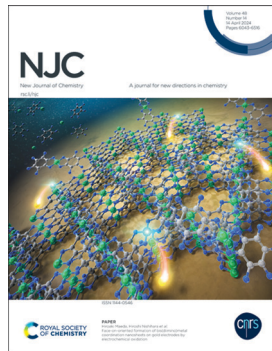


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Cover

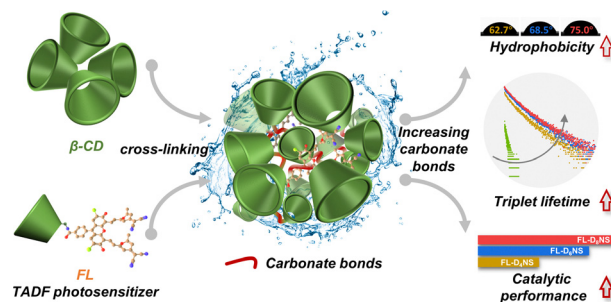
See Hiroaki Maeda, Hiroshi Nishihara *et al.*, pp. 6081–6087. Image reproduced by permission of Hiroaki Maeda from *New J. Chem.*, 2024, 48, 6081.

COMMUNICATIONS

6059

Efficient TADF-based aerobic photocatalysts for sulfide oxidation in water by increasing hydrophobic crosslinking

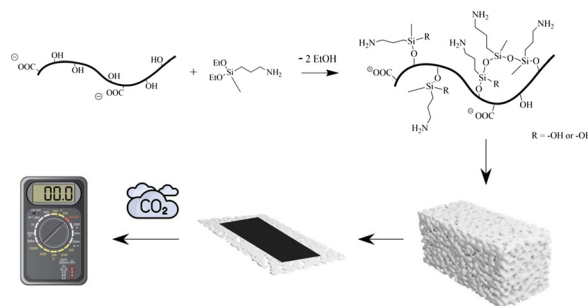
Gaobo Hong, Wenlong Chen, Jianjun Du, Fengling Song* and Xiaojun Peng



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Capacitive CO₂ sensor made of aminated cellulose nanofibrils: development and optimization

Frédéric Héraly, Anirban Sikdar, Jian Chang and Jiayin Yuan*



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Fundamental questions
Elemental answers

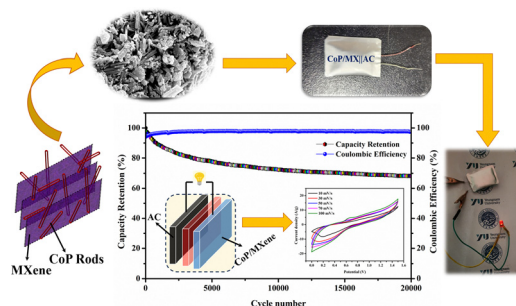


COMMUNICATIONS

6071

High-performance supercapacitors: electrochemical insights into CoP/MXene nanomaterial performance

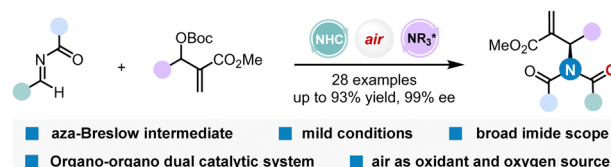
Palanisamy Rajkumar, Vedyappan Thirumal, Md. Masud Rana, Wei Xiao, Joongpyo Shim,*
Kisoo Yoo* and Jinho Kim*



6076

Highly enantioselective allylic amination reaction through aerobic oxidative organo–organo dual catalytic system

Chengli Mou, Guangping Liang, Peiyao Liang, Siyi Chen, Chong Wu,* Shenghan Teng* and Shoulei Wang*

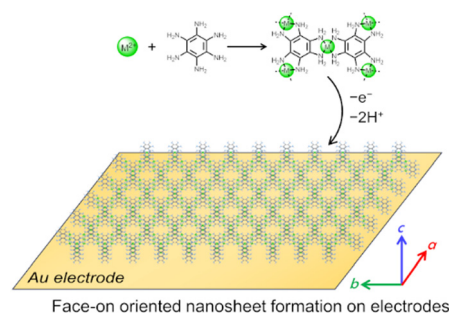


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6081

Face-on-oriented formation of bis(diimino)metal coordination nanosheets on gold electrodes by electrochemical oxidation

