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IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 47(48) 22019–22520 (2023)

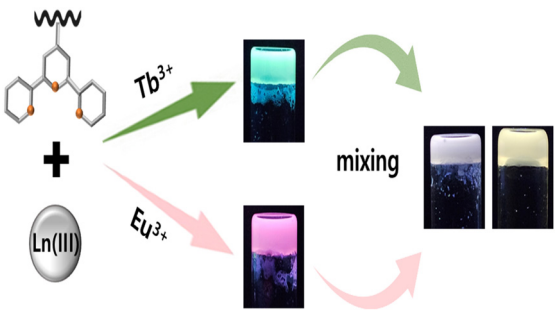
Cover
See Lei Chen, Xing-Fu Shang, Jia-Dao Wang *et al.*, pp. 22038–22049. Image reproduced by permission of Lei Chen from *New J. Chem.*, 2023, **47**, 22038.

COMMUNICATION

22034

Tunable emissions in lanthanide-based supramolecular metallogels

Eun Gyu Lee, Hyeon min Han, Jong Hwa Jung* and Sung Ho Jung*



PAPERS

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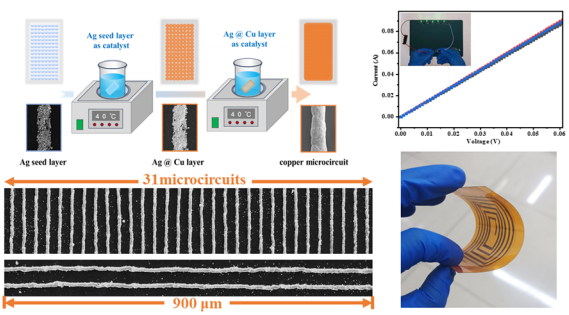
Manufacture of complex pattern flexible copper microcircuits based on silver seeds through chemical growth welding

Zhi-Yuan Cao, Lei Chen,* Le-Le Song, Ding Weng, Yuan Ma, Bo-Wen Yu, Xuan Li, Xing-Fu Shang* and Jia-Dao Wang*



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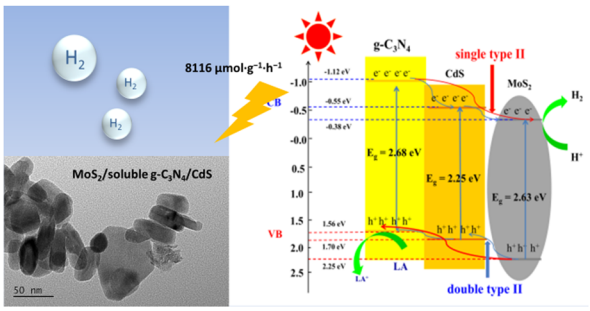
A facile synthesis of a MoS_2/soluble g-C_3N_4/CdS ternary composite for high efficiency photocatalytic hydrogen production

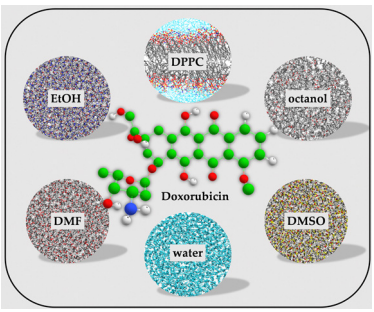
Hui-Qin Zheng, Wen-Li Zhang, Min-Cai Yin* and Yao-Ting Fan



22063

How does aggregation of doxorubicin molecules affect its solvation and membrane penetration?

Sadaf Shirazi-Fard, Amin Reza Zolghadr* and Axel Klein*



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Novel solar-light-driven Z-scheme BiOCl@WS_2 nanocomposite photocatalysts for the photocatalytic removal of organic pollutants

Daichi Nakayama, Chang-Mou Wu,* Kebena Gebeyehu Motora,* Pankaj Koinkar and Akihiro Furube

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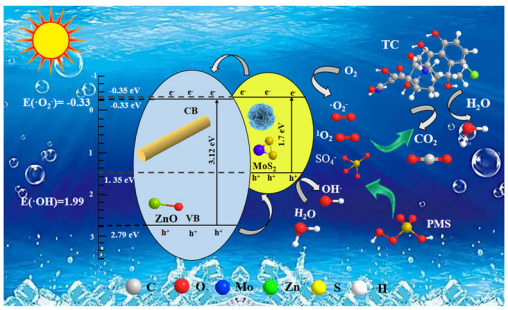
Highly efficient degradation of tetracycline by activated peroxymonosulfate over MoS_2/ZnO heterostructure nanocomposites

