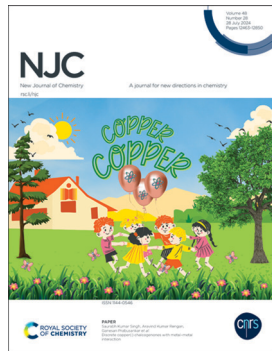


IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 48(28) 12463–12850 (2024)



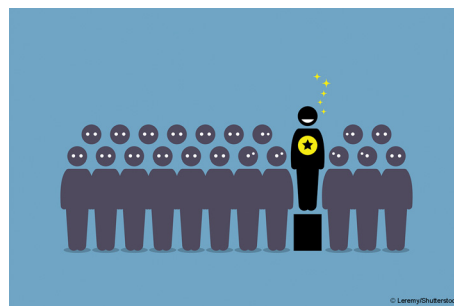
Cover

See Saurabh Kumar Singh, Aravind Kumar Rengan, Ganesan Prabusankar *et al.*, pp. 12501–12509. Image reproduced by permission of Ganesan Prabusankar from *New J. Chem.*, 2024, **48**, 12501. © OpenClipart-Vectors, GDJ, Insiyyaaaa, Marx Fidel, Sketchify, M.Wallflower via Canva.com

EDITORIAL

12476

Outstanding Reviewers for *New Journal of Chemistry* in 2023

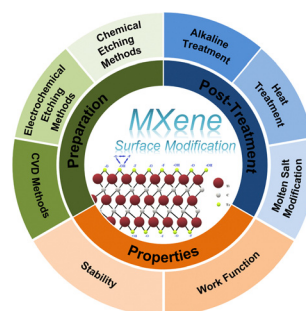


PERSPECTIVE

12477

A review on surface modulation of MXenes and the impact on their work functions and stability

Yuchen Pang, Junxiao Li, Kangle Lv, Dingguo Tang and Qin Li*



ChemComm

**Uncover new possibilities
with outstanding
preliminary research**

**Original discoveries, fuelling
every step of scientific progress**

rsc.li/chemcomm

**Fundamental questions
Elemental answers**

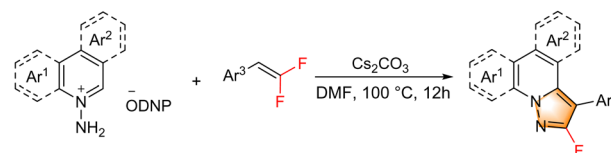


COMMUNICATION

12496

Synthesis of 2-fluorinated pyrazolo[1,5-a]pyridines via base-mediated [3+2] cycloaddition of *N*-aminopyridinium salts with *gem*-difluorostyrenes

Yang Feng, Yuanyuan Wu, Zengjiang Yue, Ying Fu* and Zhengyin Du*

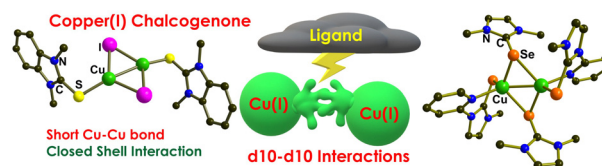


PAPERS

12501

Discrete copper(I) chalcogenones with metal–metal interaction

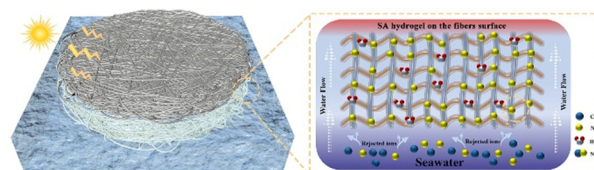
Suman Mandal, Dinesh Harijan, Kusum Kumari, Saurabh Kumar Singh,* Aravind Kumar Rengan* and Ganesan Prabusankar*



12510

A salt-resistant and self-floating Janus evaporator by electrospinning for stable solar desalination

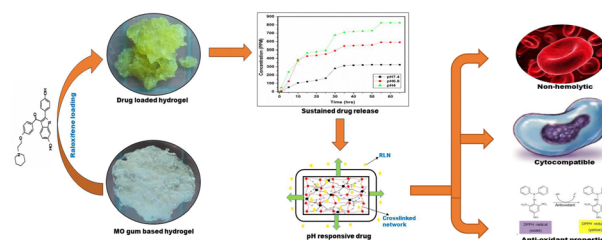
Yingying Cheng, Yanxia Luo, Yanhua Liu, Dianming Li* and Libang Feng*



