

IN THIS ISSUE

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Cover

See Sathiyarayanan Kulathu Iyer *et al.*, pp. 13251-13260. Image reproduced by permission of Sathiyarayanan Kulathu Iyer from *New J. Chem.*, 2024, 48, 13251.

EDITORIAL

13232

International Symposium on Inorganic Environmental Materials 2023 (ISIEM 2023)

Kenjiro Fujimoto,* Mamoru Aizawa,* Naoyuki Matsumoto* and Hiroaki Mori*

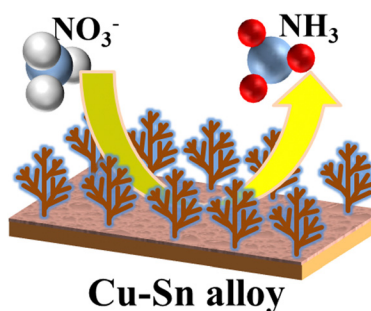


COMMUNICATIONS

13233

Electrodeposition of a 3D dendritic Cu-Sn bimetallic alloy for electrocatalytic nitrate reduction to ammonia

Jinxu Zhao,* Jingyi Xu and Liyi Shi*



ChemComm

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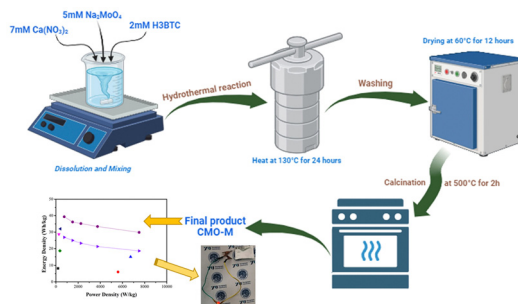
Fundamental questions
Elemental answers

COMMUNICATIONS

13238

Unlocking the potential of a MOF-derived CaMoO_4 electrode for high performance supercapacitor application

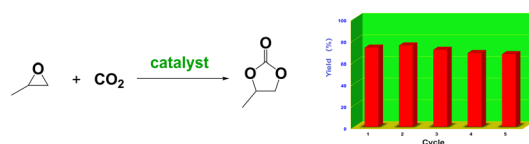
Palanisamy Rajkumar, Joel Kingston Ramesh, Vedyappan Thirumal, Maalavika S. Iyer, R. Margrate Bhackiyavathi Princess, R. M. Gnanamuthu, Kisoo Yoo* and Jinho Kim*



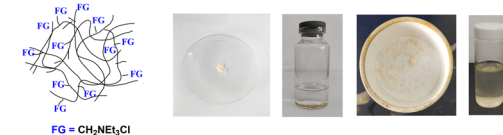
13245

The coupling reaction of epoxides with carbon dioxide catalyzed by functional cross-linked polystyrenes and metal salts/functional polystyrenes systems

Zhichao Zhang,* Anqi Guan, Jingyi Yu, Xindong Jiang, Shuang Han,* Zhaoyang Wen, Beiyong Du and Baiyang Song



Catalyst: Recyclable Functional Cross-linked Polymer (CP) or CP/ FeCl_3 Composite

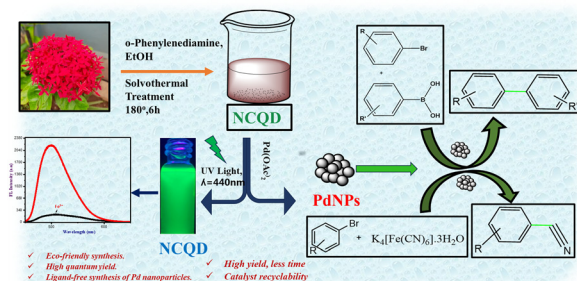


PAPERS

13251

Ixora coccinea flower-derived green luminescent carbon quantum dots for Fe^{3+} recognition and preparation of Pd nanoparticles for the Suzuki–Miyaura coupling and cyanation process

