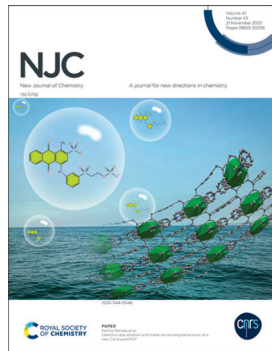


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ISSN 1144–0546 CODEN NJCHES 47(43) 19803–20206 (2023)



Cover

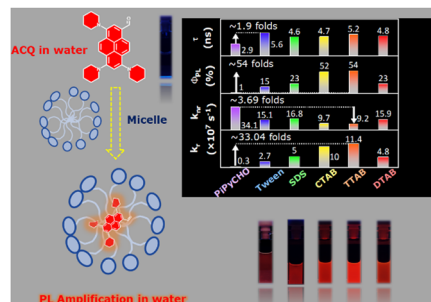
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Micelle-aided quantitatively controllable light amplification of a water-insoluble pyrene derivative

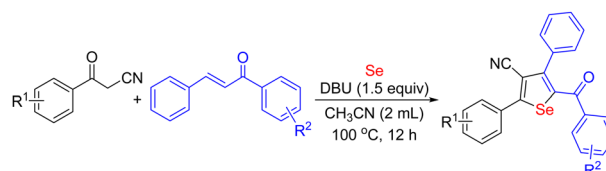
Arnab Nandi, Pradip Pattanayak and
Pradipta Purkayastha*



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Synthesis of tetrasubstituted selenophenes by DBU-induced sequential three-component coupling and intramolecular cyclization

Xiaoyu Wang, Kelu Yan,* Jiangwei Wen, Qiuyun Li,
Ke Ma, Wenlu Zhang, Wanhua Sun and Jianjing Yang*



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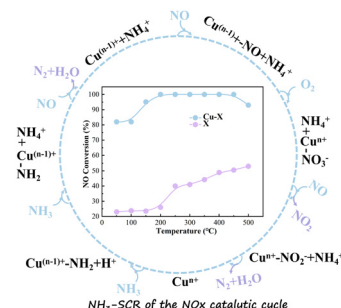


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Selective catalytic reduction over Cu-exchanged X zeolite catalyst: *in situ* DRIFTS and DFT studies of NH_3 -SCR mechanism

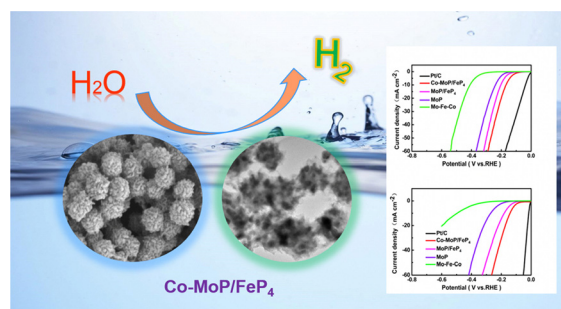
Hongli Wu, Lu Yao, Chunlian Ding,* Xiaoyong Jiang and Weizao Liu*



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Facile synthesis of three-dimensional wrinkled cobalt-doped MoP/FeP₄ nanospheres for boosted hydrogen evolution reaction

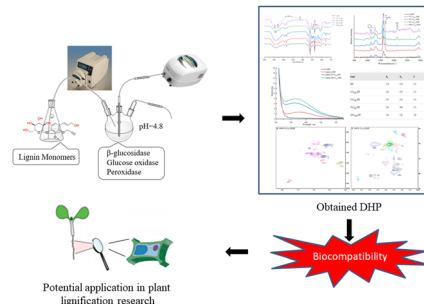
Yaoxia Yang,* Xuqin An, Dangxia Wang, Xingwei Guo, Dongfei Sun, Qingtao Wang and Zhiwang Yang



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Synthesis of novel lignin model compounds labeled with alkynyl and their potential application

