

IN THIS ISSUE

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Inside cover

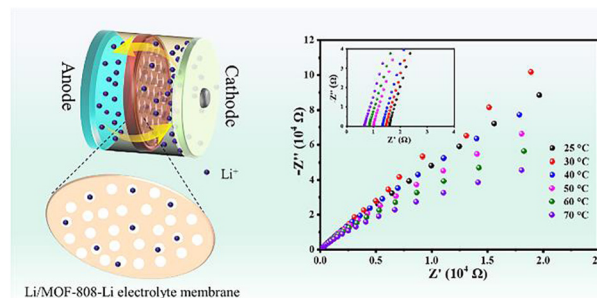
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COMMUNICATIONS

14114

Metal organic framework MOF-808-based solid-state electrolytes for lithium-ion batteries

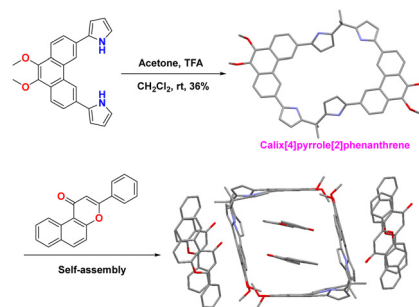
Chunmei Wang, Jia Zhang, Pengfei Shi, Zhiyuan Zhou, Yao Zhang* and Yanfang Gao*



14118

Recognition of naphthoflavones by calix[4]pyrrole[2]phenanthrene

Fei Zeng,* Lin-Li Tang and Man-Hua Ding



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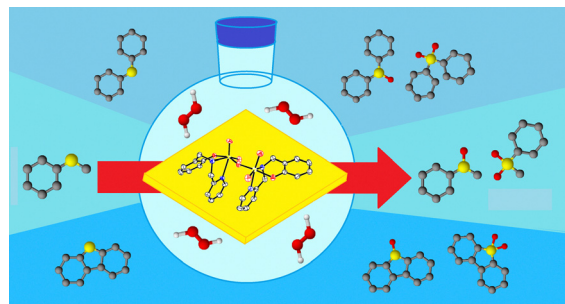
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14123

Catalytic activity of a new dioxidomolybdenum(vi) complex with a bipodal N_2O -donor ligand in sulfur compound oxidation

Paula M. A. Machado, Juliana M. Barreto, Ramon da S. Motta, José Guilherme A. Rodrigues, Wladimir F. de Souza, Igor A. V. Maldonado, Rafael A. Allão Cassaro, Gustavo R. C. dos Santos, Gabriel R. A. Carneiro, Henrique M. G. Pereira, Eliane D'Elia, Adolfo Horn and Elizabeth Roditi Lachter*

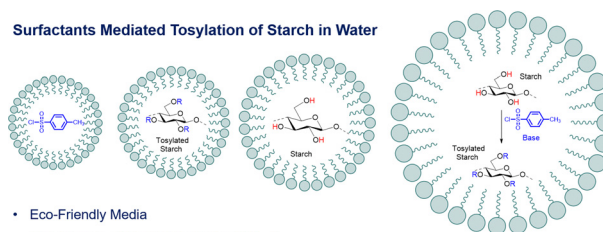


14134

Synthesis of tosyl starch in eco-friendly media

Phitawat Namnouad, Manisa Kongkaew, Suttiporn Pikulthong, Rungtiwa Wongsagonsup, Taweechai Amornsakchai, Siwaporn Meejoo Smith* and Thanthapatra Bunchuay

Surfactants Mediated Tosylation of Starch in Water

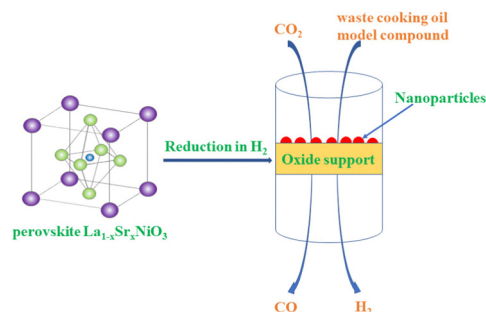


- Eco-Friendly Media
- High-Degree of Tosyl Substitution (DS_{Tos})
- Predominant Functionalization at C₂-Position

14142

Syngas production from the CO_2 reforming of a waste cooking oil model compound over catalysts derived from $La_{1-x}Sr_xNiO_3$ perovskites