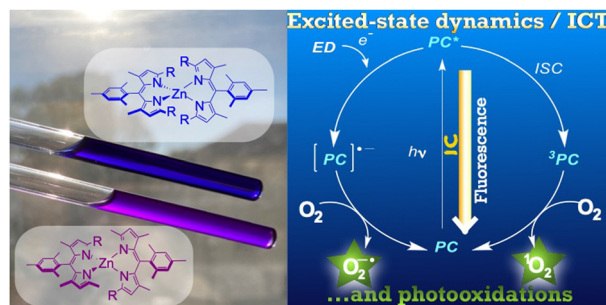
Namrata Priyadarshini Hota and Sathiyarayanan Kulathu Iyer*



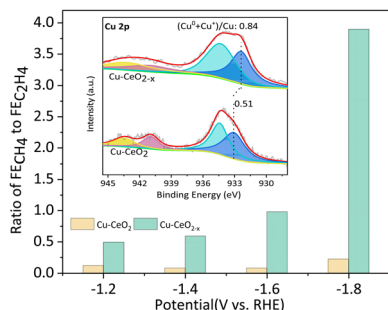
13261

Excited state dynamics of homoleptic Zn(II)dipyrrin complexes and their application in photocatalysis

Julia Leier, Pascal Rauthe, Roberta Tabone, Claudia Bizzarri* and Andreas-Neil Unterreiner*



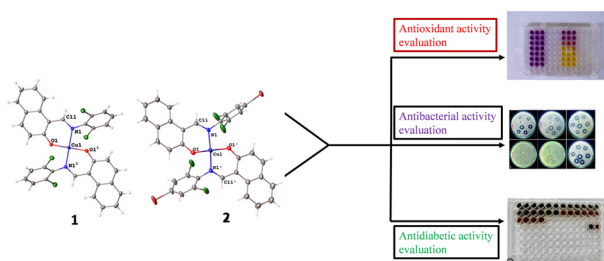
13270



Promoting reducibility and activity of Cu by tuning oxygen defects on ceria for selective electrochemical CO₂ reduction to methane

Lingwei Yu, Ying Zhang,* Leyi Zhou, Yaqi Wang, Xinru Ma, Zhangkun Hou, Hongchuan Zhang, Sai Xie and Zifeng Yan*

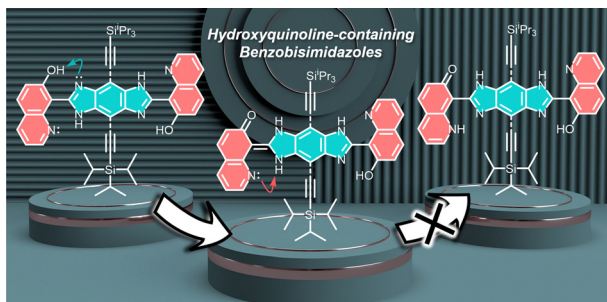
13276



Copper(II) complexes derived from naphthalene-based halogenated Schiff bases: synthesis, structural analysis, DFT computational studies and *in vitro* biological activities

Segun D. Oladipo* and Robert C. Luckay*

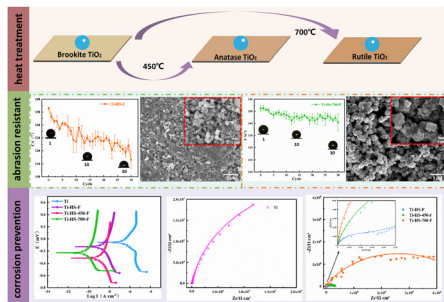
13289



Feasibility of multiple excited-state proton transfer processes in hydroxyquinoline-containing benzobisimidazole dyes

Tatiana Munteanu, Dancho Yordanov, Gabriel Canard, Olivier Siri,* Denis Jacquemin,* Anton Georgiev* and Simon Pascal*

13296



Durable medical pure titanium superhydrophobic surface: preparation and performance analysis

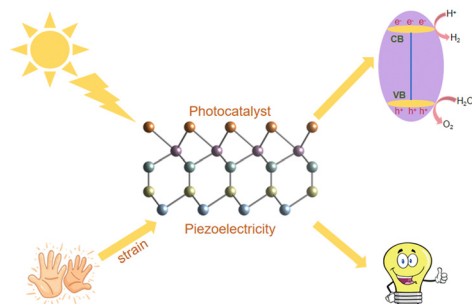
Xiaoya Guan, Yi Peng,* Bing Wu, Hang You and Chong Yang