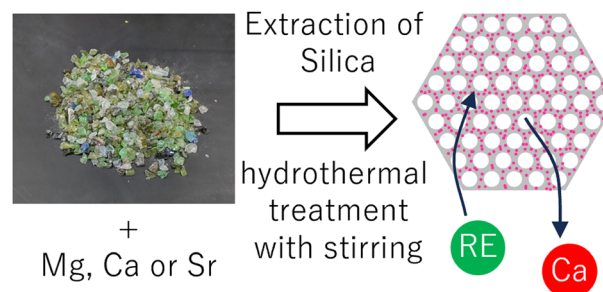
Hiroaki Maeda,* Kenji Takada, Naoya Fukui, Hiroyasu Masunaga, Sono Sasaki, Kazuhito Tsukagoshi and Hiroshi Nishihara*



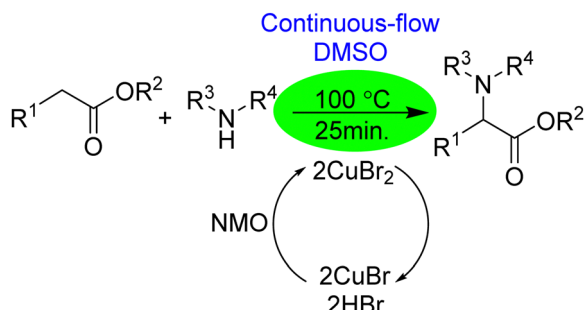
6088

Preparation of Mg, Ca, or Sr-included mesoporous silica from glass bottle waste for recovery of rare earth metal elements

Takahiro Takei,* Kousuke Takimoto, Tomohiro Takabayashi, Norio Saito and Nobuhiro Kumada



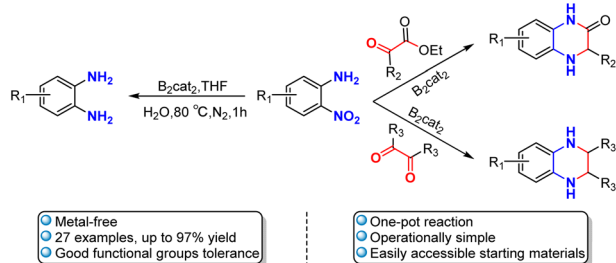
6095



A copper(II) bromide/NMO system for α -amination of esters under continuous-flow conditions with reduced catalyst loading

Yaman Chauhan, Kankanala Naveen Kumar, V. Ravichandiran, Sonali Bindita Jethy, Nirmala Mohanta and Sharada Prasanna Swain*

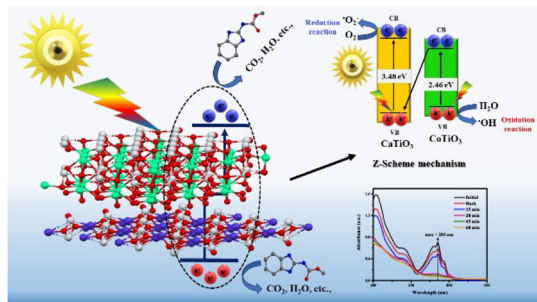
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Metal-free cascade reactions for one-pot tetrahydroquinoxaline construction through nitroarene reduction and imine hydrogenation with water

Yanqi Chen, Subin Hao, Lingfeng Yin, Xinluo Song, Zhiyao Liu, Mingde Li and Li Dang*

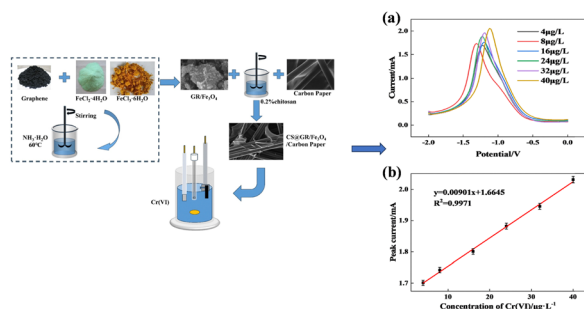
6109



Shining a light on fungicide- water: enhanced photocatalytic degradation using the CoTiO₃/CaTiO₃ nanocomposite and experimental and theoretical viewpoints on improved intervalence charge transfer from O²⁻ to Ti⁴⁺ and from Co²⁺ to Ti⁴⁺ ions and spatial charge transfer

Moorthy Gnanasekar Narendran, Elayaperumal Vijayakumar, Muniyandi Govinda Raj, Rajaraman Preetha, Joseph John Alphin, Ramalingam Mahaan, Bernaudshaw Neppolian and Aruljothy John Bosco*

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Chitosan-adhered graphene/nano iron tetroxide carbon paper electrode for the detection of hexavalent chromium

Liangyi Tian, Ting Huang, Yilei Xiang, Yichun Bi, Zihan Yu, Jihuan Xie, Jingping Qiu, Lemin Chen and Linbin Jiang*