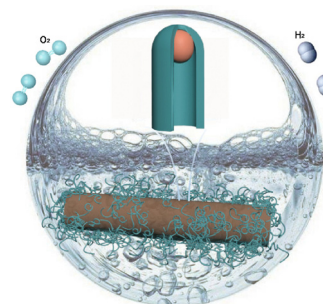
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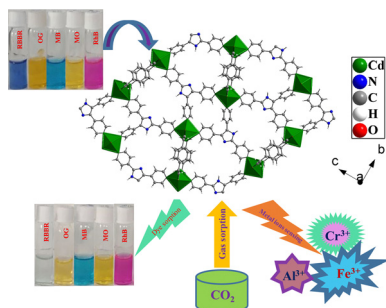
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An electrospinning strategy to fabricate an integrated electrode with multiple components for highly efficient electrocatalytic water splitting

Jian Cai, Jiace Hao, Shuanglong Lu, Fang Duan, Mingliang Du and Han Zhu*



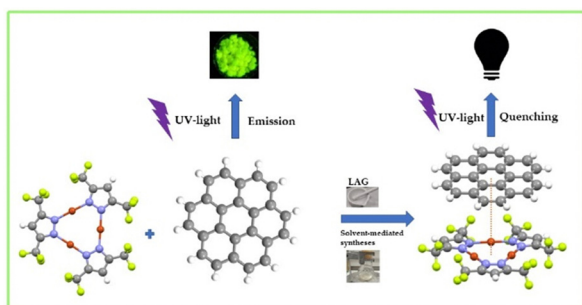
19846



Selective dye sorption and metal ion sensing behaviours of a new Cd-based MOF

Priyanka Manna, Avantika Hasija, Deepak Chopra and Partha Mahata*

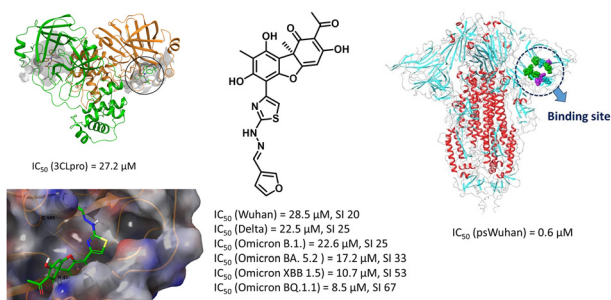
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Mechanochemical preparation of donor/acceptor adducts based on coronene and silver(i) pyrazolate metallacycles

Lorenzo Luciani, Nicola Sargentoni, Claudio Magini and Rossana Galassi*

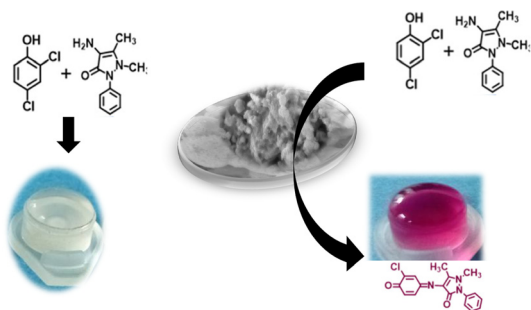
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Usnic acid based thiazole-hydrazones as multi-targeting inhibitors of a wide spectrum of SARS-CoV-2 viruses

Olga I. Yarovaya,* Aleksandr S. Filimonov, Dmitriy S. Baev, Sophia S. Borisevich, Varvara Yu. Chirkova, Anna V. Zaykovskaya, Ekaterina D. Mordvinova, Svetlana V. Belenkaya, Dmitriy N. Shcherbakov, Olga A. Luzina, Oleg V. Pyankov and Nariman F. Salakhutdinov

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MoS₂/Cu as a peptide/nucleotide-matrix-free laccase mimetic nanozyme for robust catalytic oxidation of phenolic pollutants

Biniyam Abera Ankala, Afomiya Animaw Achamyelch, Ebrahim M. Abda, Yitayal Admassu Workie, Wei-Nien Su, Aselefech Sorsa Wotango* and Menbere Leul Mekonnen*

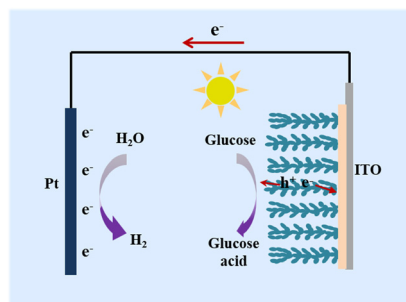


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A highly efficient light-driven non-enzymatic glucose sensor based on AuNi nanodendrites