13305

Two-dimensional Janus SeMoZAZ' (A = Si, Ge; Z = N, P, As; Z ≠ Z'): multifunctional properties for electronic, piezoelectric and photocatalytic applications

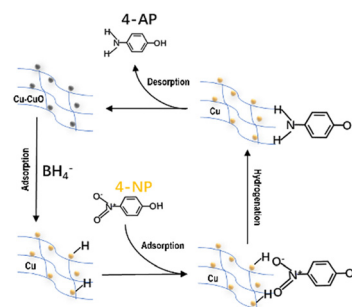
Zhen Gao, Hongbo Wu, Yao He* and Kai Xiong*



13316

In situ green synthesis of copper-loaded chitin/hydroxyapatite hydrogels for efficient catalytic reduction of 4-nitrophenol

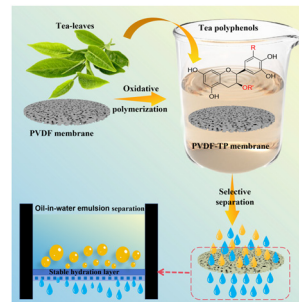
Tao Feng,* Yinyu Chen, Si Wu* and Shuai Wang



13324

Simple temperature-regulated polymerization for the fabrication of a tea polyphenols-modified PVDF membrane for emulsion separation

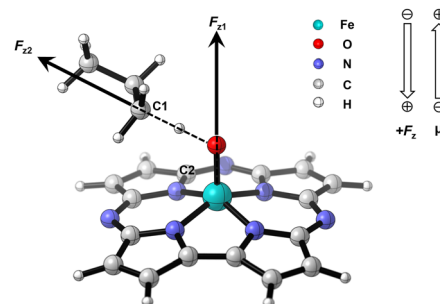
Atian Xie, Lei Lu, Can Wei, Jirong Luo, Tong Tian, Feiyan Wang, Quan Li, Jiaheng Pu, Jiuyun Cui* and Chengcai Li*



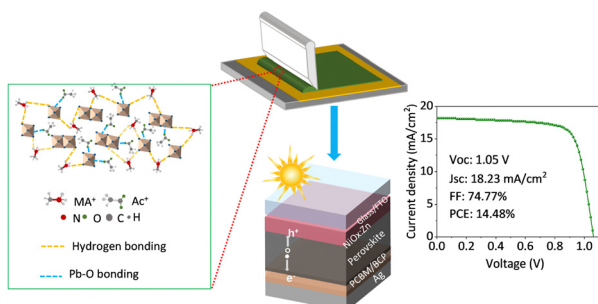
13335

OEEFs precisely regulating the propane oxidation reaction catalyzed by O-Fe-corrolazine

Cheng-Cheng Song, Lei Yang, Wei Yang, Xian Bai, Jin-Xia Liang,* Haiyan Wang* and Chun Zhu*



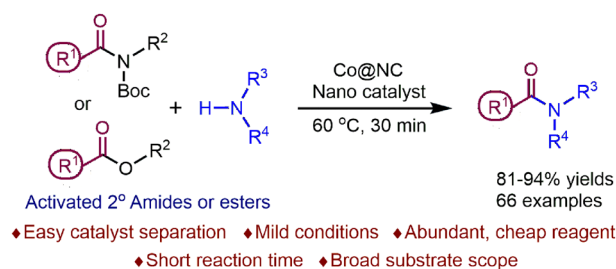
13342



A green ionic liquid solvent for additive-free, efficient and stable bladed perovskite solar cells under ambient conditions

Huanqin Yu* and Bingqiang Cao*

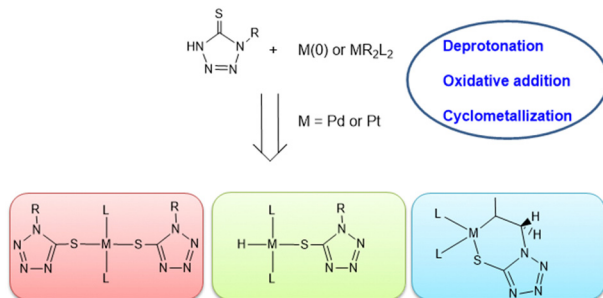
13350



Transamidation of secondary carboxamides and amidation of esters are facilitated by magnetic Co@NC nanoparticles, as a highly efficient and recyclable catalyst under neat conditions