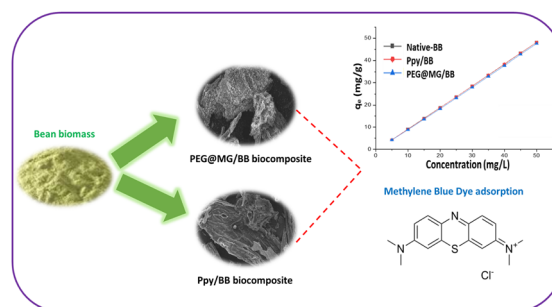
Songyuan Hao, Wenbo Luo, Yaming Kang, Sen Fu and Hong Yuan*



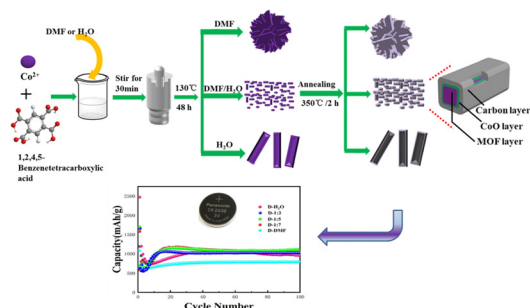
14157

Conversion of *Phaseolus vulgaris* into chemically functionalized biocomposites for efficient methylene blue removal: kinetics, isothermal, and thermodynamics analysis

Komal Saeed, Urooj Kamran,* Amina Khan, Hasan Jamal and Haq Nawaz Bhatti*



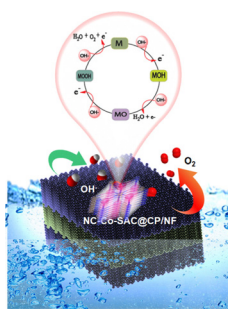
14169



Construction of hierarchical multilayered nanomaterials derived from Co-MOFs supported by pyromellitic acid for advanced lithium storage performance

Guohua Chen, Liying Wang,* Yunfei Liu, Xin Miao, Zhenzhu Cao and Yongfeng Zhang

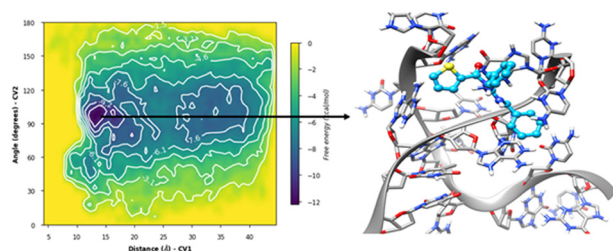
14177



N-Coordinated cobalt single atom-integrated electrospun nanofibers for an efficient oxygen evolution reaction

Reda M. El-Shishtawy, Mahmoud A. Hussein, Salih S. Al-Juaid, Muhammad Waseem Fazal, Waleed A. El-Said* and Naeem Akhtar*

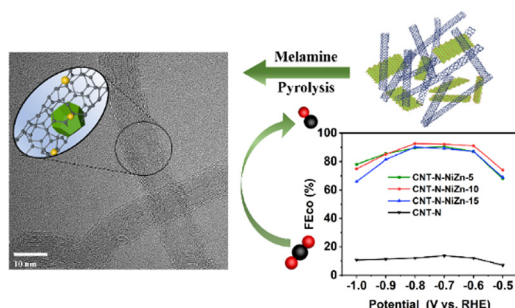
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N,N',N''-Trisubstituted guanidine derivatives as DNA-intercalators: synthesis, crystal structures and biophysical investigations

R. Durga Priyadarshini, P. N. Sathishkumar, M. Bensingh, N. Bhuvanesh, K. N. Vennila, R. Karvembu and Kuppanagounder P. Elango*

14195



Rational design of metal–nitrogen-codoped carbon nanotube catalysts for CO₂ reduction based on NiZn-layered double hydroxides

Shuyu Jia, Ping Zhang,* Hao Chen, Ruishi Xie, Yingke Fu, Lin Chen, Yaping Zhang and Ying Xiong*

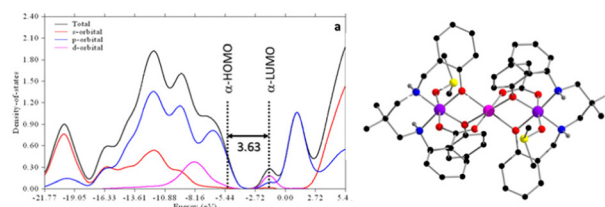


PAPERS

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Fabrication of Schottky barrier diodes utilizing carboxylate bridged trinuclear mixed valence cobalt(III/II/III) complexes of tetradentate N_2O_2 donor reduced Schiff base ligands