12516

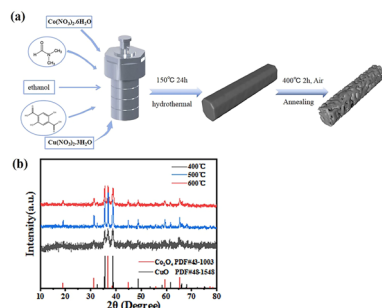
CCD-optimized *Moringa oleifera*-based hydrogel for the targeted and controlled release of the anti-cancer drug Raloxifene: evaluation of hemocompatible, cytotoxic and antioxidant properties

Priyanka Mankotia, Kashma Sharma, Yogendra Kumar Mishra,* Vishal Sharma* and Vijay Kumar*



PAPERS

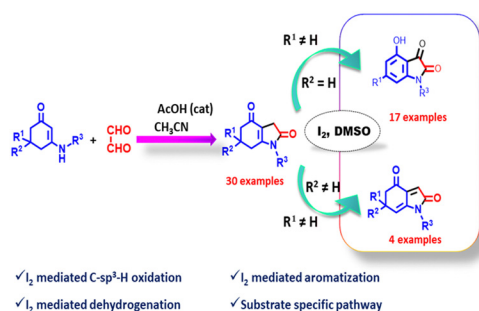
12535



Morphology-controllable synthesis of rod-shaped CuO@Co₃O₄ derived from CuCo-MOF-74 for supercapacitors

Bo Sun, Man Li, Lifeng Cheng, Qijian Li, Xiaowen Chen, Shengqi Wang, Wenhua Yan, Lei Wang, Fuxiang Wei* and Qingliang Wang*

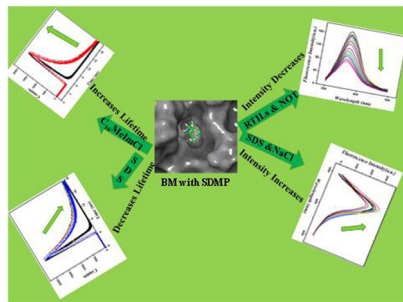
12544



I₂/DMSO-mediated substrate selective oxidation of tetrahydro indole-2,4-dione towards 4-hydroxy isatins and 5,6-dihydro-1H-indole-2,4-dione derivatives

Goutam Sinha, Sayan Pramanik, Debashis Jana, Anirban Ghosh and Chhanda Mukhopadhyay*

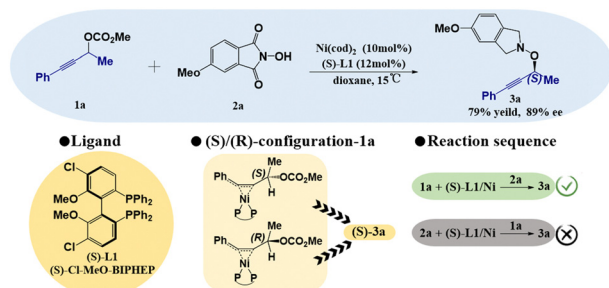
12553



Exploration and modulation of the photophysical properties of bromelain in a bioamphiphilic micellar system: comparative studies on the basis of room temperature ionic liquids, anionic surfactants, drugs and salts

Apensu Dey, Sudipta Chakraborty and Soumen Ghosh*

12565



A computational mechanistic study on the Ni-catalyzed asymmetric alkynyl propyl hydroxyaminations: origin of enantioselectivity and further rational design

Yuqing Huang, Manman Zhu, Shuqi Zhang, Yue Qiao and Lili Zhao*

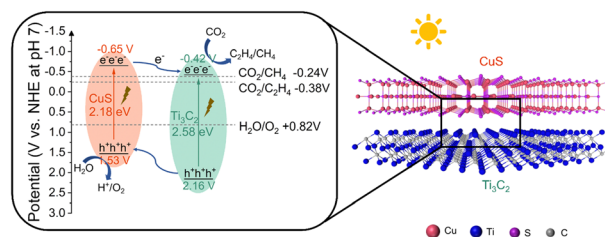


PAPERS

12575

An *in situ* spectroscopic study of 2D CuS/Ti₃C₂ photocatalytic CO₂ reduction to C1 and C2