Vishal Singh, Khushbu Rajput, Priya Mahaur, Sundaram Singh and Vandana Srivastava*

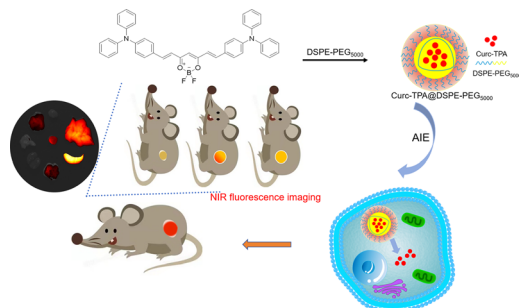
13358



Facile formation of tetrazole–thiolato Pd(II) and Pt(II) complexes through deprotonation or oxidative addition using organic tetrazole–thiones

Hyoung Soon Kwon, Geon Hyeong Park, Huiyeong Ju, Eunji Lee and Yong-Joo Kim*

13373



Nanoconstruction of curcuminoid boron difluoride dyes with aggregation-induced emission for bright near-infrared fluorescence imaging of malignant tumor

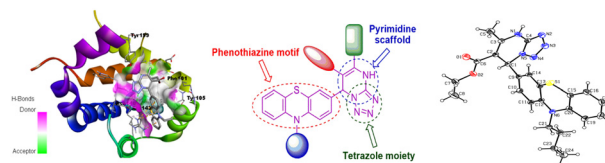
Ziwei Zhao, Susu Yan and Yanan Li*



13384

Tetrazolopyrimidine-tethered phenothiazine molecular hybrids: synthesis, biological and molecular docking studies

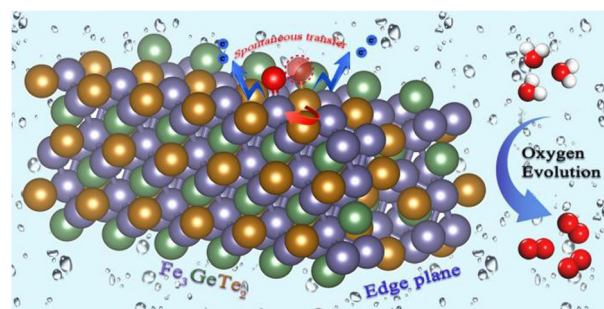
Shunmugam Iniyaval, Vadivel Saravanan, Chun-Wai Mai and Chennan Ramalingan*



13397

Active site transfer improves electrocatalytic activity of Fe_3GeTe_2 edge planes for the oxygen evolution reaction: a first-principles calculation study

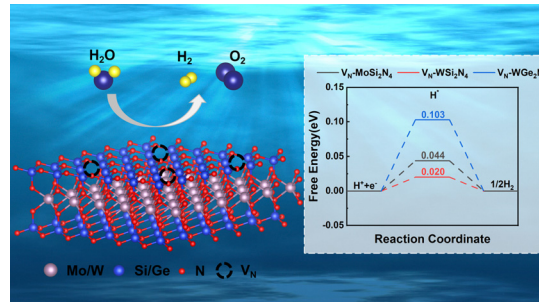
Wei Su, ZongXiang Kang, QiuHong Li and Jing Pan*



13405

Exploiting MoSi_2N_4 , WSi_2N_4 and WGe_2N_4 monolayers for efficient photocatalytic overall water splitting across a broad pH range

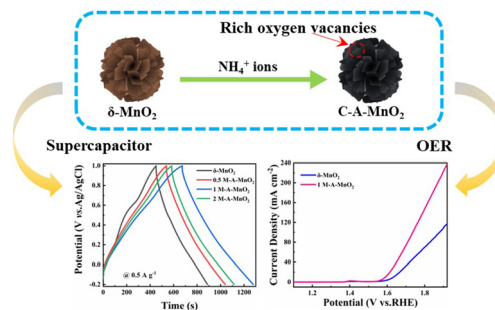
Xuhui Yang,* Hang Xue and Luteng Luo



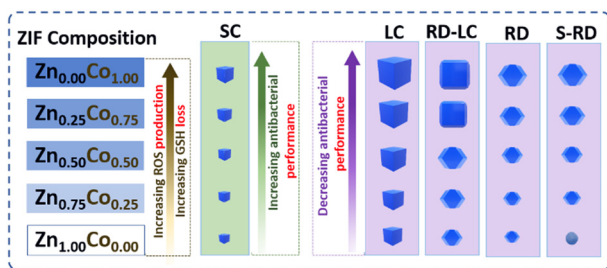
13413

Ammonium ion intercalation and oxygen-rich vacancies in birnessite-type MnO_2 for supercapacitors and oxygen evolution applications