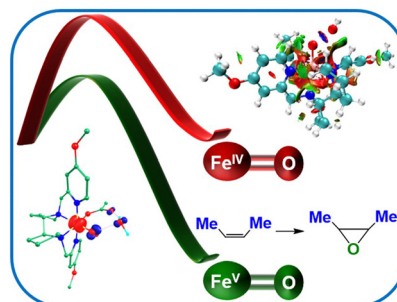


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Mechanistic insights on the epoxidation of alkenes by high-valent non-heme Fe(IV) and Fe(V) oxidants: a comparative theoretical study

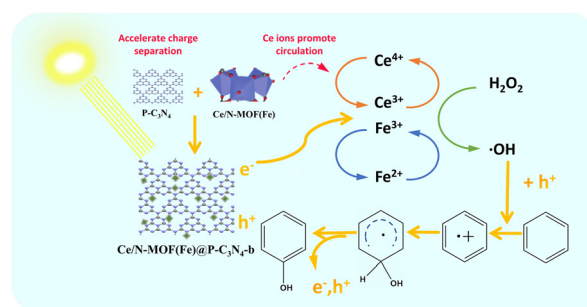
Oval Yadav, Manjeet Kumar, Ranjan K. Mohapatra, Manoj Kumar Gupta, Mursaleem Ansari* and Azaj Ansari*



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Preparation of a Ce/N-MOF(Fe)@P-C₃N₄ composite photocatalyst and efficient oxidation of benzene to phenol

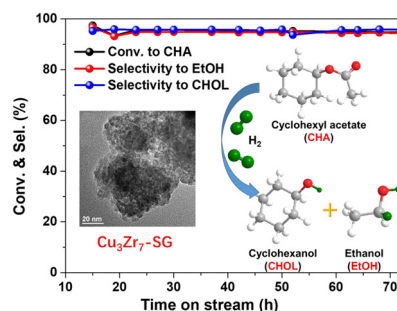
Fuying Wang, Liuxue Zhang,* Cong Liu, Xuotong Xu, Jiaolong Qiao, Xu Jia,* Kefan Dai and Xiulian Wang



6152

Efficient hydrogenation of cyclohexyl acetate to cyclohexanol with Cu–Zr catalysts

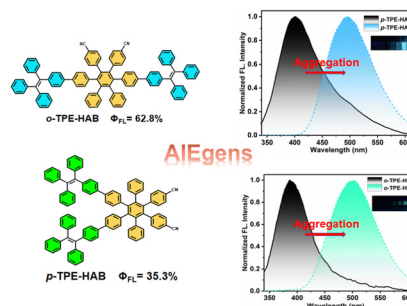
Kai Cui, Yuanyuan Qi, Tongyang Song,* Peng Wu and Xiaohong Li*



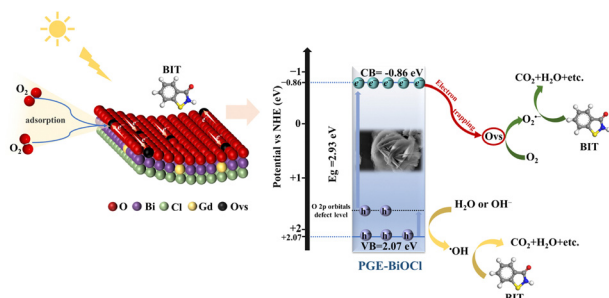
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Position-dependent hexaarylbenzene AIEgens: synthesis, characterization and optical properties

Wen-Xuan Zhao, Li-Feng Yang, Dan Yu, Fei-Yu Chen, Ling Liang, Jing-Yi Cao, Guang Yang, Shu-Hai Chen, Takehiko Yamato,* Carl Redshaw and Chuan-Zeng Wang*



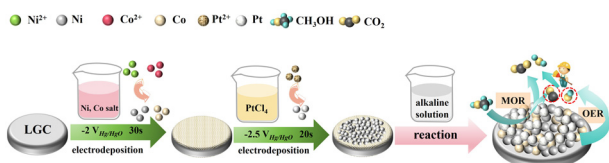
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Effective solar light-driven isothiazolinone degradation by morphology- and oxygen vacancy-modified Gd-doped BiOCl

Lei Xu, Zhiren Guo, Xiao Zhang, Menglin Zhang, Jinying Li, Dongxiang Zhang* and Xiyan Xu*

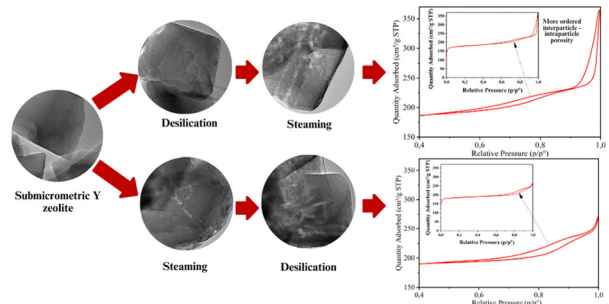
6180



NiCo alloy synergistic Pt nanocatalysts for enhancing the durability of the methanol oxidation reaction

