ChemComm

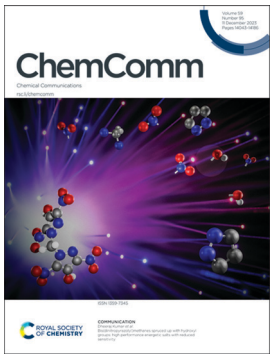
Chemical Communications

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 59(95) 14043–14186 (2023)



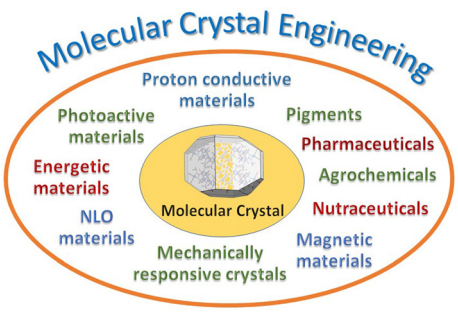
Cover
See Dheeraj Kumar *et al.*, pp. 14110–14113. Image reproduced by permission of Dheeraj Kumar from *Chem. Commun.*, 2023, **59**, 14110.

HIGHLIGHT

14052

Crystal engineering: from promise to delivery

Dario Braga

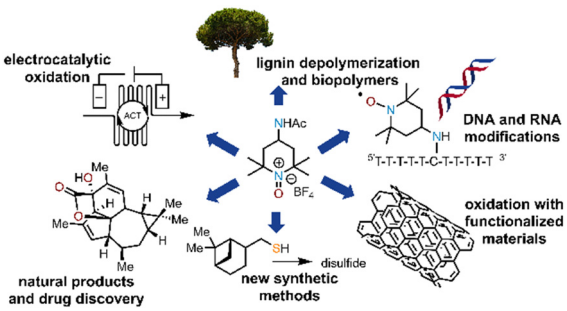


FEATURE ARTICLES

14063

Recent advancements in the use of Bobbitt's salt and 4-acetamidoTEMPO

Jean M. Bray, Shannon M. Stephens, Shayne M. Weierbach, Karen Vargas and Kyle M. Lambert*



ChemComm

Chemical Communications

rsc.li/chemcomm

Chemical Communications (print: ISSN 1359-7345; electronic: ISSN 1364-548X) is published 100 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road,Cambridge, CB4 0WF, UK
Tel +44 (0)1223 432398; E-mail **orders@rsc.org**

2023 Annual (electronic) subscription price: £3,553 / US$6,258. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at **www.rsc.org/ip**

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

Information for Authors

Full details on how to submit material for publication in Chemical Communications are given in the Instructions for Authors (available from **http://www.rsc.org/authors**).
Submissions should be made via the journal's homepage: **rsc.li/chemcomm**

♾ The paper used in this publication meets the requirements of ANSI/NISO Z39.48–1992 (Permanence of Paper).

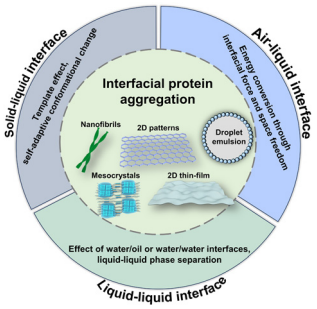
Registered charity number: 207890

FEATURE ARTICLES

14093

Interface-mediated protein aggregation

Fei Tao, Qian Han and Peng Yang*

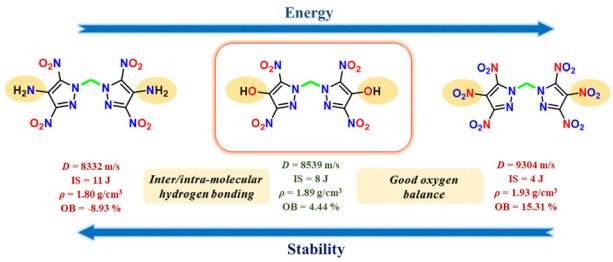


COMMUNICATIONS

14110

Bis(dinitropyrazolyl)methanes spruced up with hydroxyl groups: high performance energetic salts with reduced sensitivity

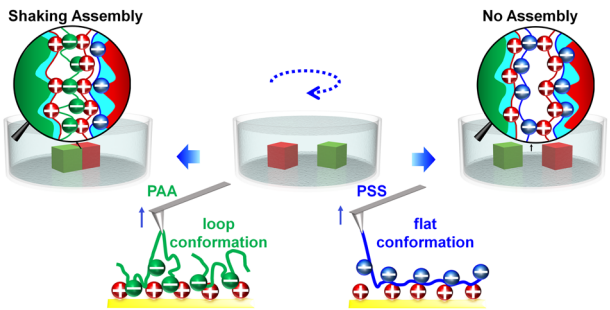
Prachi Bhatia, Krishna Pandey, Priyanka Das and Dheeraj Kumar*