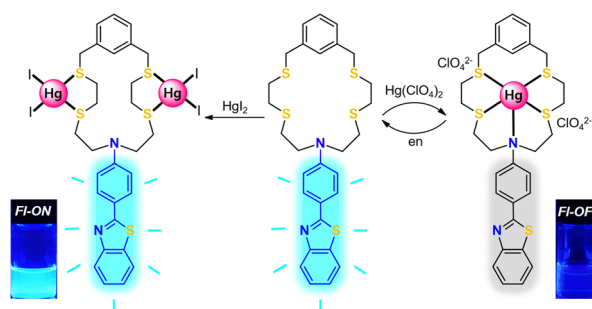
Lanfang Wang, Ruifang Ding, Yanqing Hao, Yujia Li, Wenjiao Liu, Wenbo Lu* and Xiaohong Xu*



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A benzothiazole-coupled NS₄-donor macrocycle and its complexation-based dual-channel sensing for Hg²⁺: the influence of anions and structure–function relationship

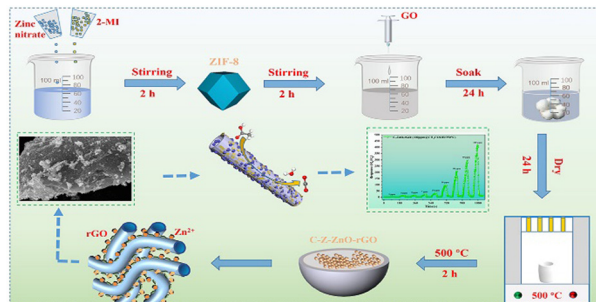
Yelim Lee, Joon Rae Kim and Eunji Lee*



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Highly sensitive detection for acetic acid based on biomorphic ZIF-8 and MOF dual-template-derived ZnO–rGO nanocomposites

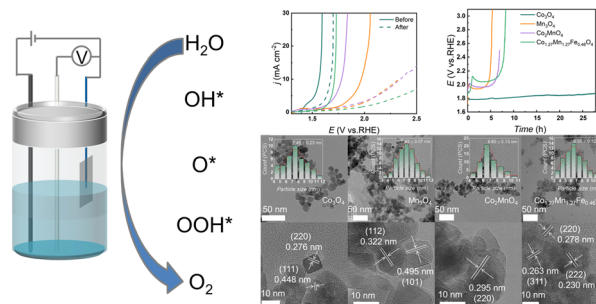
Haixia Chen,* Gaige Zhang, Jijun Ding and Haiwei Fu



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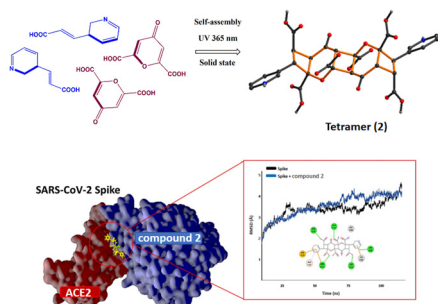
Electrocatalytic oxygen evolution activity of surfactant-free cobalt- and manganese-based spinel oxide nanoparticles in acid

Jiajie Liu,* Yvpei Li, Jingguo Du, Rongrong Cao, Zhihao Zeng, Chuanqing Huang and Chao Wang*



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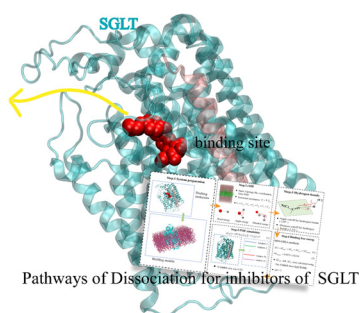
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Hydrogen-bond-assisted topochemical synthesis of a multivalent zwitterionic tetramer *via* concomitant cross- and homo [2+2] photocycloadditions. Theoretical antiviral activity against SARS-CoV-2