Feng Luo, Tingyi Wen, Jiarui Wu, Hao qing Qin and Xiaoqiang Wu*

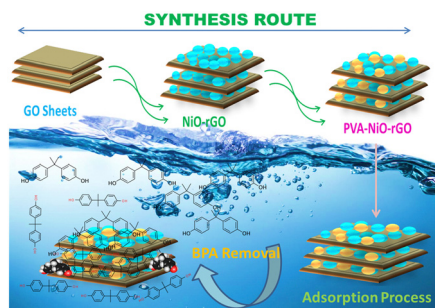
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Hierarchical submicrosized Y zeolites prepared by sequential desilication–dealumination post-synthesis modification and their catalytic performance in vacuum gas oil hydrocracking

Cecilia Manrique,* Roger Solano, Carlos Mendoza, Sandra Amaya and Adriana Echavarria

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Fabrication of a symbiotic polyvinyl alcohol-functionalized NiO/rGO nanoadsorbent for control of bisphenol-a removal

Jamil A. Buledi, Amber R. Solangi,* Hyder Ali, Akbar Ali, Arfana Mallah, Sidra Amin, Ayaz Ali Memon, Khalid Hussain Thebo,* Jun Yang* and Mohsin Kazi

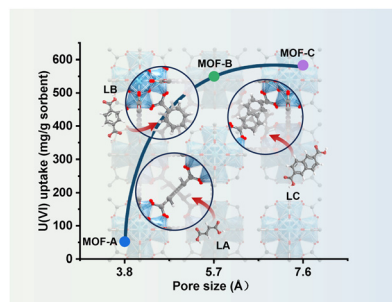


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Fine tuning of pore size in metal–organic frameworks for superior removal of U(VI) from aqueous solution

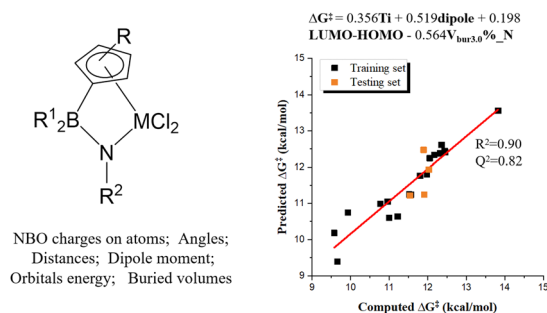
Tianyu Fu, Hongjuan Liu,* Xinyi Wang and Yingjiu Liu



6221

Quantitative structure–property relationship study of constrained geometry catalysts for olefin polymerization

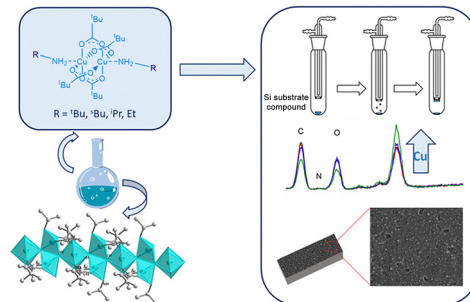
Xinyue Du, Xiaokai Cheng, Yuming Chen, Xiaodong Hong, Shaodong Zhou, Yao Yang, Wei Li, Zuwei Liao,* Jingdai Wang and Yongrong Yang



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Pivalate complexes of copper(II) with aliphatic amines as potential precursors for depositing nanomaterials from the gas phase

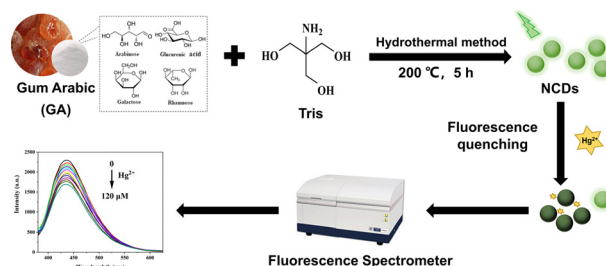
A. Butrymowicz-Kubiak, W. Luba, K. Madajski, T. Muzioł and I. B. Szymańska*



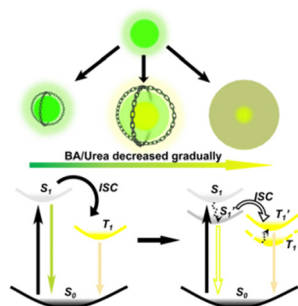
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Nitrogen-doped carbon dots as a “turn-off” fluorescence probe for mercury(II) detection and live cell imaging