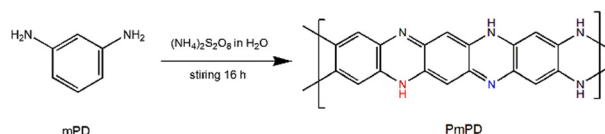
Sudip Bhunia, Pubali Das, Snehasis Banerjee, Rosa M. Gomila, Michael G. B. Drew, Antonio Frontera, Partha Pratim Ray and Shouvik Chattopadhyay*



14217

Recyclable poly-*m*-phenylenediamine selectively recovers gold from acidic solutions

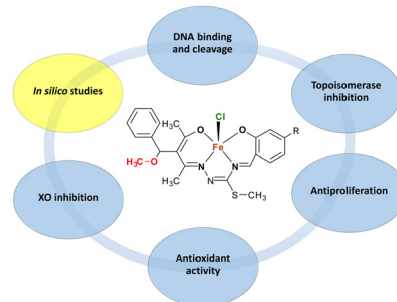
Min Wang, Zhiwei Huang, Zhongmin Feng and Zhuqing Wang*



14225

In vitro biological and *in silico* screening of novel iron(III) complexes for DNA-targeted antitumor drug component

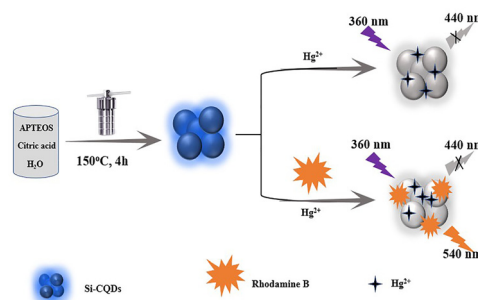
Serap Nigdelioglu Dolanbay, Zehra Kübra Yilmaz, Büşra Kaya,* Belma Aslim and Bahri Ülküseven*



14242

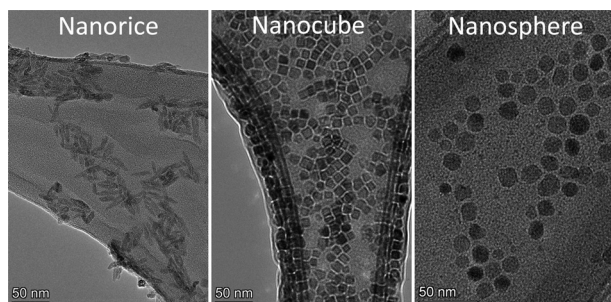
Selective detection of mercury ions *via* single and dual signals by silicon-doped carbon quantum dots

Sen Liao,* Lilei Zhang, Shiyu Li, Siyao Yue and Guoping Wang*



PAPERS

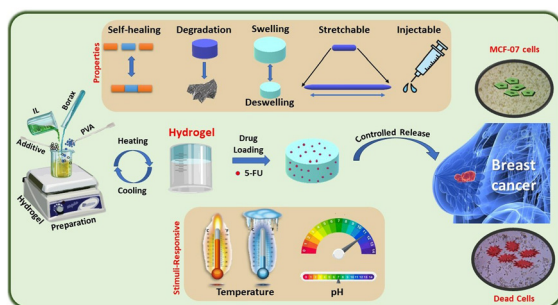
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Synthesis of bimetallic aluminum–iron oxide nanorice, nanocubes and nanospheres

Abdul Hoque, Artur Huseinov, Chaminda P. Nawarathne and Noe T. Alvarez*

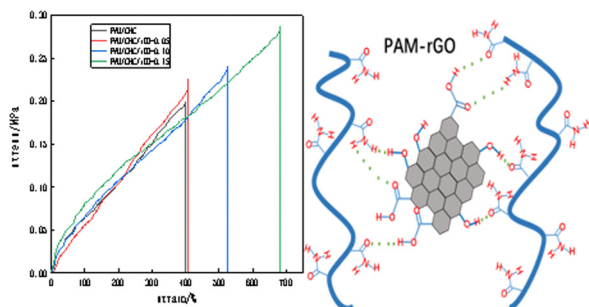
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A dual responsive ionic liquid-based polymeric hydrogel: a promising drug delivery vehicle for the treatment of breast cancer