Ana Escalona, Frank W. Heinemann, Alexander Briceño,*
Ysaías J. Alvarado, José Luis Paz, Carla Lossada,*
Lenin González-Paz,* Robert Toro and
José Antonio Henao

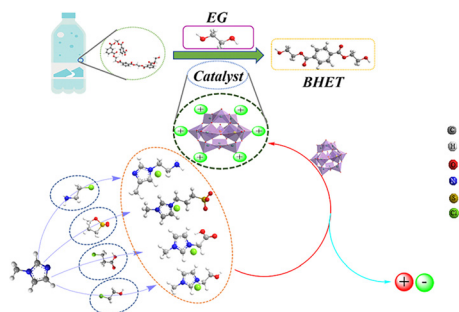
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A molecular dynamics investigation of drug dissociation from SGLT and its implication in antidiabetic medication development

Ming-Hui Pang, Xue-Feng Liu,* Xin-Guan Tan and
Yu-Qing Wang

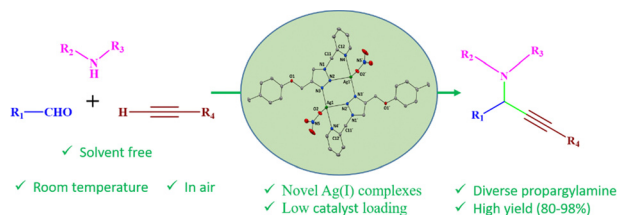
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Preparation of functionalised heteropolyacid ionic liquids and their application in catalytic degradation of bottle-grade polyester

Bo Liu, Bing Liu, Zhangbin Liao, Jialin Zhang and
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Simultaneous N2 and N3 coordination of inverse triazolyl-pyridine ligands in Ag(I) complexes: synthesis, structure, and application in the A3 coupling reaction to propargylamine under solvent free and low catalyst loading conditions

Puneet Singh Gahlaut, Deepak Gautam, Bhawana Shekhawat,
Shivani Kushwaha and Barun Jana*

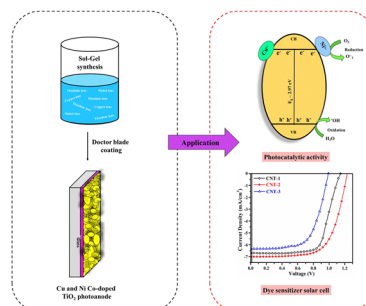


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Investigation on copper–nickel co-doped anatase titania nanospheres as an efficient material for photocatalytic and photovoltaic applications

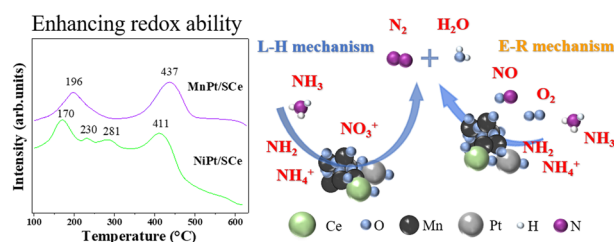
T. Raguram, K. S. Rajni,* E. Nandhakumar and G. Kiruthiga



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Insights into the effects of Mn and Ni on Pt-modified sulfated CeO₂ catalysts for NO removal

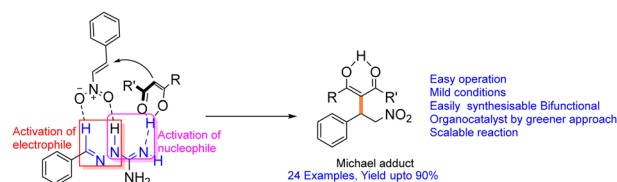
Hao Fan, Qin Peng, Zhenxing Shen,* Xuefeng He and Yiming Yang



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Michael addition reaction of malonates with nitro-olefins catalyzed by 1,1-diaminoazine, a bifunctional hydrogen bonding organocatalyst

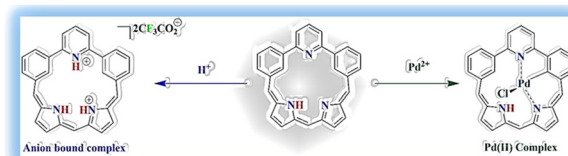
Aabid A. Wani, Kriti Mehta, Rajeswara Reddy and Prasad V. Bharatam*