Yufei Lei, Qi Li, Qian Li, Dongxiu He, Jinhua Xue, Lifu Liao, Jikai Wang* and Xilin Xiao*



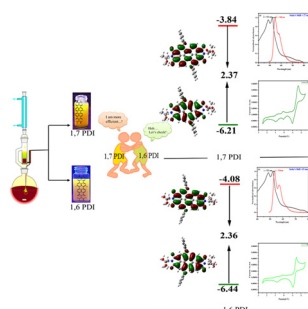
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Tunable wavelength of fluorescence and afterglow in super-bright carbon dot-based composite materials

Yulong Cui, Wenxuan Sun, Yao Dong, Yingnan Jiang, Jie Zhang, Tong Zhao, Jing Zhang, Yankai Wang, Meiling Sun* and Guangchao Yin*

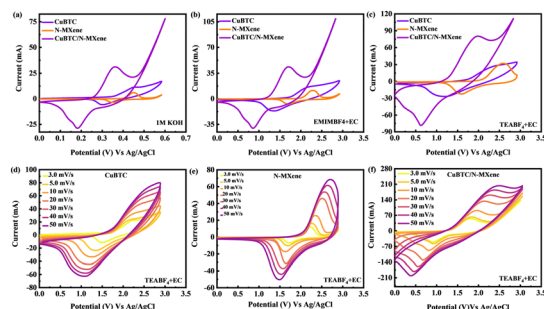
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Efficient tuning of optoelectronic properties of 1,6- and 1,7-disubstituted perylene diimides: agreement between theory and experiment

Vinita Vinita, Mridula Guin and Geeta Durga*

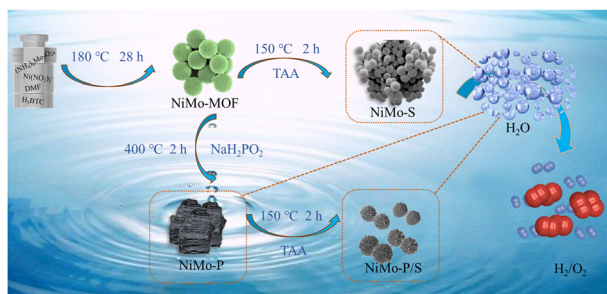
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Effect of electrolyte optimization on nitrogen-doped MXene ($\text{Ti}_3\text{C}_2\text{T}_x$) coupled with Cu–BTC MOF for a supercapattery and the hydrogen evolution reaction

Haseebul Hassan, Ehtisham Umar, M. Waqas Iqbal,* Afaf Khadr Alqorashi, Badriah S. Almutair, Hussein Alrobei, Amir Muhammad Afzal and Niaz Ahmad

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P-doped MOF-derived NiMo bimetallic sulfide used as a high efficiency electrocatalyst for oxygen evolution reaction

Bingyu Chen, Shuifeng Zhu, Yafeng Qian, Dong Wu, Linghui Huang, Jingwen Wang, Aijuan Xie* and Shiping Luo*

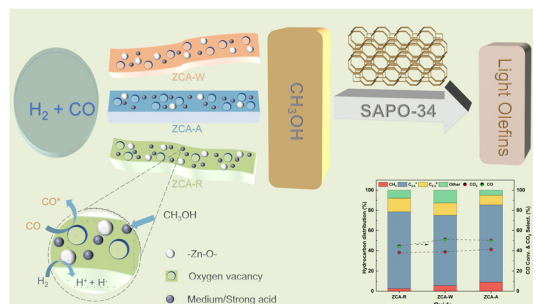


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Study on the catalytic performance of ZnCrAl co-precipitated oxides washed with ammonium carbonate solution in the synthesis of light olefins from syngas

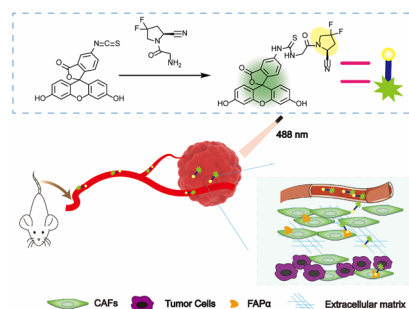
Wenli Jiang, Heping Zheng,* Daqiang Xiao, Yu Ren and Jianhua Tang



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A FAPI-conjugated FITC fluorescence probe for targeted cancer imaging

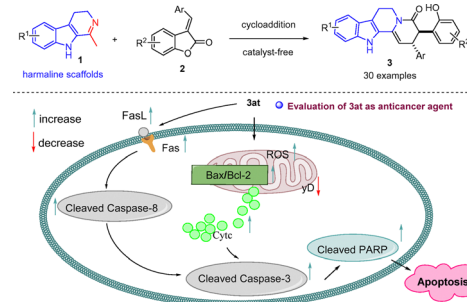
Dan Wu, Xuesu Zhou, Jiaqi Zhang, Fengfeng Xue,* Lexuan Ding, Lu An* and Qiwei Tian*