Juyin Liu, Xiaoze Ren, Yanfang Gao* and Ling Liu*



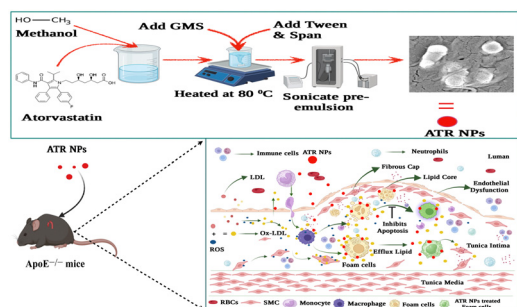
13428



Morphology-size map of zeolitic imidazolate frameworks: unveiling the bactericidal effects upon varying their zinc/cobalt ion contents

Ruth Antwi-Baah, Malcom Frimpong Dapaah, Yajing Wang, Xiaoqin Chen* and Heyang Liu

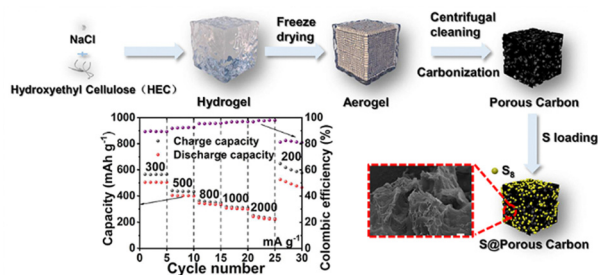
13444



Atorvastatin-based nanoparticle-decorated glyceryl monostearate as a targeted drug carrier for inhibition of atherosclerosis lesions

Sandeep Kumar Yadav, Karri Karthik, Manjunatha Mahadevappa and Soumen Das*

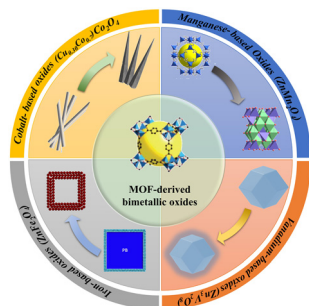
13457



S@C composites constructed by a graded pore-making strategy for Mg–S batteries with outstanding rate performance

Peng Xue, Pengpeng Wang, Xuyan Qin, Zhikai Wang, Xi Jia and Wutao Wei*

13466



Metal–organic framework-derived bimetallic oxides as anode materials for lithium-ion batteries: a mini review

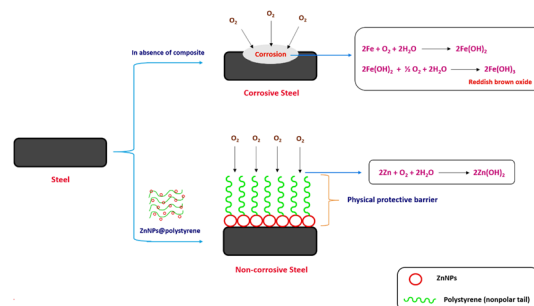
Yingchun Guan, Zichen Guo, Shengjun Zhou, Zhanpeng Chen, Kang Xu, Xiaoke Zhang, Xiaoming Lin* and Yongbo Wu*



13475

Novel advancements in protection of steel surfaces using polystyrene supported nanoparticles of metallic zinc as sacrificial corrosion inhibitors

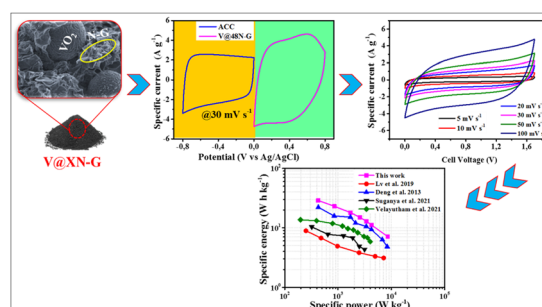
Ahmed M.A. El Naggat, Esraa M. El-Fawal,* Mohamed I. Abd el Karim, Adel A. El-Zahhar, Mohamed H. Taha, Ahmed M. Ramadan and Hanan B. Ahmed