Raviraj Pansuriya, Tapas Patel, Sanjay Mehra, Arvind Kumar, Omar A. El Seoud, Sugam Kumar, Vinod K Aswal, Suresh Kumar Kailasa and Naved I. Malek*

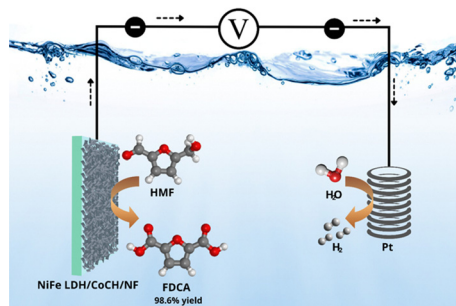
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Preparation and properties of polyacrylamide/cellulose nanocrystal/reduced graphene oxide interpenetrating network composite hydrogels

Lingling Meng,* Weihao Li, Shijie Ding, En Liu and Da Liu

14282



Highly active NiFe LDH anchoring on cobalt carbonate hydroxide for efficient electrocatalytic 5-hydroxymethylfurfural oxidation towards 2,5-furandicarboxylic acid

Lintang Dhanasmoro and Oi Lun Li*

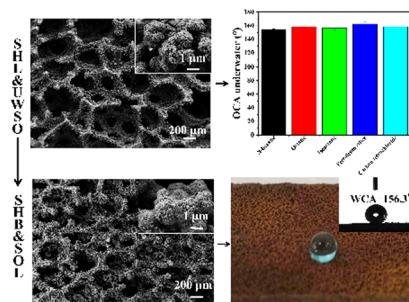


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"Two birds with one stone" strategy for oil/water separation based on Ni foams assembled using metal–organic frameworks

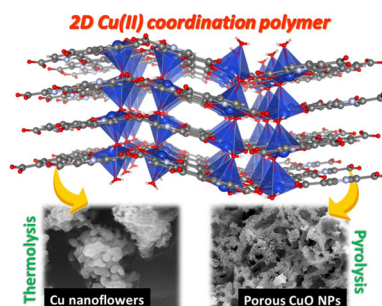
Xin-Xin Chen, Yu-Ping Zhang,* Hong-Li Du, Li Wan, Cheng-Gang Zuo and Ling-Bo Qu



14297

A 2D Cu(II) coordination polymer constructed with 2,5-pyridinedicarboxylic acid linker: synthesis, structural analysis and its selective transformation into Cu and CuO nanoparticles

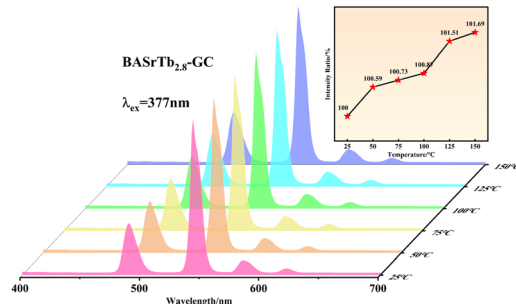
Gourab Karmakar,* Adish Tyagi,* A. P. Wadawale, Rohit Singh Chauhan and Bal Govind Vats



14306

Research of crystallization kinetics, luminescence and abnormal thermal quenching behavior of Al₂O₃–B₂O₃–SrO glass ceramic

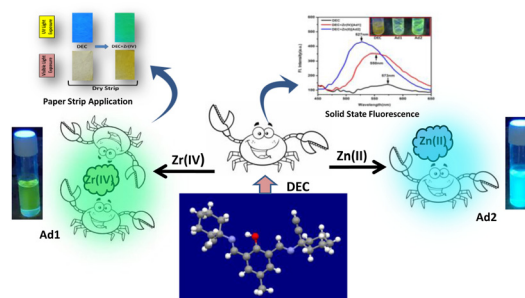
Wuyunga Bao, Xinmin Yu, Tong Wang, Qianwen Wang, Xiangyu Zou,* Hongbo Zhang* and Chunhui Su*



14315

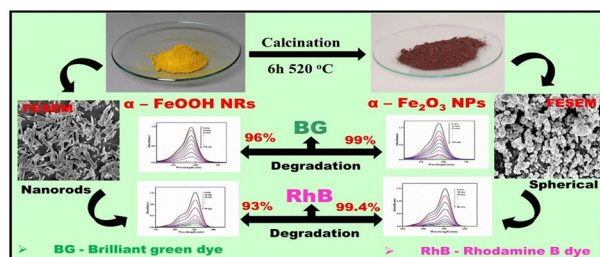
Solvent dependent ESIPT-based probe for optical recognition of Zr(IV) and Zn(II)