Shoujie Jiang, Lili Wang, Yuyang Zhou, Haixiang Wang, Qiaoli Lu, Jinmei Wang, Chunxia Wang and Dawei Gao*



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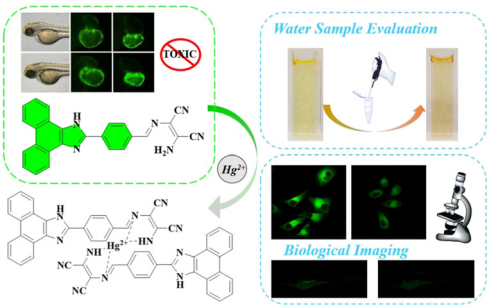

A specific amino-based fluorescent probe for mercury ion detection in water samples, cells, and zebrafish

Miaohui Yu, Tingting Fu, Wenzhai Li, Yan Zhang, Huayan Wen, Min Zheng, Moran Shi, Caiyun Liu, Meng Jin, Kechun Liu, Lei Cai, Baocun Zhu and Wenlong Sheng*

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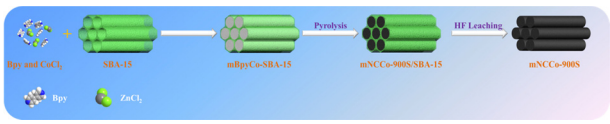
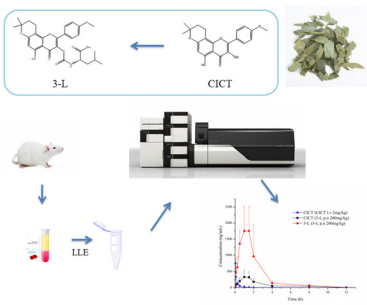


Cobalt coordinated 4,4′-bipyridine derived ordered mesoporous N-doped carbon as an efficient electrocatalyst for oxygen reduction

Qianhui Ma, Shuang Zheng, Jiajie Wang, Chenghang You, Xianghui Wang* and Qingqing Wang*

22118



Development and validation of a LC-MS/MS method for the simultaneous determination of cycloicaritin and its carbamate prodrug in rat plasma: application to pharmacokinetic study

Weiping Wang, Fengxiao Li, Jiaqi Fan, Shuo Gan, Jiaming Zhang, Qikun Jiang* and Tianhong Zhang*

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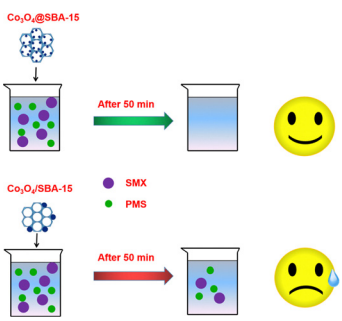

Cobalt oxide confined in mesoporous SBA-15 as a highly efficient catalyst for enhanced degradation of sulfamethoxazole

Tao Liu, Tingting Jiang, Jinqi Zhu, Tingwei Rui, Shourong Zheng and Zhixin Hu*

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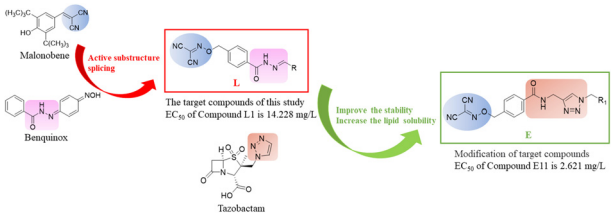
The design, synthesis, and biological activity assay of malononitrile oxime ether compounds as effective fungicides

Simin Wang, Zhixiang Zhao, Li Zhang, Jianjun Zhang, Huizhe Lu and Yanhong Dong*



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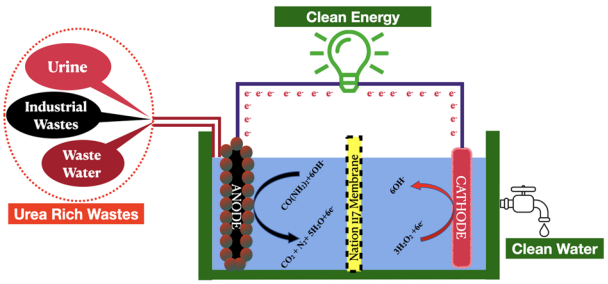
Pt_xAg_{100-x} nano-alloy decorated N-doped reduced graphene oxide: a promising electrocatalyst for direct urea fuel cells