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Design, synthesis and evaluation of structurally diverse polycyclic harmaline scaffolds as anticancer agents

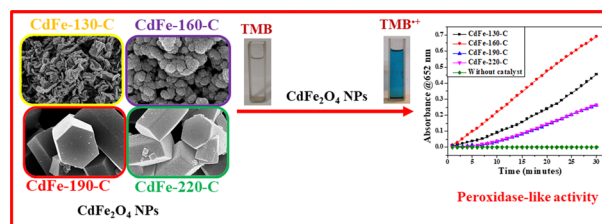
Shuang Chen, Xi-Rui Wang, Wei-Na Wang, Ke-Lan Xu, Pan Hu, Ying Zhou,* Bo-Wen Pan, Qi-Lin Wang* and Xiong-Li Liu*



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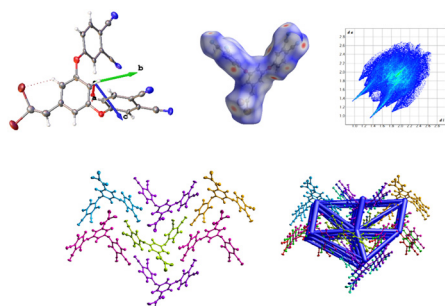
Nanoarchitectonics of CdFe₂O₄ nanoparticles with different morphologies synthesized using a thermal decomposition approach and studies of their peroxidase-like activity

Kumkum Gangwar and Pethaiyan Jeevanandam*



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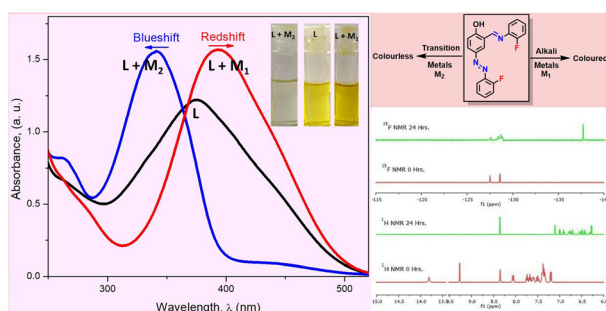
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gem-Dibromovinyl phthalonitriles: synthesis, structure elucidation, Hirshfeld surface analysis and energy framework calculations

Hasrat Ali and Johan E. van Lier*

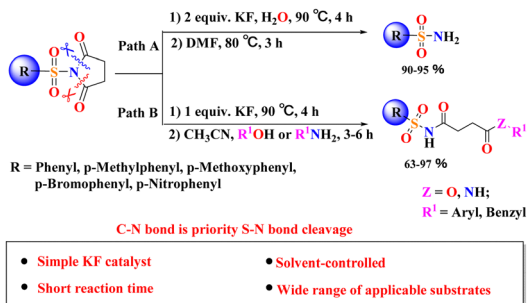
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Studies on the effect of fluorine on the interaction of different metal ions with a fluorinated azobenzene-Schiff base: intramolecular C–F activation under polar solvent

Samridhi Patel and Girish Chandra*

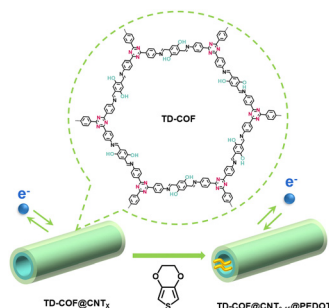
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An efficient and straightforward approach for accessing sulfonamide/*N*-sulfonyl succinic esters via potassium fluoride-promoted C–N cleavage of *N*-sulfonyl succinimide

Zujia Lu, Guangzao Yang, Huaxin Luo, Minjie Gao, Majeed Irfan, Fei Wang* and Zhuo Zeng*

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A simple strategy for the construction of bi-supported triazine-based covalent organic frameworks as high-performance capacitive materials

Chan Yao, Yue Hu, Di Cui, Mengyue Xu and Yanhong Xu*

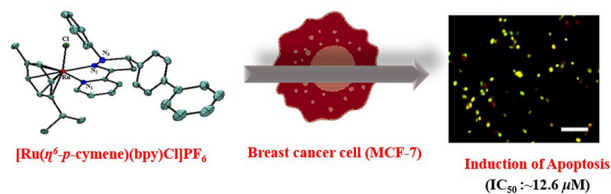


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Synthesis, characterization, and anticancer activity of Ru(*p*-cymene) complexes bearing pyrazolyl–pyridine type ligands