13492

Enhancement of the electrochemical properties of vanadium dioxide via nitrogen-doped reduced graphene oxide for high-performance supercapacitor applications

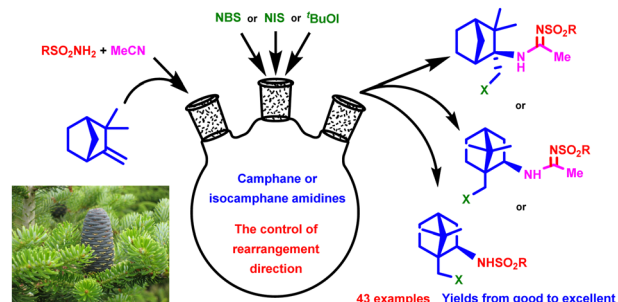
Samba Sarr, Daba T. Bakhom, Ndeye F. Sylla, Ndeye M. Ndiaye, Delvina J. Tarimo, Vusani M. Maphiri, Balla D. Ngom and Ncholu Manyala*



13506

Halosulfonamidation of camphene: chemo and stereoselectivity, rearrangement, solvent interception, heterocyclization

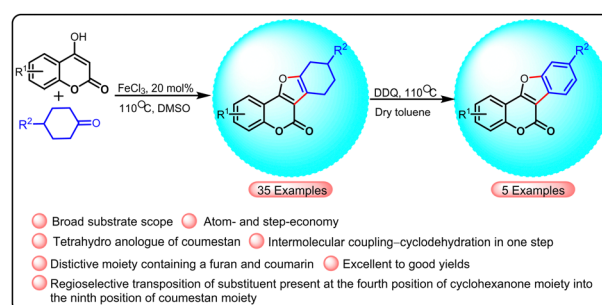
Mikhail Yu. Moskalik,* Ivan A. Garagan, Bagrat A. Shainyan, Olga I. Yarovaia, Anton S. Ganin, Vera V. Astakhova, Irina V. Sterkhova, Sergey V. Zinchenko, Nariman F. Salakhutdinov and Amirbek D. Radzhabov



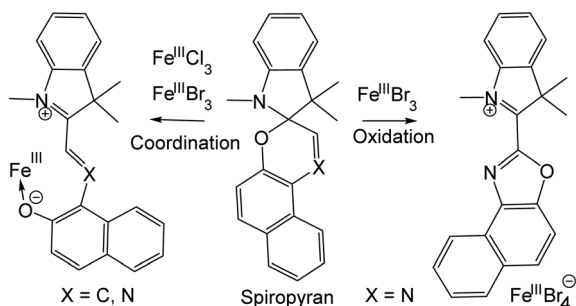
13514

A short and elegant synthetic approach for 9-substituted tetrahydro coumestan derivatives and synthesis of some naturally occurring coumestan derivatives

Simra Faraz and Abu Taleb Khan*



13526



Coordination vs. oxidative rearrangement of photochromic spiropyrans upon reacting with $\text{Fe}^{\text{III}}\text{Cl}_3$ and $\text{Fe}^{\text{III}}\text{Br}_3$

Nikita G. Osipov, Maxim A. Faraonov, Alexey V. Kuzmin, Salavat S. Khasanov, Alexander F. Shestakov, Nikolay N. Denisov, Tatiana A. Savinykh, Akihiro Otsuka, Hiroshi Kitagawa and Dmitri V. Konarev*

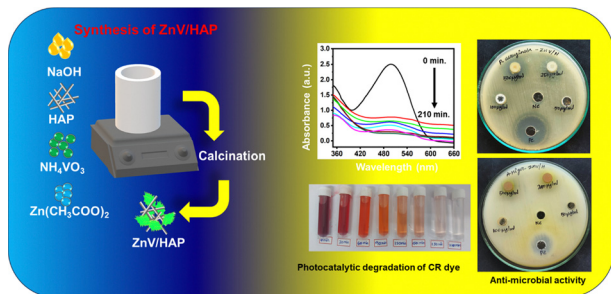
13538



Decaying leaves turn into energy: empowering high-energy-density lithium–sulfur batteries