Iram Amin, Sajad Ahmad Bhat, Murtaza Manzoor Bhat, Feroz Ahmad Sofi, Aamir Y. Bhat, Pravin P. Ingole, Ritwik Mondal, Musthafa Ottakam Thotiyl and Mohsin Ahmad Bhat*



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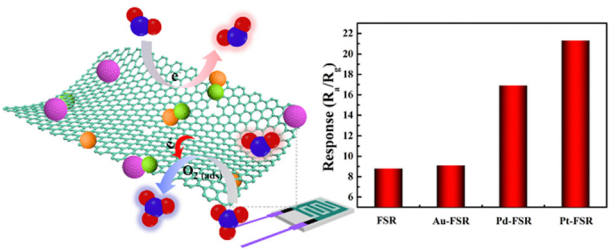
Enhanced room-temperature NO_2 response of noble metal decorated α-Fe_2O_3/SnO_2–rGO hybrids

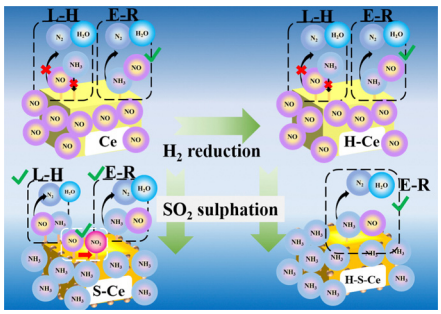
Yaqing Zhang, Liang Zhao, Zhimin Yang, Yunpeng Xing, Congcong Xin, Zefeng Wei, Teng Fei, Sen Liu* and Tong Zhang*



22168

Effect of SO_2 introduction into CeO_2 on its surface acidity and redox property for the selective catalytic reduction of NO with NH_3

Xuejun Zhang, Dujuan Mo, Zhongxian Song,* Wei Liu, Haiyang Li, Nana Guan, Mengru Zhang, Ruihua Guo and Zhenzhen Huang*



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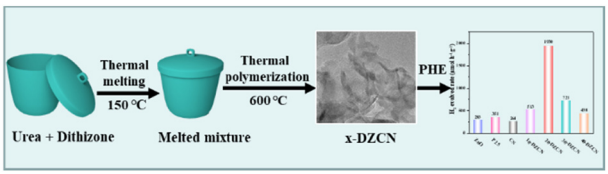
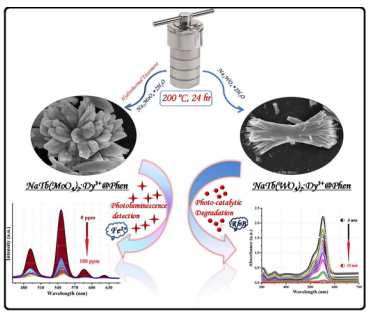


Tailoring a sulfur doped carbon nitride skeleton to enhance the photocatalytic hydrogen evolution activity

Tianyu Zhou, Feifan Cui, Guijie Li, Xiaozhong Sun, Dongshu Sun, Chunbo Liu,* Chun Zhao* and Shangyu Li*

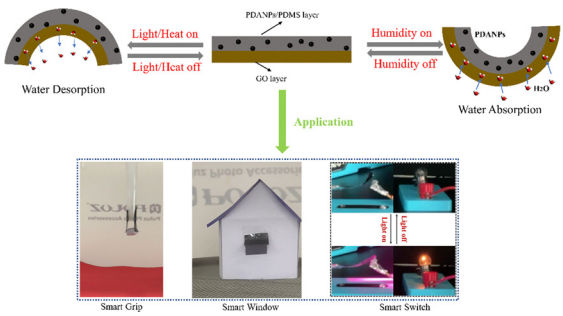
22192



Fabrication of multifunctional 3D-flower-shaped $NaTb(MoO_4)_2$:Dy^{3+}@Phen and $NaTb(WO_4)_2$:Dy^{3+}@Phen nanoparticle materials for efficacious luminescence sensing of Fe^{2+} ions and photocatalytic degradation of rhodamine B in an aqueous medium

Swaita Devi, Charanjeet Sen, Richa Singhaal and Haq Nawaz Sheikh*

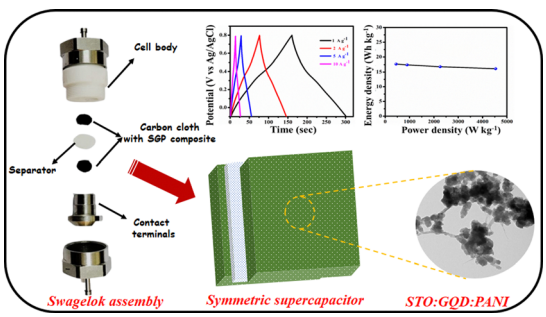
22205



Smart bionic applications based on a multiple stimulus response GO-PDANP/PDMS bilayer flexible actuator