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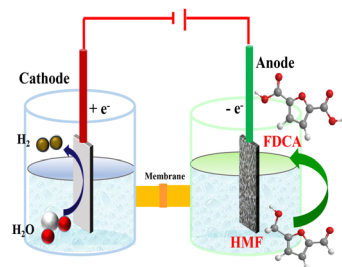
Unveiling protonated form of 2,6-di-*m*-phenylpyridine embedded isosmaragdyrin analogue and its organo-Pd(II) complex

Sourav Ranjan Pradhan, M. Murugavel, Sangya Chitranshi, Gakhyun Kim, Dongho Kim, Mainak Das* and A. Srinivasan*



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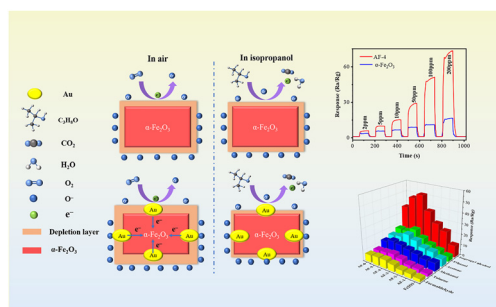
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Ni₉S₈/MoS₂/Ni₃S₂ ternary heterostructure

Interface engineering of a Ni₉S₈/MoS₂/Ni₃S₂ heterostructure to boost biomass upgrading coupled with the hydrogen evolution reaction at large current densities

Ao Wang, Yan Meng, Gang Xu, Shi-Jiao Dong and Jun-Ling Song*

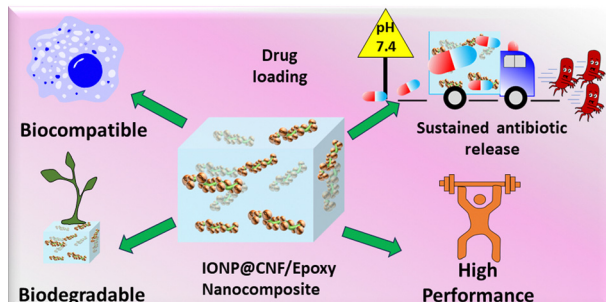
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Au-modified α -Fe₂O₃ nanoparticles for ultrasensitive isopropanol detection

Lexian Sang, Yun Wang, Shan Sun, Yi Tian, Yuning Xie, Fuchao Jia, Tong Zhou, Guangchao Yin, Fazhe Sun* and Xiaomei Wang*

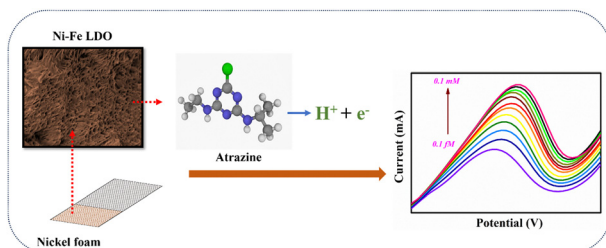
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A robust epoxy nanocomposite with iron oxide decorated cellulose nanofiber as a sustained drug delivery vehicle for antibacterial drugs

Nobomi Borah, Muzamil Ahmad Rather, Bibrita Bhar, Biman B. Mandal, Manabendra Mandal and Niranjana Karak*

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Ni–Fe layered double oxide on porous nickel foam: a rationalized approach to electrochemical sensing of Atrazine herbicide in water samples

Gopika Mukundan, Nagarajan Ganapathy and Sushmee Badhulika*

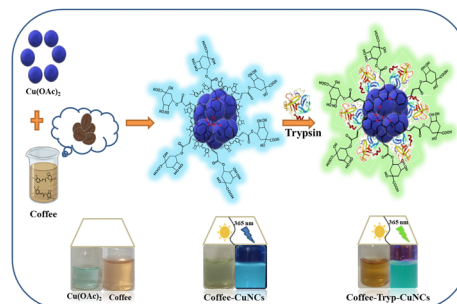


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Microwave-assisted synthesis of green fluorescent copper nanoclusters: a novel approach for sensing of hydroxyl radicals and pyrophosphate ions via a "turn-off-on" mechanism