Tandrim Shyam, Subhasis Ghosh, Sangita Maji, Prosenjit Mandal and Debasis Das*



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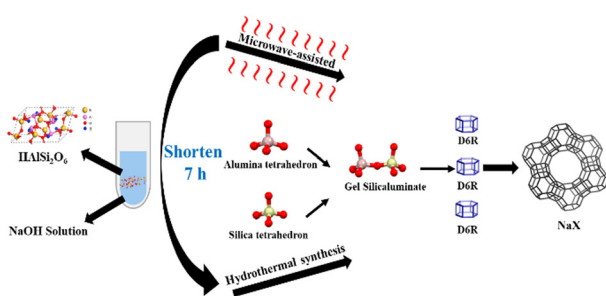
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Hydrothermal synthesis of α -FeOOH (1D) nanorods and their transition to α -Fe₂O₃ (0D): an efficient photocatalyst in neutralizing hazardous organic dyes

Aruna M. Sudapalli and Navinchandra G. Shimpi*

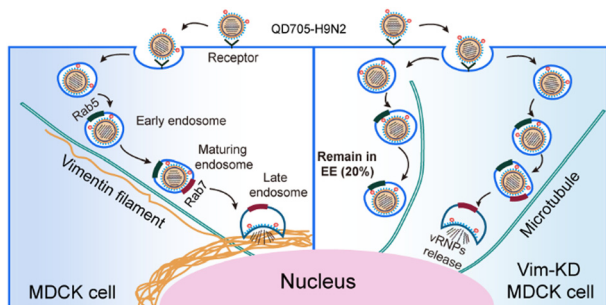
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Insight into the kinetic behavior of microwave-assisted synthesis of NaX zeolite from lithium slag

Shaozu Huang, Yu Wang, Lin Zhang, Shenjie Zhu, Zhengfei Ma, Qun Cui* and Haiyan Wang*

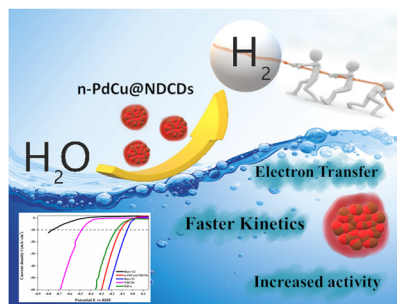
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Quantitative analysis of the effects of vimentin intermediate filaments on the early stages of influenza A virus infection

Ju-Mei Zhang, Zhi-Gang Wang, Lei Du, Dan-Dan Fu, Meng-Qian Zhang, Jing Li, Shu-Lin Liu and Dai-Wen Pang*

14355



Efficient hydrogen evolution electrocatalysis using nitrogen doped carbon dot decorated palladium copper nanocomposites in acid medium

Chandrasekaran Pitchai, Mahalakshmi Vedanarayanan and Sethuraman Mathur Gopalakrishnan*

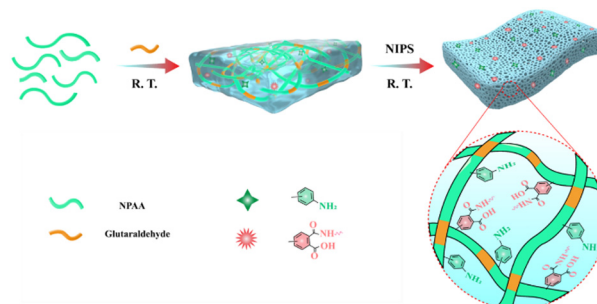


PAPERS

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Facile fabrication of a modified polyamide acid porous membrane for uranium enrichment in wastewater

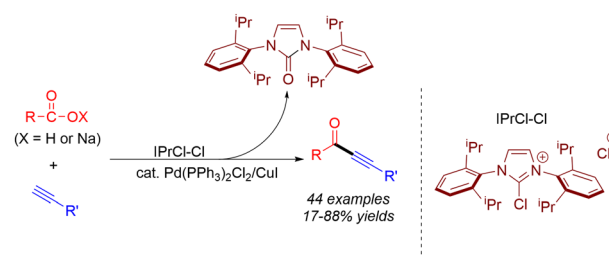
Zhiming Mi, Lingjun Meng, Junman Wang, Lintao Liao, Yangyang Huang, Kaiyang Zhang, Jingling Xiao, Tongtong Xie, Yuhang Yan, Yiping Zhong and Zhixiao Liu*