Song He,* Chunxiang He, Xinyu Liu, Chunhua Du, Xin Jin, Qilin Chen and Ping Li*

22215



Polyaniline wrapped graphene quantum dot decorated strontium titanate for robust high-performance flexible symmetric supercapacitors

Rosmy Joy, Merin K Wilson, Aldrin Antony, Bharathi Konkena, Sibu C Padmanabhan, Michael A Morris and Suja Haridas*

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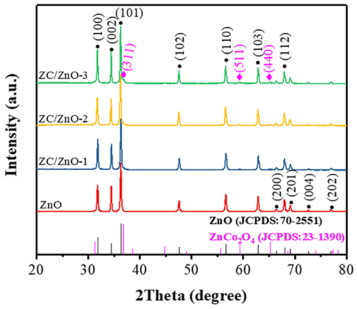
Construction of $ZnCo_2O_4$ decorated ZnO heterostructure materials for sensing triethylamine with dramatically enhanced performance

Xiaodong Wang,* Juanmei Zhou, Yan Wang, Guiyun Yi, Guang Sun, Tielang Wang, Bin Yang and Zhanying Zhang



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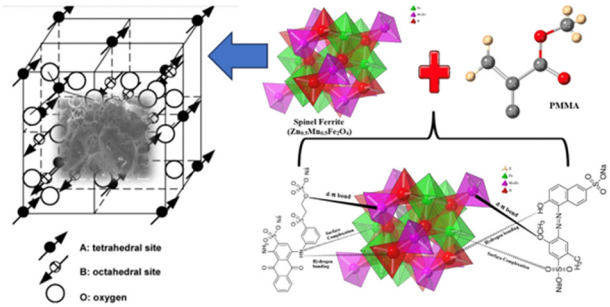
Application of the $Zn_{0.5}Mn_{0.5}Fe_2O_4$–PMMA nanocomposite for efficient removal of complex organic pollutants

Joshua Arámbula, Somayeh Mohammadi, Amirhossein Mahdaviarab, Daryoush Sanaei, Rajendra P. Patil and Hamidreza Sharifan*



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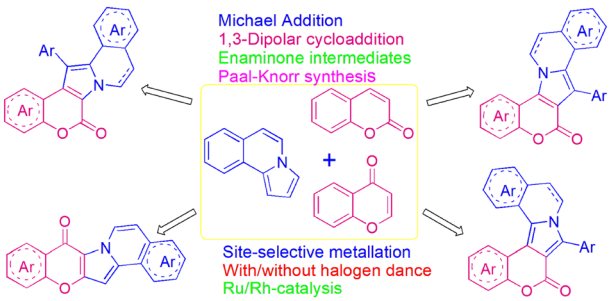
Recent advances in the synthesis of chromenone fused pyrrolo[2,1-*a*]isoquinoline derivatives

Sonali Bera, Avishek Maji, Susanta Patra, Dibyendu Sekhar Mahanty,* Shubhankar Samanta, Swarna Kamal Samanta, Biplab Biswas and Prasanta Patra*



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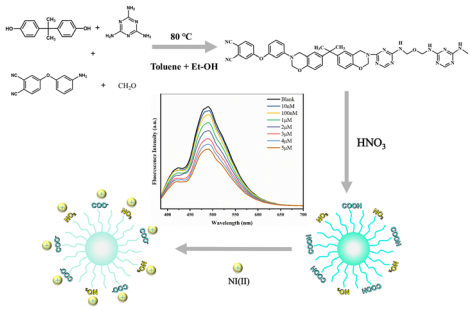
A cross-linkable phthalonitrile derivative as a precursor to synthesize nitrogen-doped carbon nanodots for Ni ion detection

Zilin Fan, Qimeng Ran, Xiaoling Xu, Yin Tang, Xiaobo Liu and Kun Jia*



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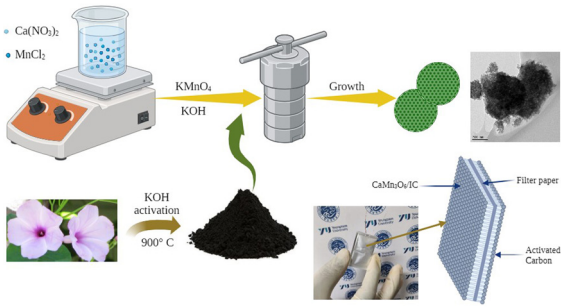
A novel approach towards synthesis of benzothiazoles and benzimidazoles: Eosin Y-catalyzed photo-triggered C–S and C–N bond formation