14114

Polyelectrolyte chain conformation matters in macroscopic supramolecular self-assembly

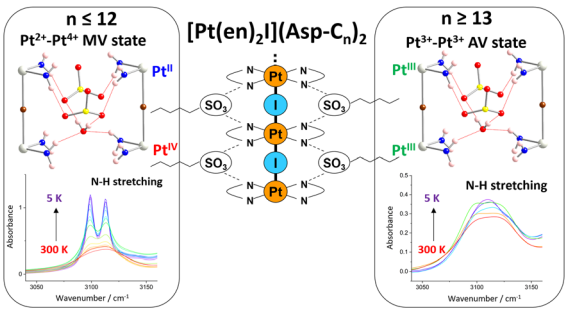
Qian Zhang, Cuiling lin, Chen Chen, Liqun Zhang, Feng Shi* and Mengjiao Cheng*



14118

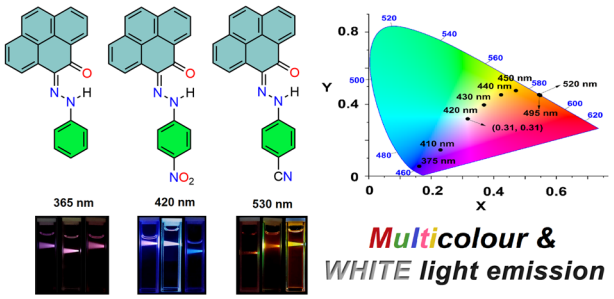
Chemical pressure-induced Pt^{III}–I Mott–Hubbard nanowire, $[Pt(en)_2I](Asp\text{-}C_n)_2{\cdot}H_2O$ ($13 \leq n$), detected *via* polarized infrared spectroscopy

Shohei Kumagai, Takefumi Yoshida, Hiroaki Iguchi, Masanori Wakizaka, Nobuto Funakoshi, Masahiro Yamashita* and Shinya Takaishi*



COMMUNICATIONS

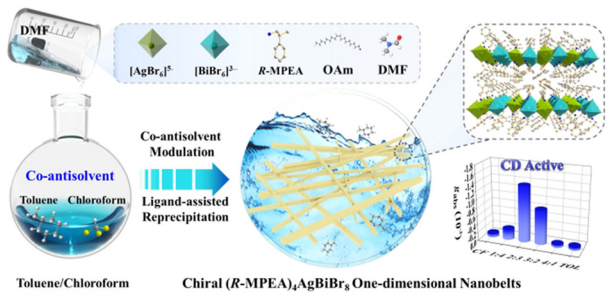
14122



Excitation wavelength-dependent multi-coloured and white-light emissive pyrene-based hydrazones: suppression of Kasha's rule

Naveen Kumar M, Deikrisha Lyngdoh Lyngkhoi, Sudhakar Gaikwad, Jayanta Samanta, Rafiq Ahamed, Snehadrinarayan Khatua* and Susnata Pramanik*

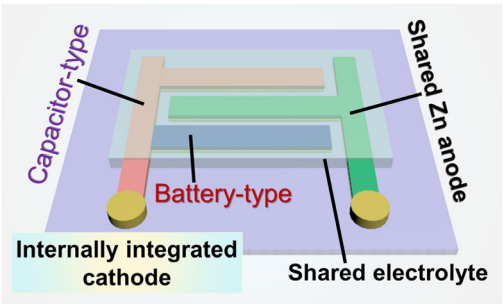
14126



Two-dimensional lead-free silver-bismuth double perovskite nanobelts with intrinsic chirality *via* co-antisolvent modulation strategy

Xuexia Yu, Rong Lu, Pengfei Zhang, Shun Wang, Yihuang Chen* and Shuang Pan*

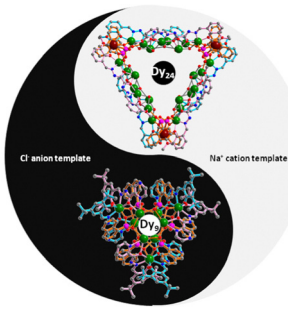
14130



Design of internally integrated in-plane electrodes for superior flexible hybrid zinc-ion capacitor devices