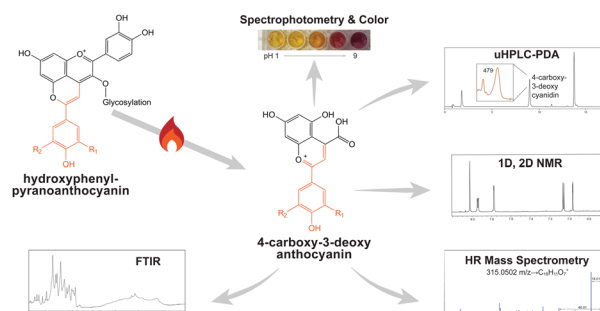
Harshita, Tae Jung Park and Suresh Kumar Kailasa*



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Structure elucidation of 4-carboxy-3-deoxyanthocyanidins formed from thermal degradation of hydroxyphenyl-pyranoanthocyanins

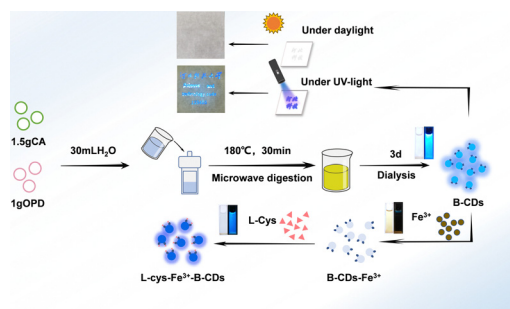
Danielle M. Voss, Fenfen Tang, Kenneth M. Riedl, Gonzalo Miyagusuku-Cruzado, Siyu Yao, Luis Rodriguez-Saona, Emmanuel Hatzakis and M. Monica Giusti*



20061

Carbon dots with high quantum yields used for Fe³⁺ detection, information encryption and anti-counterfeiting

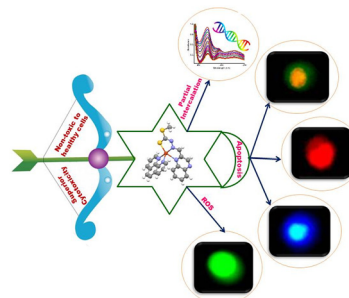
Daohan Zhang, Lei Liu* and Chunyan Li



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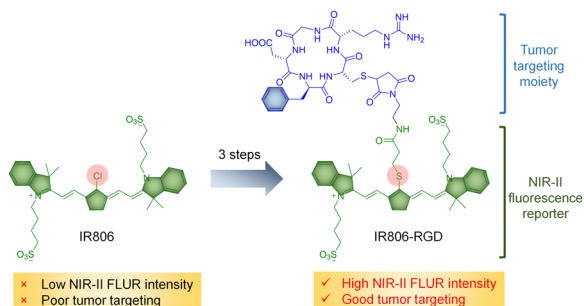
Copper(II) complexes of the CuN₄S core: selective cytotoxicity to cancerous cells, ROS generation and induction of apoptosis

Kakoli Malakar, Balasubramaniam Selvakumaran, Mariappan Murali,* Pitchan Arul Prakash, Somasundaram Sangeetha, Winaki P. Sohtun, Mohamed Sultan Mohamed Jaabir and Marappan Velusamy*



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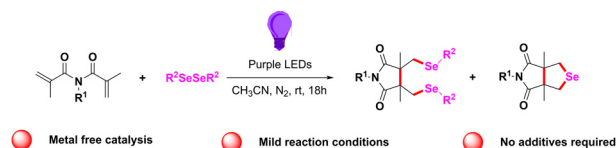
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Molecular engineering of a commercially available NIR-II fluorescent cyanine dye for improved tumor targeting and imaging

Yaxin Liu, Xiaomei Lu,* Wen Zhou* and Quli Fan

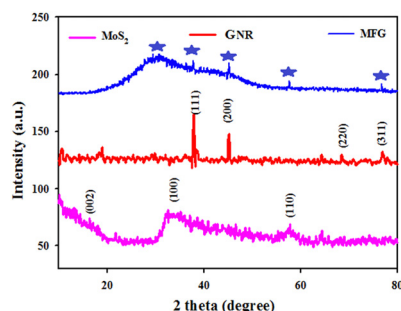
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Visible-light-mediated selenylation/cyclization reactions of diselenide with acrylimide derivatives: synthesis of selenosubstituted pyrrolidine-2,5-diones