Khushbu Rajput, Vishal Singh, Arsala Kamal, Himanshu Kumar Singh, Sundaram Singh* and Vandana Srivastava*

22281



Enhancing supercapacitive performance: integration of bio-mass-derived carbon into a $CaMn_3O_6$ nanocomposite

Palanisamy Rajkumar, Vediyappan Thirumal, Maalavika S. Iyer, Karuppanan Aravinth, Mozaffar Abdollahifar, Kisoo Yoo* and Jinho Kim*

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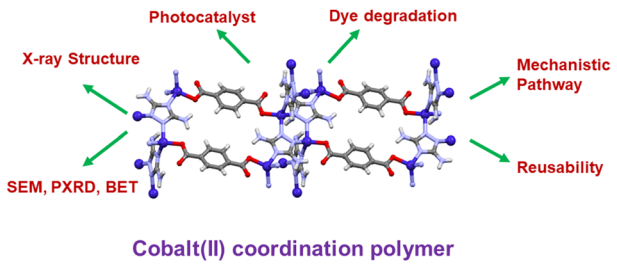

3D construction of a cobalt(II) coordination polymer as a photocatalyst for the degradation of methyl green dye under visible light and its mechanistic pathway

Rais Ahmad Khan,* Amal AlFawaz, Afnan Abdullah Alhamed, Nouf Abdulrahman AlMuryyi, Imran Hasan, Anup Paul, Sandeep Dey, Saad. G. Alshammari, Hadi D. Arman and Ali Alsalme*

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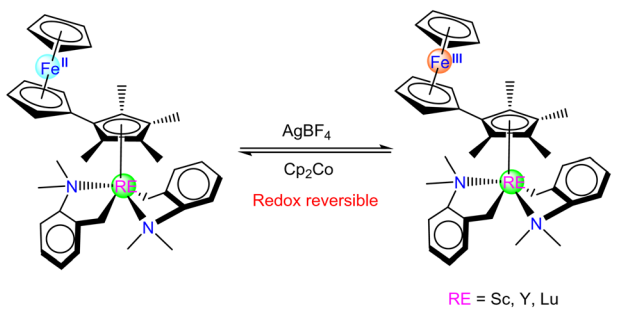

Synthesis, characterization and ε-caprolactone polymerization properties of ferrocenyl modified half-sandwich rare-earth metal complexes

Min Li, Yi Zhong, Yunjie Luo* and Meng Deng*

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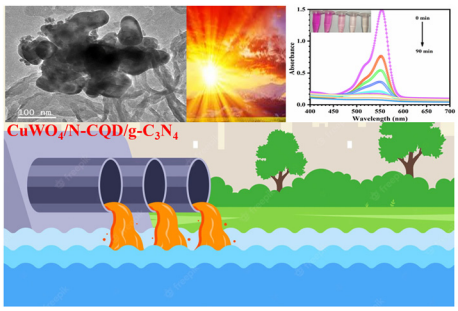
22304

Boosting the photodegradation of rhodamine B with the $CuWO_4/g\text{-}C_3N_4$ heterojunction by introducing biomass derived N-CQDs as an electron mediator: mechanism and DFT calculations

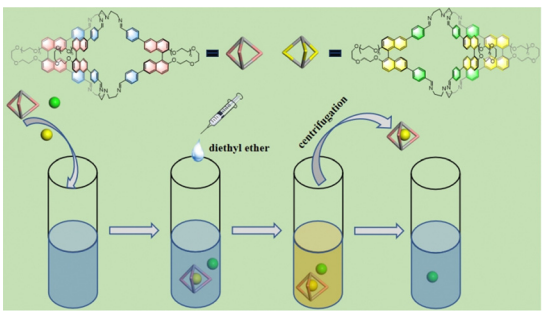
Juri Goswami, Purashri Basyach, Siddhartha K. Purkayastha, Ankur K. Guha, Parasa Hazarika* and Lakshi Saikia*



22320

Luminescent covalent organic cages with a C_3-symmetric structure for effective enantioseparation