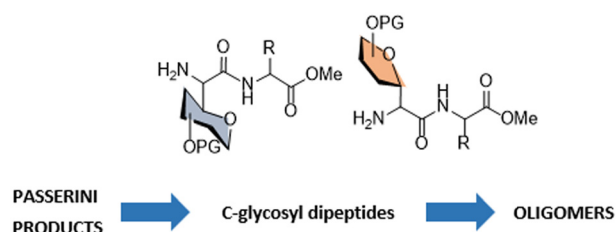
Wanhe Li, Yahui Chen, Shuhan Jia, Yiyang Zhou, Yiting Hua, Xinyu Lin* and Zhi Zhu*



12584

The synthesis of oligomers containing alternating C-glycosyl α -amino acids and proteinogenic α -amino acids

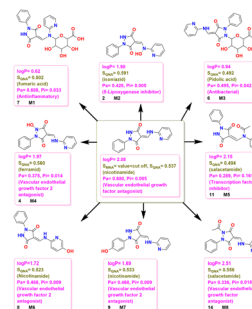
Ivana Colić, Barbara Bogović and Ivanka Jerić*



12591

Synthesis, investigation of the crystal structure, DFT calculations, and *in silico* medicinal potential of hydrazone- and aminomethylene substituted pyrazolidine-3,5-diones as potential anticancer scaffolds

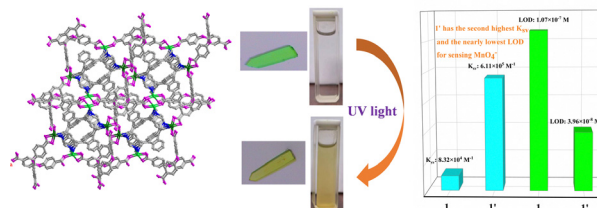
Youness El Bakri,* Sabir Ali Siddique,* Shaaban K. Mohamed, Muhammad Sarfraz, Hatem A. Abuelizz, Rashad Al-Salahi, Joel T. Mague and Eman A. Ahmed



12609

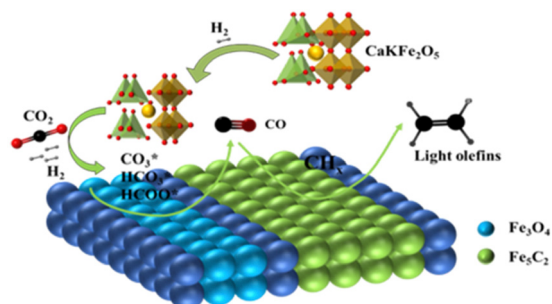
A photochromic metal–organic framework with a rare 3D self-interpenetrated architecture and an ultrahigh MnO₄[−] sensing ability

Jinfang Zhang,* Yinlong Yue, Xingyu Tao, Jiarun Zhang, Dejing Yin and Chi Zhang*



PAPERS

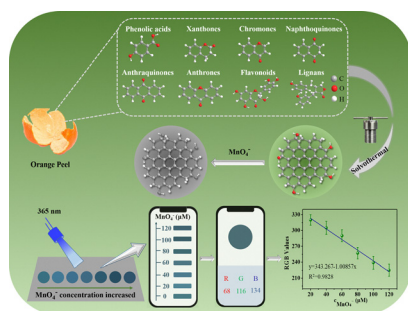
12616



Potassium-modified calcium-ferrate-catalyzed hydrogenation of carbon dioxide to produce light olefins

Aixin Cui, Man Wu, Tuo Guo,* Xiunan Sun, Yulong Chen and Qingjie Guo*

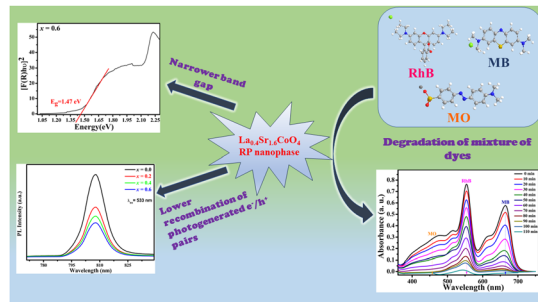
12626



A portable smartphone platform based on fluorescent carbon quantum dots derived from biowaste for on-site detection of permanganate