Simiao Zhao, Haojie Li, Jiaxuan Bai, Hui Ma, Yifan Dong and Xiaocong Tian*

14134



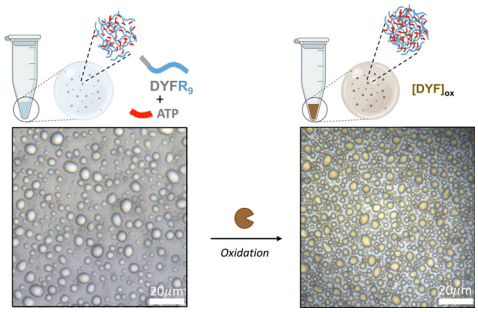
Double-stranded metallo-triangles: from anion-templated nonanuclear to cation-templated tetraicosanuclear dysprosium clusters

Yanan Liu, Xiao Sun, Peiqiong Chen, Xiaojuan Li, Fu-Ping Huang,* Hou-Ting Liu* and Haiquan Tian*

14138

Localized and regulated peptide pigment formation inside liquid droplets through confined enzymatic oxidation

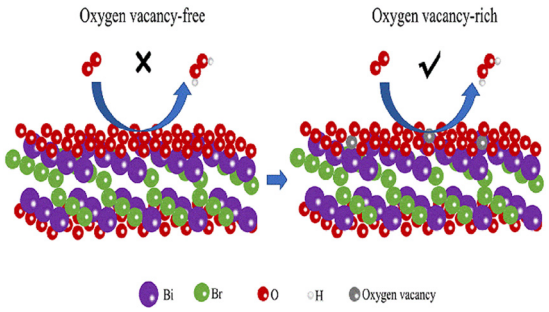
Kenny Barriales, Salma Kassem, Deborah Sementa, Alfredo Vidal Ceballos, Tong Wang, Shadman Khandaker, Rinat R. Abzalimov, Ankit Jain, Shana Elbaum-Garfinkle and Rein V. Ulijn*



14142

Oxygen vacancy-promoted photocatalytic H_2O_2 production over bismuth oxybromide nanosheets

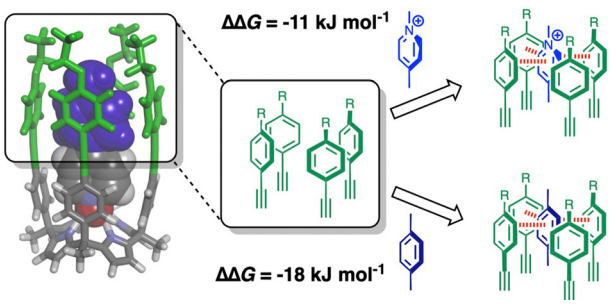
Hongxiang Chu, Ruofan Li, Di Zeng, Wenjing Wang, Bingkun Cui, Taikang Jia, Ling Zhang* and Wenzhong Wang*



14146

Solvation rules: aromatic interactions outcompete cation–π interactions in synthetic host–guest complexes in water

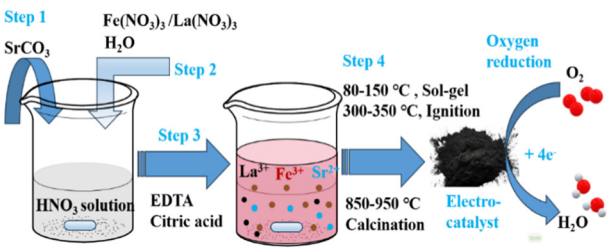
Gloria Tobajas-Curiel, Qingqing Sun, Jeremy K. M. Sanders, Pablo Ballester* and Christopher A. Hunter*



14149

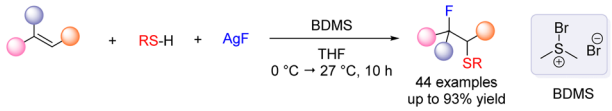
A facile mixed complex synthesis method for perovskite oxides toward electrocatalytic oxygen reduction

Hui Lu,* Danyang Wu, Yue Gu, Wenxin Sun, Xiaojian Yang, Wenxuan Li, Honglei Shuai and Xinsheng Zhao*



COMMUNICATIONS

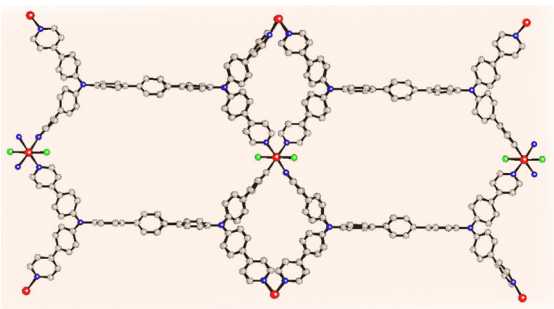
14153



1,2-Fluorosulfenylation of unactivated alkenes with thiols and a fluoride source promoted by bromodimethylsulfonium bromide