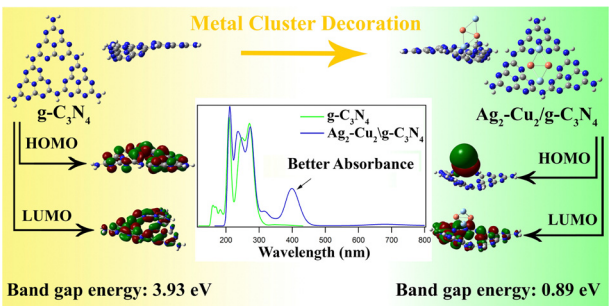
Tianyu Li, Yuan Pan, Haixin Song, Hui Jiang,* Yujing Guo,* Linlin Shi,* Xinqi Hao and Mao-Ping Song



22326

Theoretical study of the electronic structure of the complexes of gold, silver, and copper mono- and bimetallic nanoclusters decorated on graphitic carbon nitride ($g\text{-}C_3N_4$): DFT and TD-DFT studies of photocatalytic activity

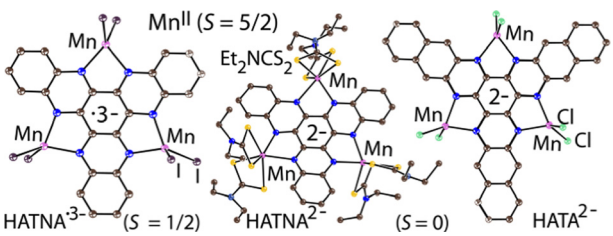
Hanieh Moradi, Hossein Farrokhpour,* Sayyed Mahdi Hosseini and Mehran Ghiaci



22339

Manganese(II) complexes of hexaazatrinaphthylene and hexaazatrianthracene: synthesis, structure and properties

Maxim V. Mikhailenko, Vladislav V. Ivanov, Maxim A. Faraonov, Aleksey V. Kuzmin, Salavat S. Khasanov, Akihiro Otsuka, Hideki Yamochi, Hiroshi Kitagawa and Dmitri V. Konarev*



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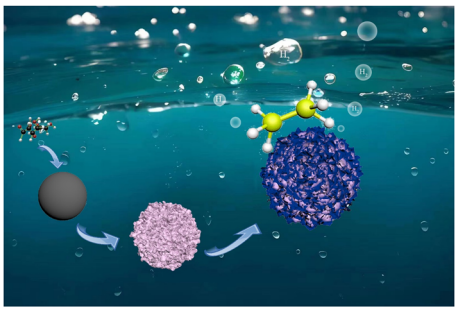
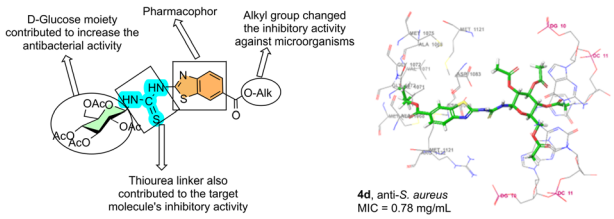
22350



High dehydrogenation of ammonia borane by core–shell heterostructure catalysts formed by carbon template-assisted synthesis

Hui-Ling Zheng, Zi-Hao Zhang, Chen-Gang Feng, Hong-Lin Zhu and Yue-Qing Zheng*

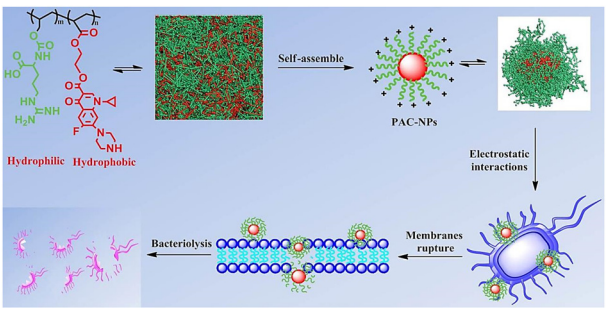
22360



Synthesis, antimicrobial activity and molecular simulation of thiourea derivatives containing 6-carboalkoxybenzo[*d*]thiazole and D-glucose moieties

Nguyen Dinh Thanh,* Do Son Hai, Nguyen Thi Kim Giang, Vu Ngoc Toan, Hoang Thi Kim Van, Nguyen Minh Tri and Duong Ngoc Toan

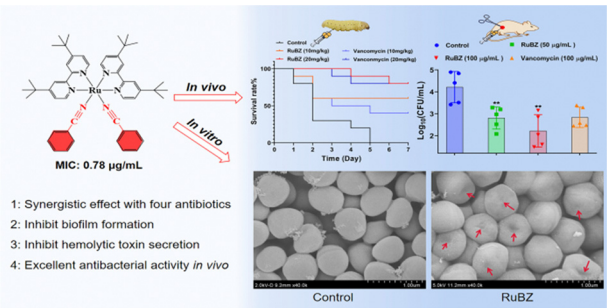
22377



Ciprofloxacin peptide-based nanoparticles confer antimicrobial efficacy against multidrug-resistant bacteria