Li Xu, Chenfei Zhu, Xiaogang Duan, Lei Bao, Guanglin Wang and Wei Fu*

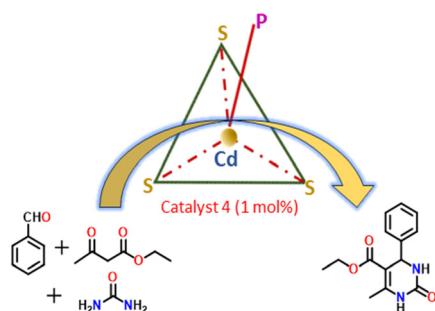
12633



Switching from antiferromagnetism to ferromagnetism in nanocrystalline $\text{La}_{1-x}\text{Sr}_{1+x}\text{CoO}_4$ ($x = 0.0, 0.2, 0.4$ and 0.6) layered perovskite oxides: effects of mixed valence states of Co on their magnetic, optical and photocatalytic properties

Amit Kumar Atri, Irfan Qadir, Shikha Sharma, Ujwal Manhas, Sumit Singh, Preteek Sharma, Manisha Sharma and Devinder Singh*

12654



Synthesis of a series of Cd(II) furan-2-thiocarboxylates: unprecedented coordination geometry of a Cd(II) complex exhibiting catalytic efficiency for the synthesis of 3,4-dihydropyrimidine-2(1H)-one derivatives

Krishna Kumar, Akash Shrivastav, Sakshi, Angshuman Roy Choudhury and Subrato Bhattacharya*

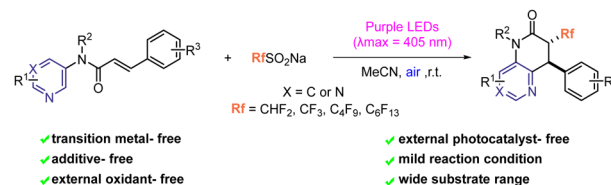


PAPERS

12664

Visible-light-induced self-catalyzed fluoroalkylation/cyclization of *N*-arylcinnamamides: synthesis of fluoroalkyl-containing 3,4-disubstituted dihydro-1,5-naphthyridin-2(1*H*)-ones and 7,8-disubstituted dihydropyrido[3,2-*d*]-pyrimidin-6(5*H*)-ones

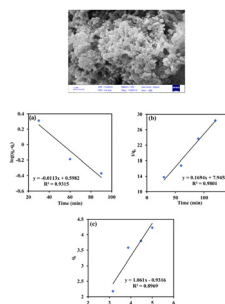
Hongmiao Yao, Qianding Zeng, Yiqun Tang, Xiangqiao Yang, Shaodong Wang, Jiangmeng Ren* and Bu-Bing Zeng*



12672

Adsorptive removal of nitrate from aqueous solution using a MnFe_2O_4 @zeolite-activated carbon magnetic nanocomposite: isotherm and kinetics studies

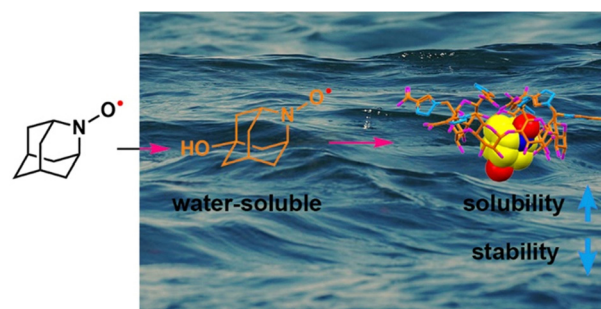
Ali Babri Shal, Morteza Kashefi AlAsl* and Shahrzad Khoramnejadian



12681

A water-soluble aza-adamantyl nitroxide radical and its complexes with β -cyclodextrin derivatives

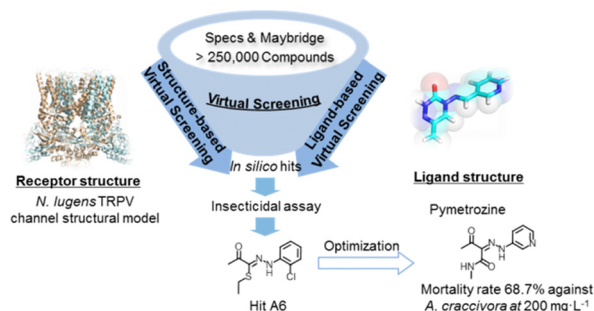
Yani Zhao, Ran Duan, Weijie Guo, Lele Lyu, Xiaoyu Liu, Hua Jiang and Ying Wang*