14374

Efficient synthesis of ynones from carboxylic acids and terminal alkynes via Pd/Cu catalysis using 2-chloroimidazolium chloride as the activation reagent

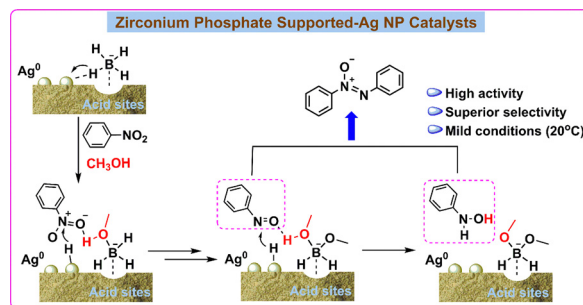
Weixiang Zheng, Nengde Liang, Yi Fu, Jing Zhong, Yan Zhang,* Li Wang, Yuanhua Wang* and Qiwei Wang*



14380

Zirconium phosphate supported-silver nanoparticles for selective hydrogenation of nitrobenzene into azoxybenzene compounds

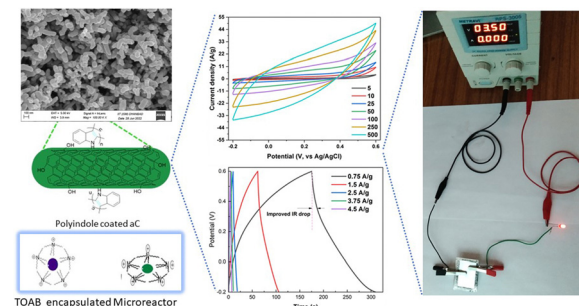
Yuxi Qin, Yongjun Jiang, Xinjia Wei, Yuan Ma, Huiying Liao, Qingpo Peng, Sheng Dai, Zhiqiang Wang,* Xiuge Zhao* and Zhenshan Hou*



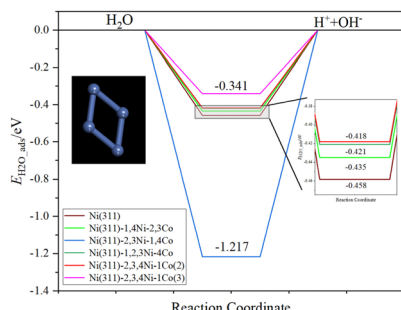
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Hydrotrope-assisted interconnected mesoporous polyindole-decorated carbon nanotubes: synthesis, characterisation, and fabrication of asymmetric supercapacitor

Shashikant Shivaji Vhatkar, Kumar Abhisek, Helen Treasa Mathew and Ramesh Oraon*



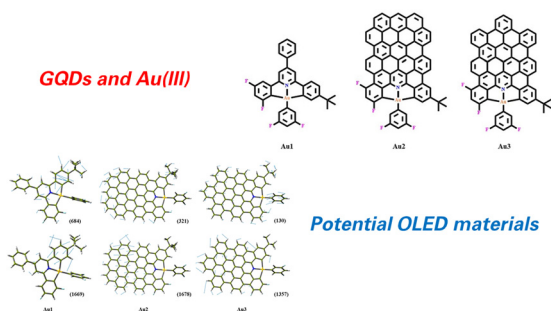
14408



A computational study of design and performance investigation of Ni-based electrocatalysts for efficient electrocatalytic hydrogen evolution reaction

Jingyi Zou and Xuefeng Ren*

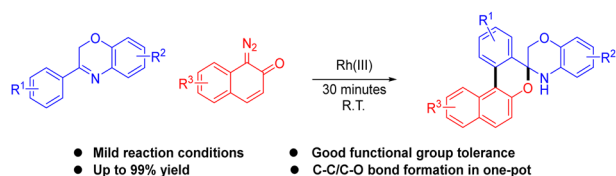
14418



Computational investigation of graphene quantum dot and tridentate Au(III) complex composites

Lingkai Tang, Yafei Luo, Guangzhou Sun, Yu Jiang, Wenqin Luo, Xinru Yue, Zhigang Zhang, Chunran Zhang* and Jianping Hu*