Jian-Bin Zhen,* Jia-Jia Yi, Bing-Xiao Liu, Yan-Jun Liu, Xin-Yi Bu, Xiao-Jing Wu and Da Tang*

22388



Synthesis and anti-infective potency study of a Ru-based complex bearing benzonitrile against *Staphylococcus aureus*

Ziying Huang, Guijuan Jiang, Yun Song, Jingjing Chen, Wenjing Lin, Guangying Yu, Xuemin Duan, Yanshi Xiong, Jintao Wang,* Xiangwen Liao* and Lianghong Liu*

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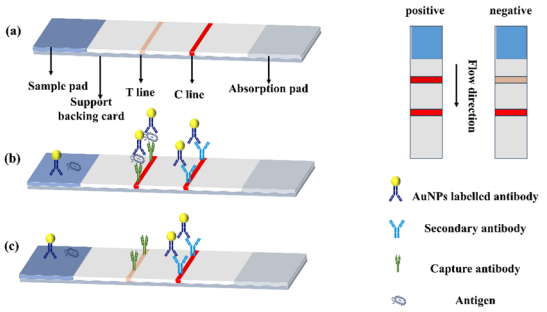
22402

Preparation of monoclonal antibodies against norovirus and establishment of a rapid immunochromatographic technique

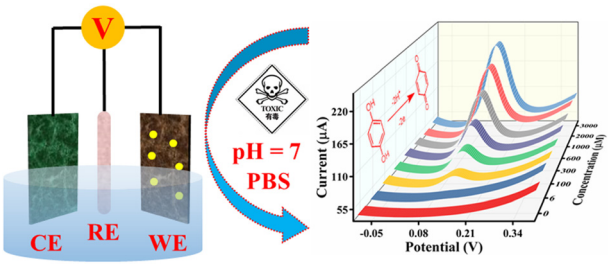
Chunhao Wei, Lingling Guo, Aihong Wu, Chuanlai Xu,* Hua Kuang, Xinxin Xu and Liqiang Liu*



22410

Au nanoparticle-decorated Ni_2P nanosheet arrays with porous grids for electroanalytical hydroquinone sensing

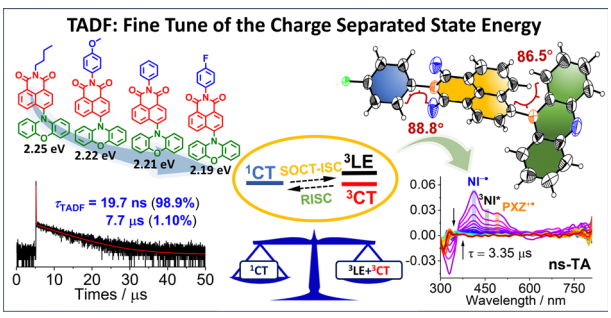
Wenbo Lu,* Xue Zhang, Wenting Tong and Ming Wei*



22418

Fine-tuning of the charge-separated state energy in compact orthogonal naphthalene–phenoxazine dyads and its effect on the thermally-activated delayed fluorescence

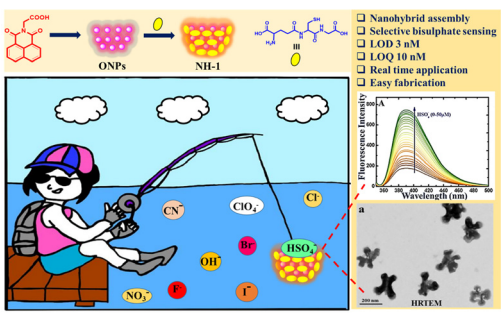
Jieyu Tang, Xi Liu, Xue Zhang, Jianzhang Zhao* and Yan Wan*



22430

Chaotropic anion induced self-assembly of naphthalimide–glutathione nanohybrids: selective recognition of bisulphate anions in aqueous medium

Amanpreet Singh, Monika Chaudhary, Meenakshi Verma, Navneet Kaur* and Narinder Singh*