Jia-Hui Han, Shi-Yin Tian, Weidong Rao, Shu-Su Shen, Daopeng Sheng and Shun-Yi Wang*

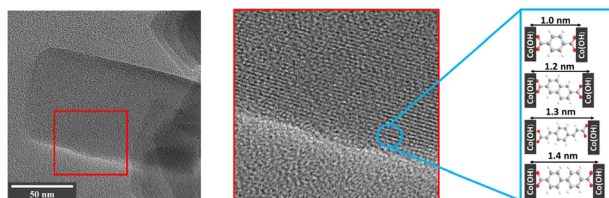
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Gold nanorods incorporated into a MoS₂/Fe₃O₄ nanocomposite for photothermal therapy and drug delivery

Behdad Shariati, Mohammad Taghi Goodarzi,* Alireza Jalali, Nasrin Salehi and Majid Mozaffari

20109



Surfactant-assisted lamellar structuration of tunable Co-based hybrid nanosheets

Tennessee Riant, Diane Rebiscoul, Jérôme Maynadié* and Daniel Meyer

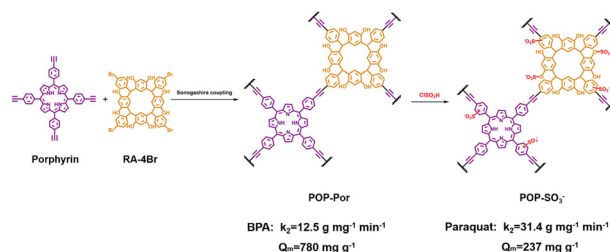


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Synthesis of porphyrin and resorcinarene-based porous organic polymers for the superfast adsorption of bisphenol A and cationic herbicides

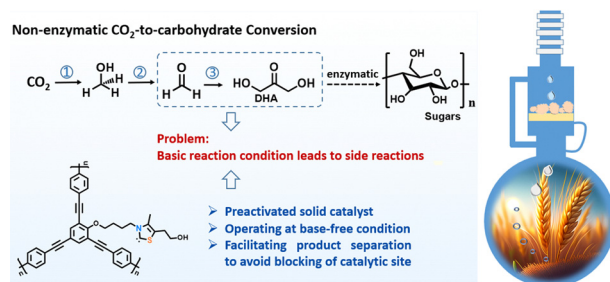
Xinyu Zhou, Jia Huang, Weifeng Lv, Lu Han, Shiyuan Zhou,* Yingjie Liu* and Peiyang Gu*



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Synthesis of 1,3-dihydroxyacetone via heterogeneous base-free formaldehyde condensation

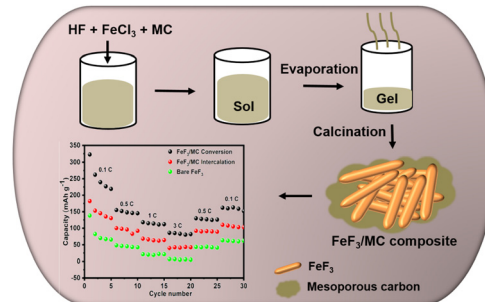
Jing Wang, Han Li, Jiawei Chen and Cheng Wang*



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Constructing a mesoporous carbon incorporated FeF₃ nanocomposite cathode by one-step impregnation route for Li-ion battery applications

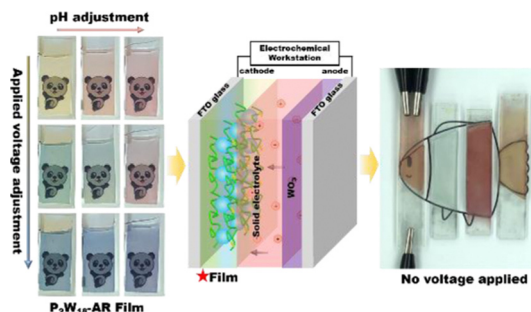
Kesavan Thangaiyan* and Yuvashri Jayamkondan