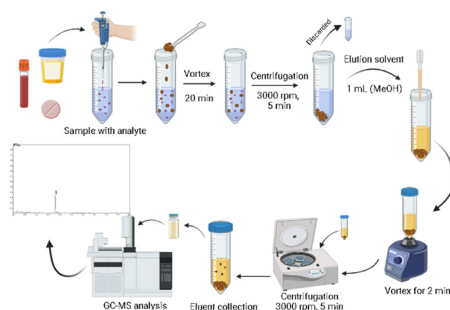
14430



Efficient synthesis of spirooxazine-pyrans via rhodium-catalyzed [3+3] cascade spiroannulation of benzoxazines with 1-diazonaphthalen-2(1H)-ones

Junwei Huang, Xuelin Yue, Yijie Gao, Yadong Feng and Xiuling Cui*

14436



Molecularly imprinted polymer-based dispersive solid-phase extraction for the selective determination of carisoprodol in biological and pharmaceutical samples

Sakshi Manhas, Atul Bajaj, Bharti Jain, Deepak Kumar, Jaskaran Singh, Saurabh Shukla* and Rajeev Jain*

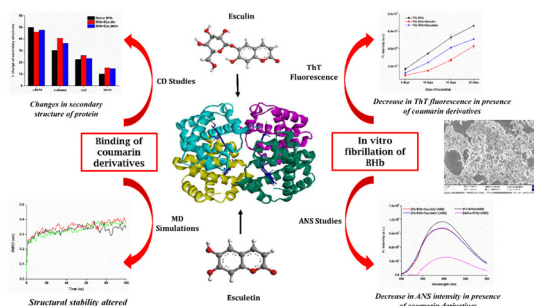


PAPERS

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In vitro interactions of esculin and esculletin with bovine hemoglobin alter its structure and inhibit aggregation: insights from spectroscopic and computational studies

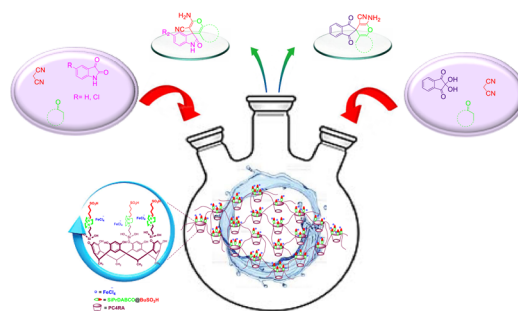
Sona Lyndem, Upasana Hazarika, Anindita Bhatta, Vivek Prakash, Anupam Nath Jha* and Atanu Singha Roy*



14469

3D mesoporous polycalix-functionalized dual Brønsted–Lewis acidic double-charged DABCO-based ionic liquid: a powerful and recyclable supramolecular polymeric catalyst for the synthesis of spiro-fused[4H-pyran]

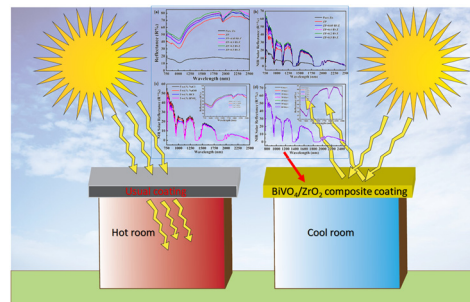
Zahra Karimi, Bahador Karami* and Aref Mahmoudi Asl



14484

Development of an intense yellow-coloured BiVO₄/ZrO₂ composite coating for anticorrosion multifunctional cool roofing

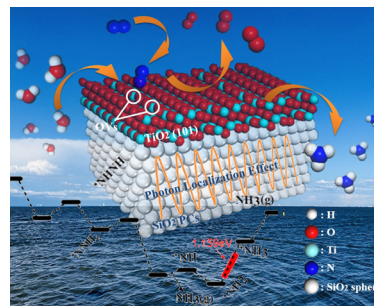
A. H. Riyas, C.V. Geethanjali, Liya Johnson, Liju Elias, A. M. A. Henaish, Aslam Hossain and S. M. A. Shibli*



14494

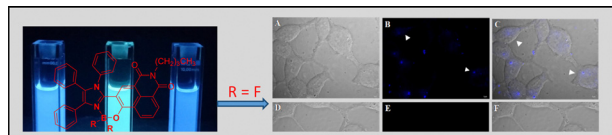
Photon localization effect and surface oxygen vacancy enhanced photocatalytic nitrogen fixation performance for nanocrystalline titanium dioxide films