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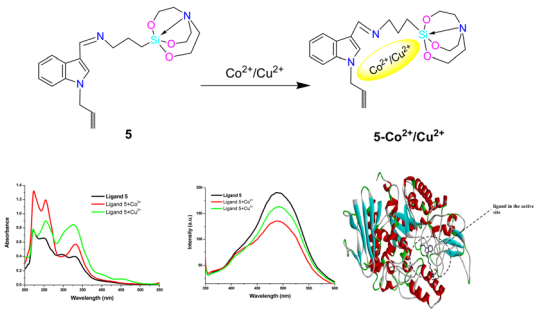
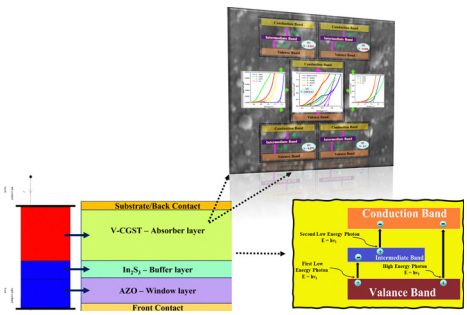
22441



A dual response UV-vis and fluorescence receptor based on acetylenic-indole conjoined silatrane for selective recognition of Co^{2+} and Cu^{2+} ions and *in silico* antidiabetic activity

Gurjaspreet Singh,* Sushma,* Priyanka, Anita Devi,* Tamana, Harshbir Kaur, Mithun, Jandeep Singh and Gurleen Singh

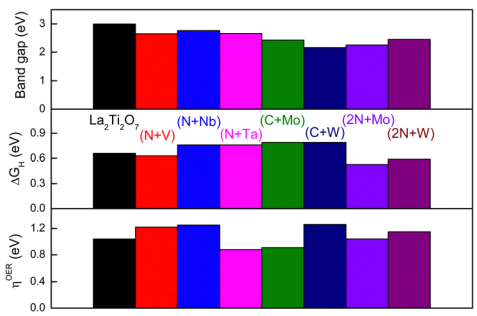
22456



Hierarchically structured sub-bands in chalcopyrite thin-film solar cell devices

Karthikeyan Vijayan, Logu Thirumalaisamy,* S. P. Vijayachamundeeswari,* Kalainathan Sivaperuman, Nazmul Ahsan and Yoshitaka Okada

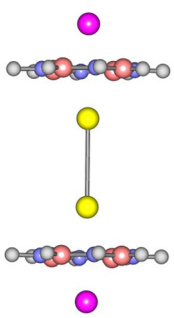
22469



Designing visible-light-responsive $La_2Ti_2O_7$ photocatalysts by surface co-doping of nonmetal and metal combinations

Shuyuan Yang, He Qu and Xin Zhou*

22481



Exploring the effect of external dopants on the electride characteristics of bimetallic sandwich complexes based on the $B_4N_4H_8$ ligand, $M_2(B_4N_4H_8)_2Ca_2$ (M = Na and K)

Ria Sinha Roy, Avik Ghosh, Soumadip Banerjee and Abhijit K. Das*

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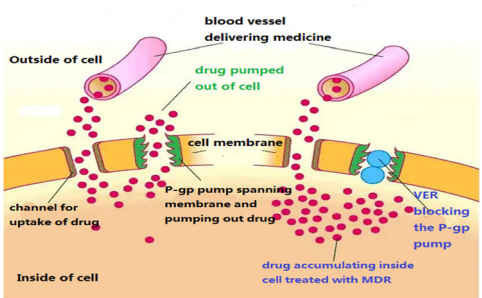
22495

ZIF-8-based core/shell nanocarriers for relieving multidrug resistance in cancer therapy

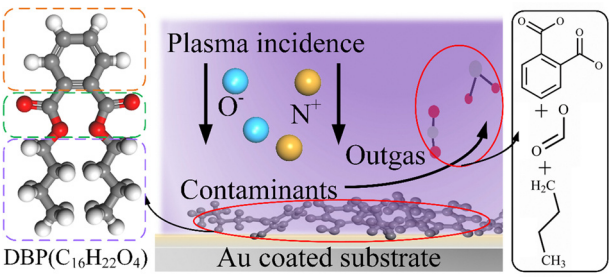
Jinsong Gong, Xiaobin Li, Shaoping Li, Man Xu and Wubin Dai*



22508

Reaction analysis and the removal mechanism of organic contaminants in plasma cleaning: a molecular dynamics simulation

Qingshun Bai,* Xujie Liu, Hao Sun, Yuhai Li, Xueshi Xu and Peng Zhang



CORRECTION

22518

Correction: A facile synthesis of a MoS_2/soluble g-C_3N_4/CdS ternary composite for high efficiency photocatalytic hydrogen production

Hui-Qin Zheng, Wen-Li Zhang, Ming-Cai Yin* and Yao-Ting Fan