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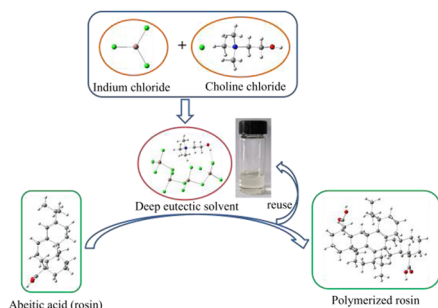
A pH and voltage dual-adjustment of electrochromic material achieves multicolor change based on alizarin red and Dawson-type polyoxometalate

Jie Zhang, Yan-Yan Yang,* Shu-Ping Liu,* Su-Yang Feng, Feng-Ru Li, Fang-Ting Chen, Xiao-Yang Yu and Xiao-Shu Qu*



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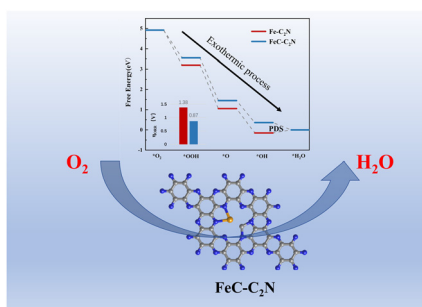
20144



Lewis acidic deep eutectic solvents as catalysts for rosin polymerization

Yali Yu, Fengli Yu,* Lu Li, Bing Yuan, Congxia Xie and Shitao Yu

20151

Non-metal doped Fe-C₂N as an electrocatalyst for oxygen reduction reaction: a density functional calculation

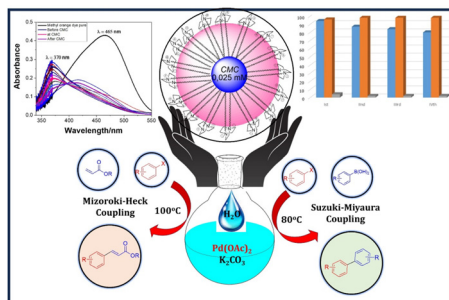
Dan Shu, Dan Wang* and Yan Wang*

20157

Synthesis of small-crystal Y zeolites *via* regulating Na₂O/Al₂O₃ and superior catalytic performance of corresponding NiWS-supported catalysts for hydrocracking of naphthalene

Xiaojun Dai,* Yan Cheng, Tingting Liu, Lingjuan Mao, Ruihua Kang, Qiang Wei and Yasong Zhou*

20171

Pd(OAc)₂/[C₁₈-DABCO-C₁₈]₂Br: a nano palladium catalytic approach for Mizoroki-Heck and Suzuki-Miyaura coupling reactions in water

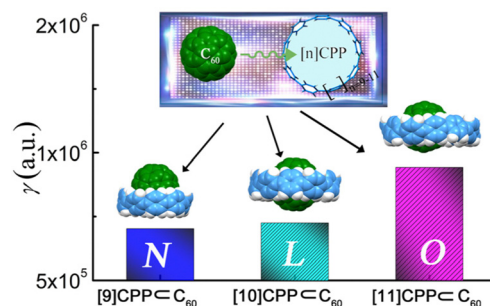
Archana Rajmane, Chunilal Pawara, Sumit Kamble, Utkarsh More, Suresh Patil and Arjun Kumbhar*



20182

Third-order nonlinear optical properties of the host–guest complexes formed between fullerenes and cycloparaphenylene ([*n*]CPP: *n* = 9, 10 and 11)

Li Wang,* Yan-Li Liu, Quan-Jiang Li, Di He, Sheng-Hui Chen, Yan-Liang Zhao and Mei-Shan Wang*



20193

Superparamagnetic iron oxide nanoparticle-loaded nanodroplets for dual-modal ultrasound/magnetic resonance imaging-guided drug delivery

Roghayeh Kamran Samani, Fatemeh Maghsoudinia, Mahdi Asgari, Maryam Atarod, Masoud A. Mehrgardi* and Mohamad Bagher Tavakoli*

