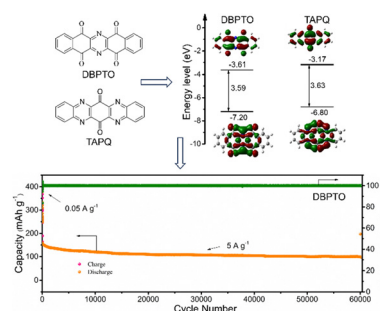
Aisa Mohanty, Smruti Rekha Rout, Rambabu Dandela and Prosenjit Daw*



420

Tuning the number of redox groups in the cathode toward high rate and long lifespan zinc-ion batteries

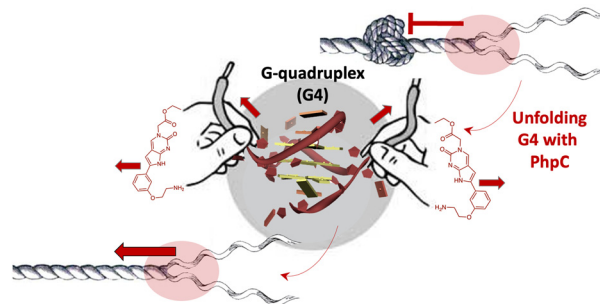
YanJun Shi,* Zhihui Xu, Pengcheng Wang, Haiguang Gao, Wanjiao He, Yanan Sun, Yucheng Huang, Juan Xu and Jianyu Cao*



424

PhpC modulates G-quadruplex-RNA landscapes in human cells

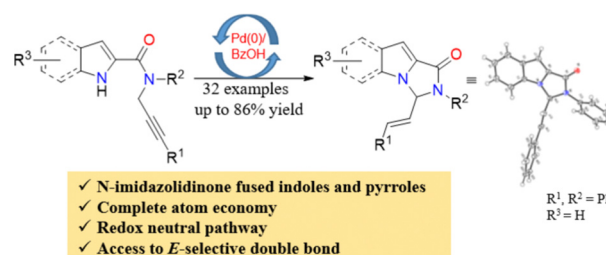
Jérémie Mitteaux, Sandy Raevens, Zi Wang, Marc Pirrotta, Ibai E. Valverde, Robert H. E. Hudson and David Monchaud*



428

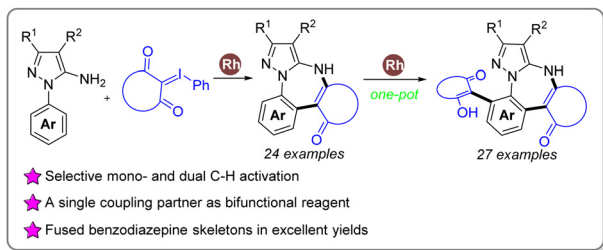
Pd/Brønsted acid catalysed intramolecular N-allylation of indoles and pyrroles with alkynes for the synthesis of N-fused heterocycles

Saswat Ranjan Bhoi, Chhanda Debnath and Shikha Gandhi*



COMMUNICATIONS

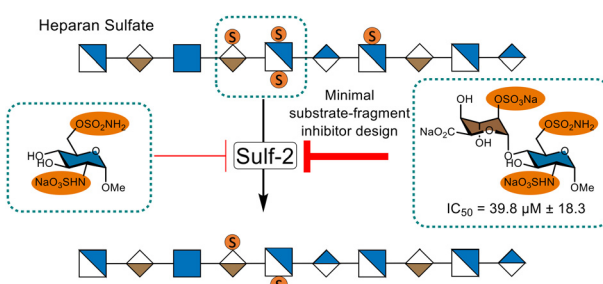
432



Rh(III)-catalyzed selective mono- and dual-functionalization/cyclization of 1-aryl-5-aminopyrazoles with iodonium ylides

Longkun Chen, Mingshuai Zhang, Meichen Liu, Zhuoyuan Liu, Yuetong Qiu, Zhilai Zhang, Fuchao Yu* and Jiuzhong Huang*

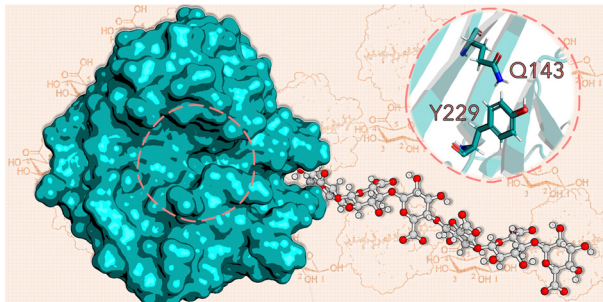
436



Modified minimal-size fragments of heparan sulfate as inhibitors of endosulfatase-2 (Sulf-2)

Alice Kennett, Sven Epple, Gabriella van der Valk, Irene Georgiou, Evelyn Gout, Romain R. Vivès and Angela J. Russell*

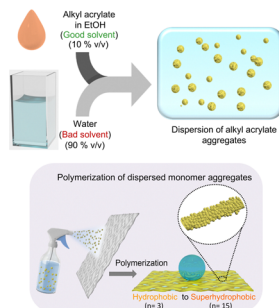
440



Glucuronan lyases from family PL7 use a Tyr/Tyr_{syn} β-elimination catalytic mechanism for glucuronan breakdown

Marlene Vuillemin, Bo Pilgaard, Emma Kiehn, Folmer Fredslund, Ditte H. Welner, Anne S. Meyer, Finn L. Aachmann and Casper Wilkens*

444



Polymerization of monomer aggregates for tailoring and patterning water wettability

Manideepa Dhar, Chittaranjan Mishra, Avijit Das and Uttam Manna*

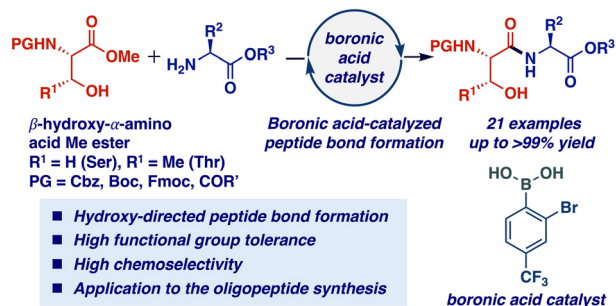


COMMUNICATIONS

448

Hydroxy-directed peptide bond formation from α -amino acid-derived inert esters enabled by boronic acid catalysis

Naoya Takahashi, Airi Takahashi and Naoyuki Shimada*



452

Photoinduced radical formation in hydrogen-bonded organic frameworks

Asia R.Y. Almuhan, Georgia R.F. Orton, Callum Rosenberg and Neil R. Champness*