Xiao Wang, Yaozu Jia,* Di Wang, Xinzhi Ma,* Hongxu Su, Qiong Gao and Zhikun Xu*

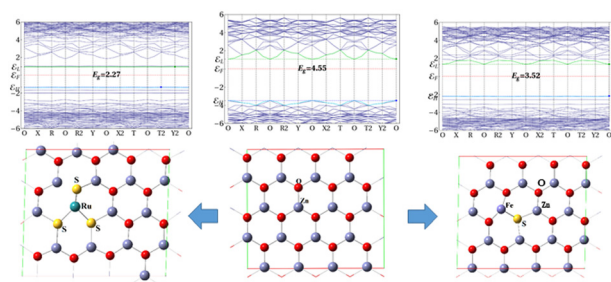
13544



Interface engineering of $\text{Zn}_3\text{V}_2\text{O}_8$ decorated hydroxyapatite nanocomposite for photocatalytic degradation of Congo red dye and anti-microbial applications

I. Betsy Elizabeth, Elaiyappillai Elanthamilan, Sea-Fue Wang* and I. Sharmila Lydia*

13557



Enhancing ZnO monolayer nanosheets for photocatalysis: the role of FeS_n and RuS_n ($n = 0-3$) doping in electronic and structural properties

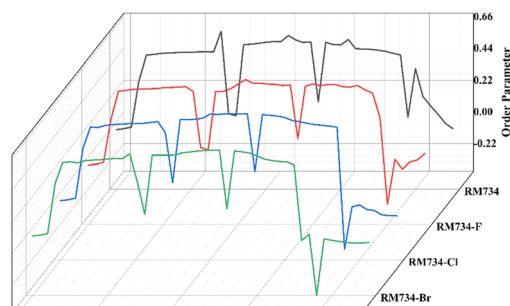
Hamidreza Jouypazadeh and Esmail Vessally*



13566

Variations in the charge-transport, nonlinear optical, and electro-optical properties of RM734 due to halogenation: a quantum mechanical study

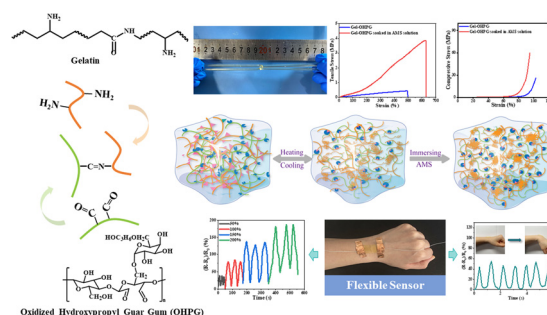
Manish Kumar, Mirtunjai Mishra, Devesh Kumar* and Devendra Singh*



13577

A fully biobased tough hydrogel derived from guar gum and gelatin as a flexible sensor

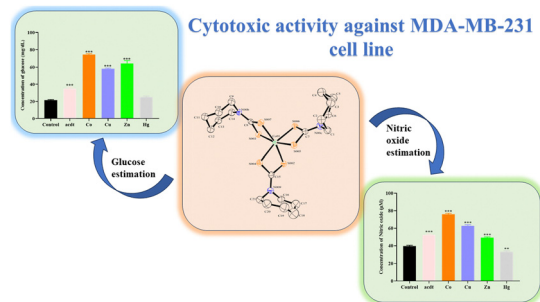
Zixuan Wei, Hongxin Zhou, Yingying Meng, Ting Wu,* Junjie Li* and Yuping Wei*



13589

Design, synthesis, and structural evaluation of metal complexes of azepane-1-carbodithioate for targeting human breast cancer: investigating cytotoxic activity against the MDA-MB-231 cell line

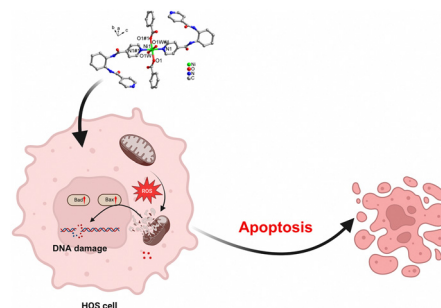
Shubham Jaiswal, Nilesh Rai, Suryansh Chandra, Ashish Verma, Vibhav Gautam, Manu Adhikari, Sanjay Singh and M. K. Bharty*