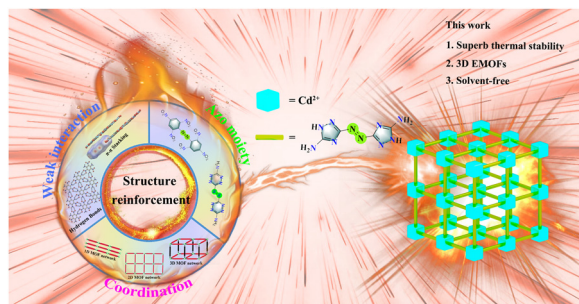
12688

Identification of potential novel insect TRPV channel modulators by homology modeling, binding mode analysis, virtual screening studies and chemical optimization

Xiaoyang Li, Cong Zhou, Lujue He, Zhiping Xu, Zhong Li and Jiagao Cheng*



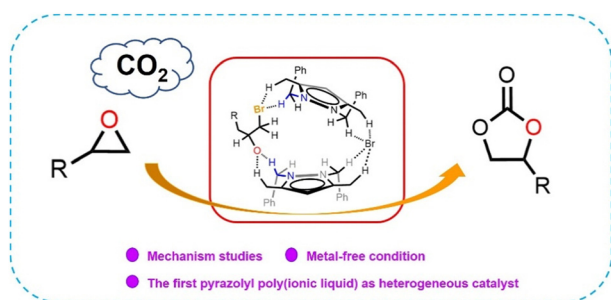
12697



Integrating three types of structure reinforcements abounding in heat-resistant explosives to construct a 3D solvent-free EMOF with superb stability

Tianjiao Hou, Huiting Leng, Mengjia Chen, Jun Luo, Chong Zhang, Yu Zhang, Zhenxin Yi, Shunlin Zhang and Xuan Shen*

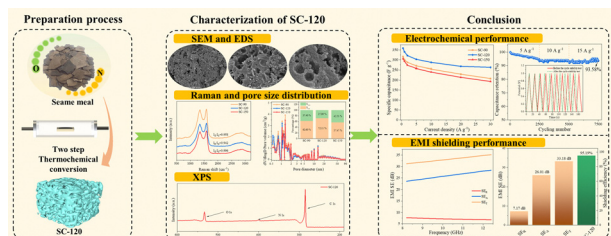
12706



A novel pyrazolium ionic liquid used for CO₂ cycloaddition

Jun-Fei Li, Xiao-Hui Guan, Hui-Jun Feng, Dai-Mei Zhou, Qiao-Yun Liu,* Wen-Yao Zhang, Cai-Hong Guo,* Jun-Hua Bai and Jun-Wen Wang*

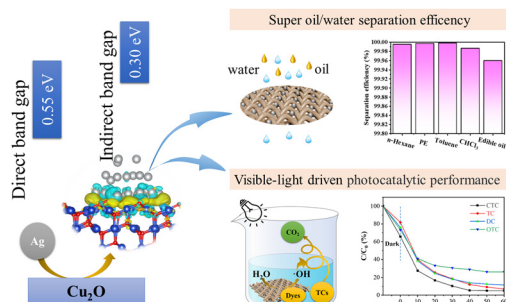
12713



Facile synthesis of O/N co-doped hierarchical porous carbon: for high performance supercapacitors and electromagnetic interference shielding

Kaiming Dong, Zhenjie Sun, Ge Jing, Jiajun Wang, Biao Tang, Nanjin Zhao, Lingwei Kong, Weijie Yan and Feiqiang Guo*

12724



Superwetting Ag@Cu₂O anchored copper mesh for efficient oil/water separation and visible-light driven removal of organic pollutants

Jianchao Zhao, Zhengqiang Yang, Na Liu,* Rui Wang, Siqi Deng and Haijie Cao*

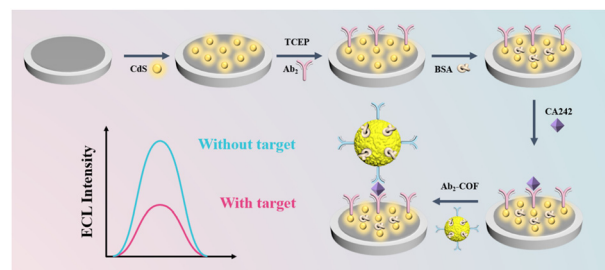


PAPERS

12733

A quenching electrochemiluminescence energy resonance transfer system based on CdS and COFs for the ultrasensitive detection of CA242