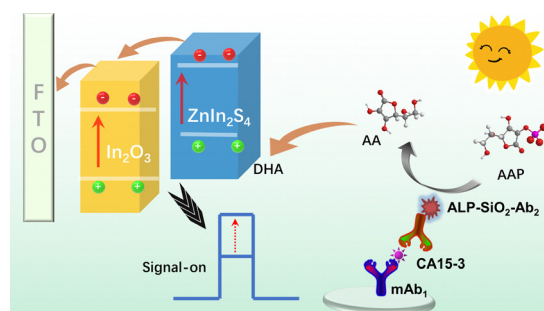
Arangasamy Mounica, Arumugam Madan Kumar, Nattamai S. P. Bhuvanesh and Mani Ganeshpandian*



6401

Photoelectrochemical immunoassay for the breast cancer biomarker CA 15-3 based on In₂O₃/ZnIn₂S₄ heterojunctions

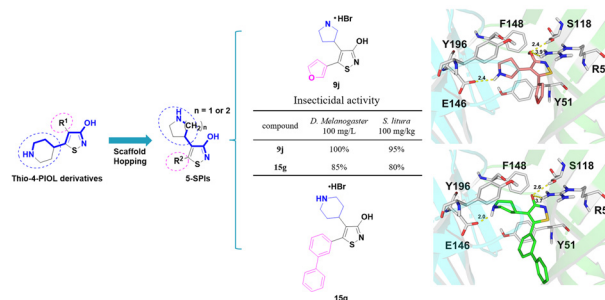
Jiajie Xue, Lingjun Kong, Wei Lin, Jiasheng Zhang and Youzhi Zhu*



6407

Design and synthesis of novel insecticidal 3-isothiazolols as potential antagonists of insect GABA receptors

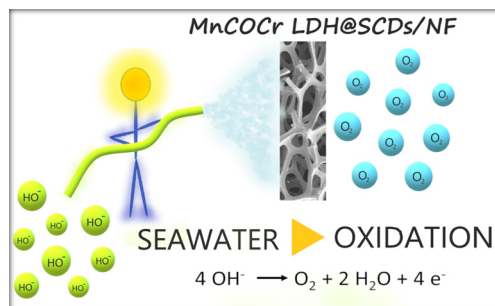
Zihang Ye, Congwei Zhou, Minghong Jiang, Xiaogang Luo, Fengshou Wu, Zhiqiang Xu, Qi Sun* and Genyan Liu*



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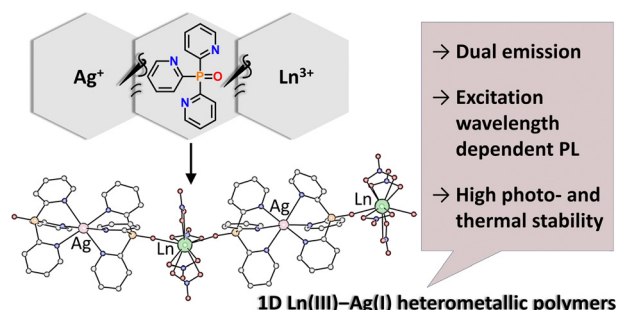
Exploring seawater oxidation potential using a MnCoCr layered double hydroxide@sulphur doped carbon dot/nickel foam electrocatalyst in an alkaline environment

Mahalakshmi Vedanarayanan, Chandrasekaran Pitchai and Sethuraman Mathur Gopalakrishnan*



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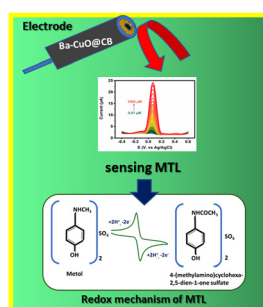
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Dual emissive Ln(III)–Ag(I) heterometallic chains based on tris(2-pyridyl)phosphine oxide

Yuliya A. Bryleva,* Mariana I. Rakhmanova, Alexander V. Artem'ev, Andrey Yu. Baranov and Ludmila A. Glinskaya

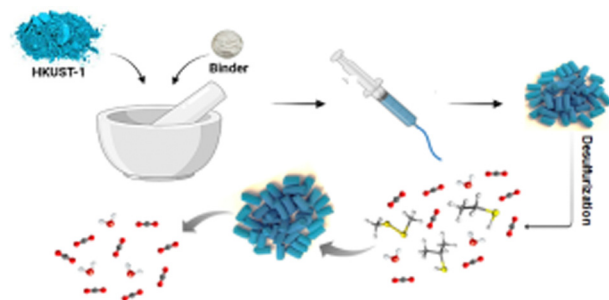
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Development of an electrochemical sensor based on a barium-doped copper oxide anchored carbon black modified glassy carbon electrode for the detection of Metol