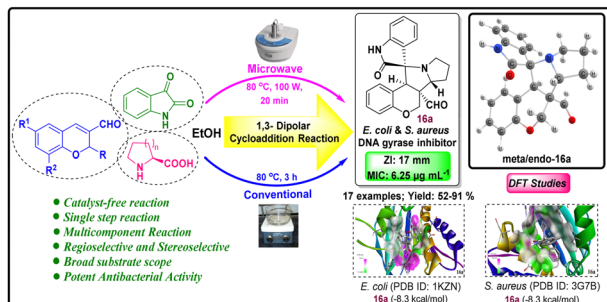
13602

A novel Ni-based complex inducing apoptosis through mitochondrial dysfunction in osteosarcoma HOS cells

Xiao-Dong Liu, Pei-Xin Liu, Zhong Zhang, Li-Long Li, Jian Luan* and Yi Qin*



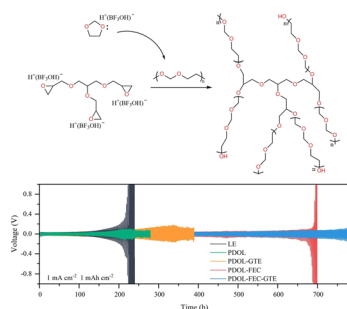
13609



[3+2] Cycloaddition mediated synthesis of spirooxindole pyrrolidine/piperidine fused chromene aldehyde derivatives: DFT studies, antibacterial evaluation and molecular docking investigation as DNA gyrase inhibitors

Jasmine Panda, Bishnu Prasad Raiguru, Sabita Nayak,*
 Suhasini Mohapatra, Seetaram Mohapatra,
 Saiprakash Rout, Pranay Mohanty,
 Himansu Sekhar Biswal, Debdutta Bhattacharya and
 Chita Ranjan Sahoo

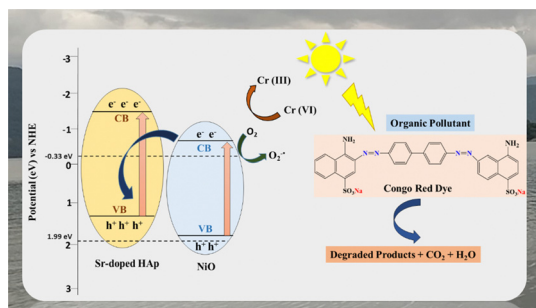
13631



A glycerol triglycidyl ether cross-linker assisting an *in situ* thermally polymerized gel polymer electrolyte for advanced lithium metal batteries

Hao Huang, Linyun Yi, Xiaoxiao Chen, Chaohui Wei,
 Aijun Zhou, Yuehui Wang and Jingze Li*

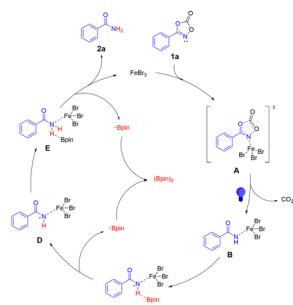
13639



Development of a hydroxyapatite-based composite: Sr-doped HAp/NiO proven to be an efficient nanocatalyst for photocatalytic degradation of organic dye and photoreduction of Cr(vi)

Linkon Bharali, Susmita Sahu, Juri Kalita and
 Siddhartha Sankar Dhar*

13654



Visible-light-induced Fe(III)-promoted reduction amidation of 1,4,2-dioxazol-5-one

Bosen Wang, Hao Li, Minmin Liu, Jiayi Lin,
 Chenglei Yang, Zhongkai Zhao, Dianjun Li* and
 Jinhui Yang*



CORRECTION

13659

Correction: Synthesis of template-free magnetite nanospheres grown on Sb_2WO_6 hierarchical structures for sunlight-driven photo-Fenton catalysis of organic pollutants

Abeer A. AlObaid, Vipin Bihari Shrotriya, Girraj Sharma, Ghazanfar Nazir and Zia Ul Haq*