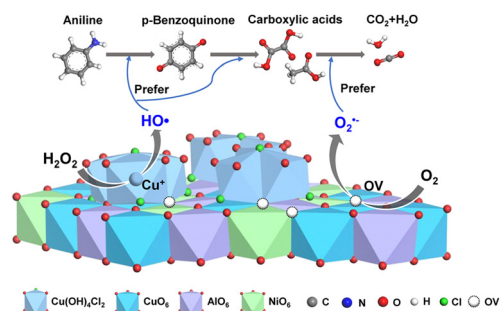
Baokun Han, Shujun Wang,* Fengqian Xie, Shuangna Wang, Feng Tang, Shaowen Xiang,* Yueyuan Li, Ping Wang, Yueyun Li, Qing Liu* and Yuying Liu*



12740

Synthesis of γ - $\text{Cu}_2(\text{OH})_3\text{Cl}$ /LDH composites as Fenton catalysts to mineralize aniline: successive mineralization by hydroxyl and superoxide radicals

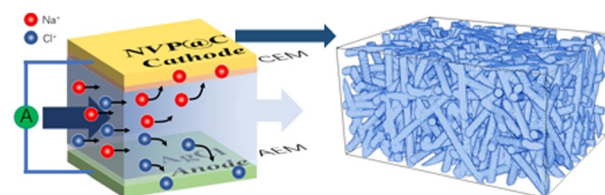
Hao Wang,* Tingting Shen, Yang Li, Longfang Wang, Ying Xiong and Yan Wu



12753

Ion transport in fibrous electrodes for desalination cells: a three-dimensional Boltzmann simulation

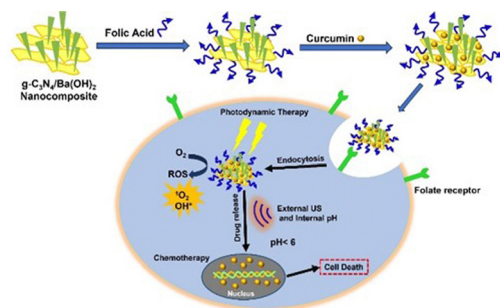
Shouguang Yao,* Hongjiang Yao, Yihao Yang and Rui Liu



12769

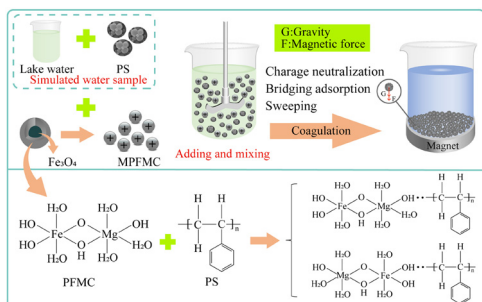
Dual pH and ultrasound responsive curcumin loaded g- C_3N_4 /Ba(OH) $_2$ nanocarrier for chemo-photodynamic therapy

Saumya, Faqua Zarreen, Masood Nadeem, Srinivas voddumalla, Moshahid A Rizvi and Bhavani Prasad Naik Nenavathu*



PAPERS

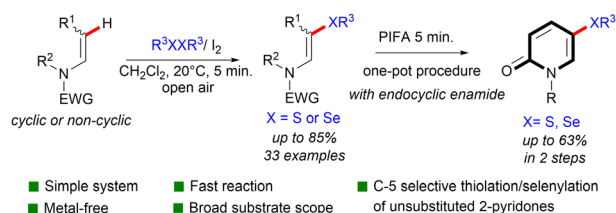
12783



Magnetic polymeric ferric magnesium chloride: Fe species distribution, characterization and coagulation removal of microplastics in water

Haicheng Liu* and Jiahui Yang

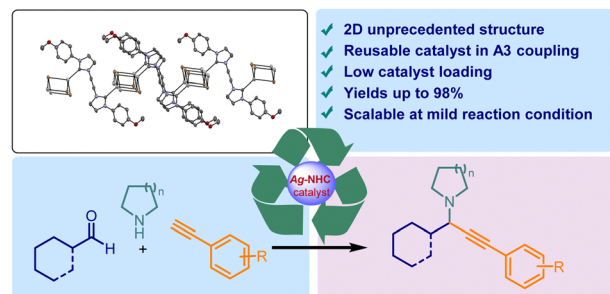
12793



I₂ or I₂/PIFA one-pot induced system for rapid synthesis of chalcogenated enamides, uracils or 2-pyridones under mild conditions