Sheng Chen, Ying-Min Xu, Ji-Nan He, Sheng-Li Chen* and Ai-Jun Wang



PAPERS

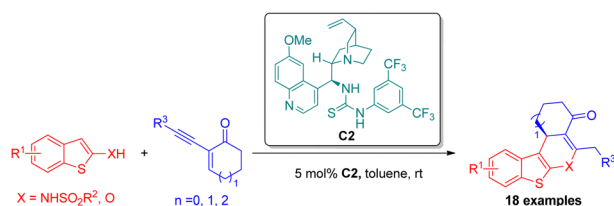
14508



Synthesis, photophysical properties, bioimaging potential and *in vitro* toxicity studies of naphthalimide imidazole boron complexes

Ramu V. Ranga Naidu Chinta, Sushree Sulava, Basava Punna Rao Aradhyula, Harithalakshmi Jandhyam, Debasmitta Pankaj Alone* and Krishnan Venkatasubbaiah*

14515

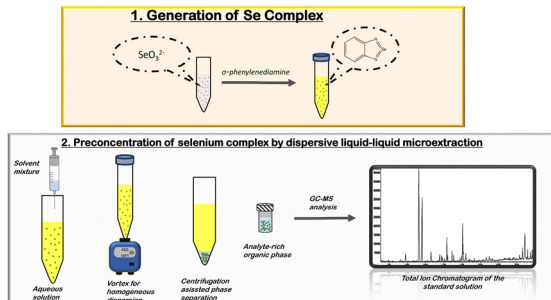


- Asymmetric [3 + 3] annulation to access novel polycyclic benzothiophenes
- Moderate to good yields (50 – 93%) • Good enantioselectivities (up to 97%)

Organocatalytic stereoselective construction of polycyclic benzo[b]thiophenes from 2-aminobenzo[b]thiophenes and alkynyl-substituted enones

Cheng Niu, Yao Zheng and Da-Ming Du*

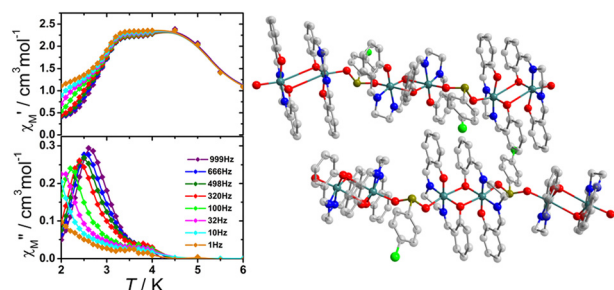
14520



Determination of selenium by gas chromatography-mass spectrometry after formation of its volatile derivative and preconcentration using vortex-assisted dispersive liquid-liquid microextraction

Serkan Topal, Miray Öner, Buse Tuğba Zaman, Cansu Demir, Fatma Turak, Ömer Tahir Günkara and Sezgin Bakirdere*

14528



Single chain magnetic behaviour in a selenite-bridged out-of-plane Mn₂O₂ dimer motif

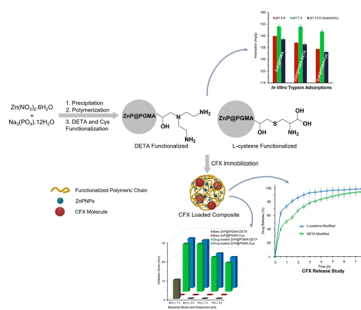
Shao-Liang Zhang,* Yu-Wen Liu, Cai-Ran Yue, Xin-Hua Zhao, Yan-Lan Wang* and Shan-Shan Li*



14534

Synthesis and functionalization of zinc phosphate@polyglycidyl methacrylate composites for antimicrobial drug immobilization and controlled release: an *in vitro* study

Tonmoye Sarkar Shathi, Md. Abdur Rahman,*
Md. Ataur Rahman, Md. Nasiruddin,
Md. Abdul Alim Al-Bari, Sagar Pande,
Tadahiro Komeda, Anwar Ul-Hamid,
Hasan Ahmad and Md. Rabiul Karim*



14551

Design, synthesis, crystal structure, photophysical behavior and aggregation-induced emission of a novel pyrene scaffold multifunctional Schiff base ligand: inhibition of digestive enzymes and docking studies

Naba Kr Mandal, Priyanka Arya, Neera Raghav,
Shubhamoy Chowdhury and Jnan Prakash Naskar*