Kiruthika Mariappan, Don Disouza Francis Packiaraj, Tse-Wei Chen,* Shen-Ming Chen,* Subramanian Sakthinathan, Saran Vignesh Alagarsamy, Amal M. Al-Mohaimed, Wedad A. Al-onazi, Mohamed S Elshikh and Te-Wei Chiu

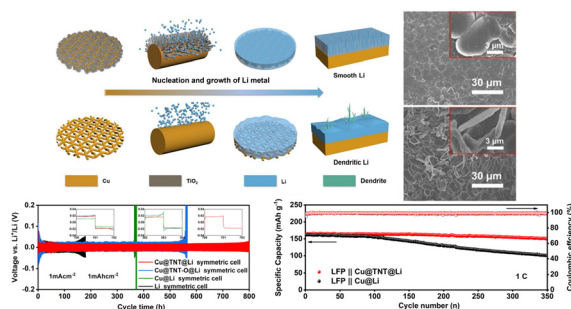
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A resistant and stable HKUST@MC composite for highly efficient gas adsorptive desulfurization

Flávia H. Silva, Leonã S. Flores, Aline F. M. da Silva, Célia M. Ronconi, Alexandre A. Leitão and Charlane C. Corrêa*

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Constructing TiO₂ nanotube arrays with oxygen vacancies on a Cu mesh to enable homogeneous Li deposition towards a long-life Li metal anode

Yujue Wang, Xiaoping Xian, Yilin Wang, Yong Guo and Dan Xiao*

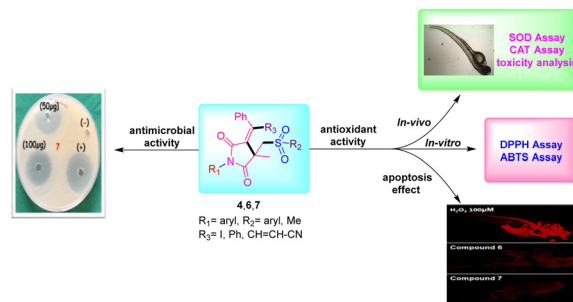


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An investigation of the biological applications of sulphonated succinimides: *in vivo* toxicity to zebrafish larvae as well as antioxidant and antimicrobial potential

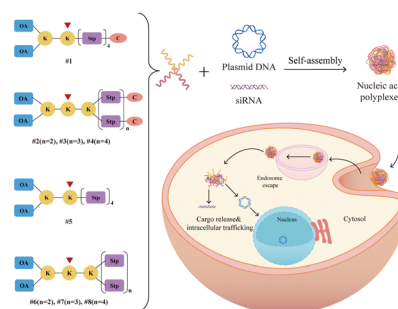
Mathiyazhagan Sivanantham, Gopal Chandru Senadi, Chinnasamy Ragavendran, Mohankumar Ramasamy* and Chinnaperumal Kamaraj*



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Tuning the charge density and crosslinking of precise amphiphilic oligo(ethan-amino)amides for efficient and biocompatible gene delivery

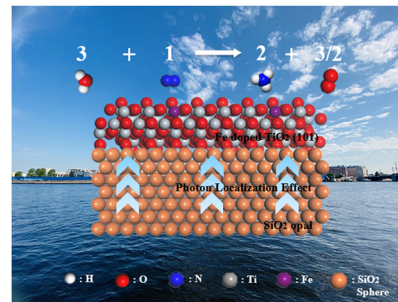
Jiamin Wang, Hao Lin, Mengli Liu, Bo Xiong, Dingyuan He, Jiasheng Tu* and Dongsheng He*



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Improved N_2 photo-fixation performance of nanocrystalline TiO_2 films by photon localization effects and Fe doping

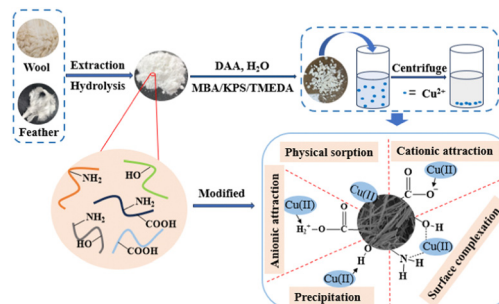
Ying-Min Xu, Sheng Chen, Sheng-Li Chen* and Ai-Jun Wang



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Keratin-derived sorbents for efficient removal of copper ions from aqueous solutions

Li Feng, Jin Chuan Wu and Qingxin Li*



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Expression of concern: Deep eutectic solvent mediated synthesis and fabrication of a WO_3 –MgO nanocomposite as an electrode material for energy storage applications

C. Joel, R. Biju Bennie,* A. Jerold Antony, A. Nirmal Paul Raj and G. Selvakumar