Zihui Yang, Jia Liu and Lan-Gui Xie*

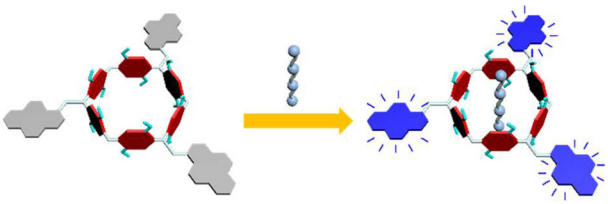
14157



Exploring redox properties of a 3D Co-based framework with bis(triarylamine) terphenyl as a redox-active linker

Chin-May Ngue, Yong-Yun Zhang and Man-kit Leung*

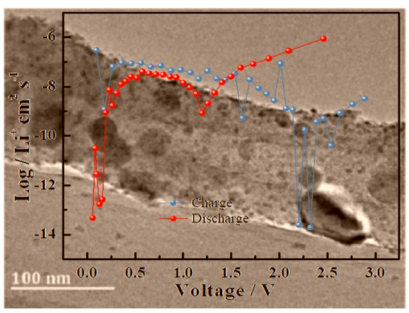
14161



Water-soluble pillar[6]arene bearing pyrene on alternating methylene bridges for direct spermine sensing

Li Ling, Zizhen Zhao, Lijun Mao, Shuyi Wang and Da Ma*

14165



Promoted kinetics and capacity on the $Li_2CuTi_3O_8$/C anode by constructing a one dimensional hybrid structure for superior performance lithium ion batteries

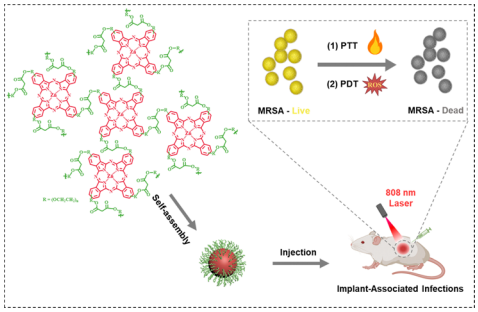
Yakun Tang, Jian Liu, Yue Zhang, Wenjie Ma, Lang Liu,* Biao Zhang and Sen Dong

COMMUNICATIONS

14169

Hyperbranched polyphthalocyanine micelles with dual PTT/PDT functions for bacteria eradication under an NIR window

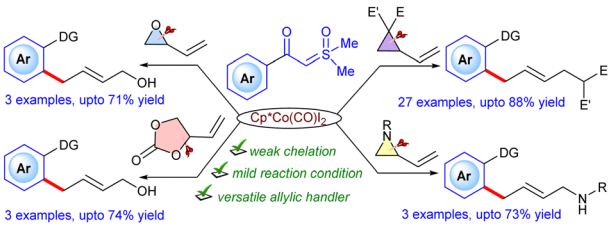
Ying Du, Guangyu Chu, Rui Yu, Rui Cui, Yuling Wang, Yiyong Mai, Ming Guan,* Fugui Xu* and Yongfeng Zhou*



14173

Expedient C–H allylation of sulfoxonium ylides: merging C–H and C–C/C–het bond activation

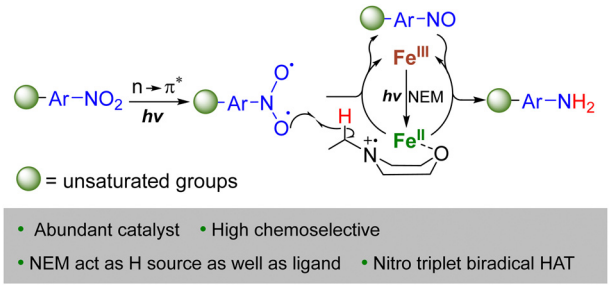
Sharajit Saha, Hemanga Bhattacharyya, Pallab Karjee, Bijoy Debnath, Kshitiz Verma and Tharmalingam Punniyamurthy*



14177

Visible-light-induced iron-catalyzed reduction of nitroarenes to anilines

Shilei Yang, Min He, Yi Wang, Ming Bao and Xiaoqiang Yu*



14181

Rapid construction of Co/CoO/CoCH nanowire core/shell arrays for highly efficient hydrogen evolution reaction

Sihan Liu, Runwei Song, Shuai Wang, Weiye Shi, Qin Zhou, Yan Zhang, Chunqing Huo,* Shengjue Deng* and Shiwei Lin*