Hamdi Sanaa, Ismaël Dondasse, Pascal Retailleau, Cyril Nicolas* and Isabelle Gillaizeau*

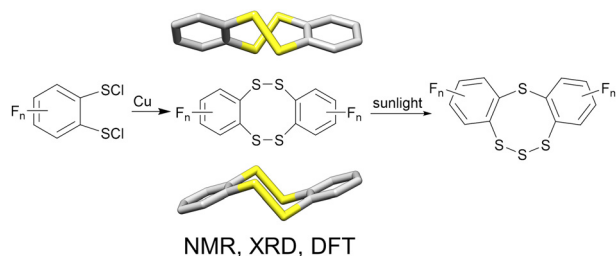
12800



Internal 2D networking of silver bromide with a bidentate N-heterocyclic carbene ligand enables the formation of an inherently heterogeneous reusable catalyst for multicomponent A³ coupling

Sundaravelu Nallappan, Oleksandr Kucherak, Anita Kiss, Ringaile Lapinskaite, Ivana Cisařová and Lukas Rycek*

12807



Synthesis, structural peculiarities, and photosensitivity of fluorinated dibenzo-1,2,5,6-tetrathiocines

Alexander A. Buravlev, Alexander Yu. Makarov,* Georgy E. Salnikov, Alexander M. Genayev, Irina Yu. Bagryanskaya, Pavel V. Nikulshin, Vyacheslav E. Platonov and Andrey V. Zibarev

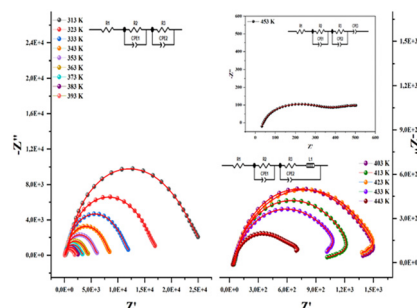


PAPERS

12817

Electrical and dielectric study of $\text{Na}_{2/3}\text{Mn}_{2/3}\text{Fe}_{1/3}\text{O}_2$ as a cathode active material for sodium-ion batteries

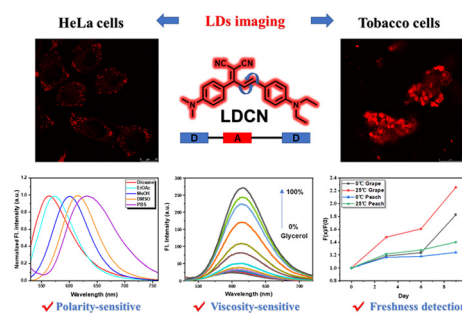
Faouzi Missaoui, Moufida Krimi, Abdelfattah Mahmoud, Frédéric Boschini and Abdallah Ben Rhaïem*



12828

A viscosity-sensitive fluorescent probe with a large Stokes shift for monitoring lipid droplets and its application in cell, tobacco leaf, and food detection

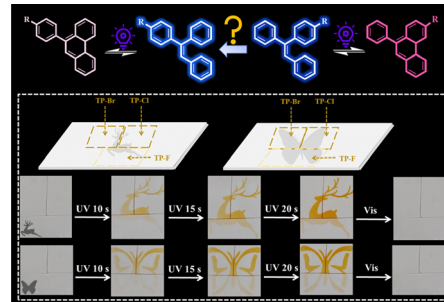
Yuan He,* Yun-Hao Yang, Guo-Yu Chen, Lin Li, Lin-Qing Wang, Long-Ke Li and Jian-Yong Wang*



12834

Effect of *cis/trans* isomerization on the photochromic performances of triphenylethylene

Zhuo-Cheng Li, Hao Cui, Su-Hang Xu, Zi-Hang Zhang, Zuo-Qin Liang,* Chang-Qing Ye and Xiao-Mei Wang



12841

Bioactivity of benzophenazine enaminone derivatives as inhibitors of ERK2 based on molecular docking and dynamics simulation studies

Abolfazl Olyaei,* Monir Shalbafan and Mahdieh Sadeghpour

