

## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 50(1) 1-588 (2026)



## Cover

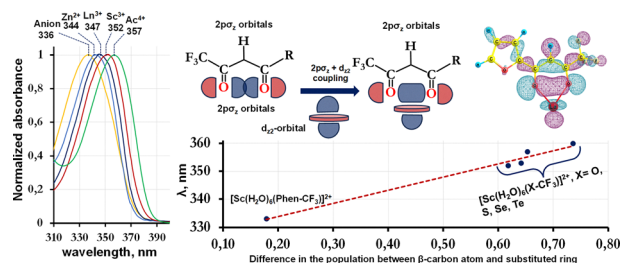
See Tianchi Li,  
Weifang Zheng  
et al., pp. 34–46.  
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*New J. Chem.*,  
2026, 50, 34.

## COMMUNICATIONS

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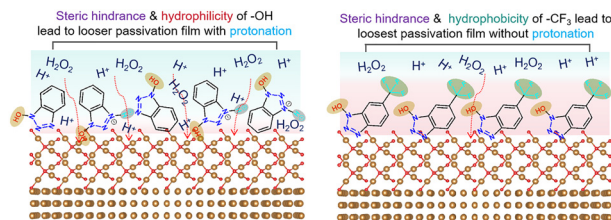
On the nature of the red shift in absorption spectra of  $\beta$ -dicarbonyl chelates

Maxim A. Lutoshkin



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## Effects of hydroxyl and trifluoromethyl substituents on the corrosion inhibition of benzotriazole derivatives in copper surface planarization

Anguo Zhang, Xinyu Li, Yuhan Chen, Chun Cao,\*  
Chunjing Shi and Jianting Liu

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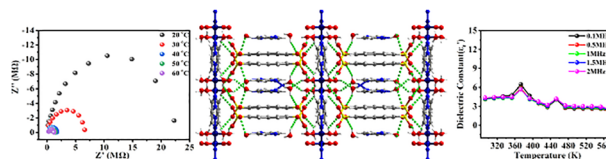


## COMMUNICATIONS

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### Proton conductivity and dielectric anomalies in a chain-based metal–organic framework with a hydrogen-bonded network of [SO<sub>3</sub>] groups, pyrazine and water molecules

Jiechen He, Feirong Chen, Chenxin Lin, Yaozong Chen, Lizhen Liu\* and Zizhu Yao\*

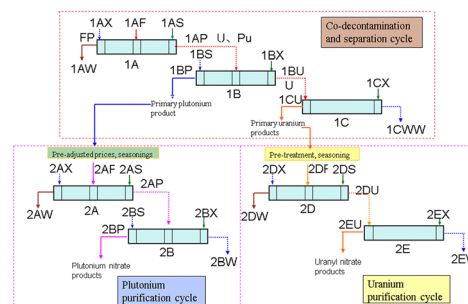


## PAPERS

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### Impact of various reductants on Pu(III) stability in the organic phase and its distribution ratio in a biphasic system

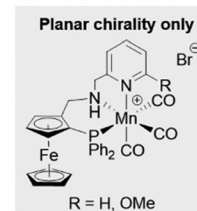
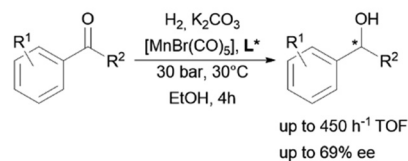
Xuemei Sun, Zhi Cao, Chen Zuo, Qi Chen, Tianchi Li\* and Weifang Zheng\*



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### Asymmetric hydrogenation of ketones with planar chiral manganese(I) complexes

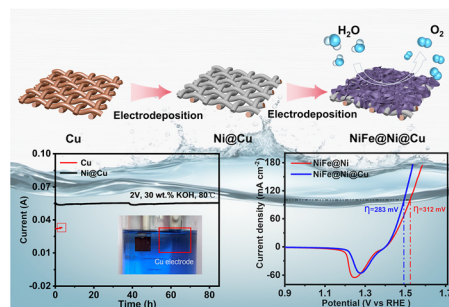
Runqian Yang, Uchchhal Bandyopadhyay, Sonia Mallet-Ladeira, Rinaldo Poli,\* Eric Manoury\* and Agnès Labande\*



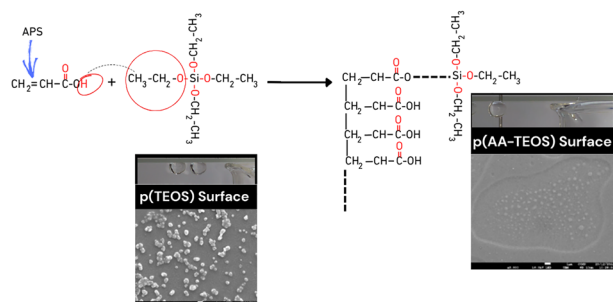
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### High-conductivity NiFe@Ni@Cu composite electrodes for durable and efficient industrial oxygen evolution

Yequan Zhu, Xiaoman Zheng, Shuo Ming, Huaizi Li, Xinya Han, Yu Wang,\* Huiying Li and Zhenwei Wang\*



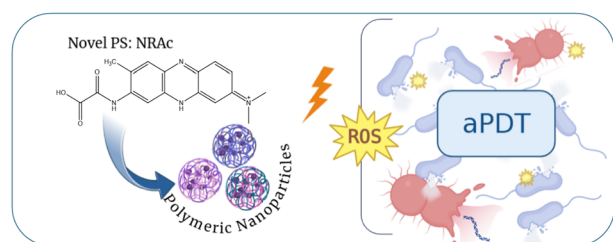
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### Simultaneous radical and condensation polymerization for the fabrication of cost-effective, transparent, and underwater oil-repellent hybrid films

Elcin Eroglu, Sema Nur Belen, Candan Cengiz and Ugur Cengiz\*

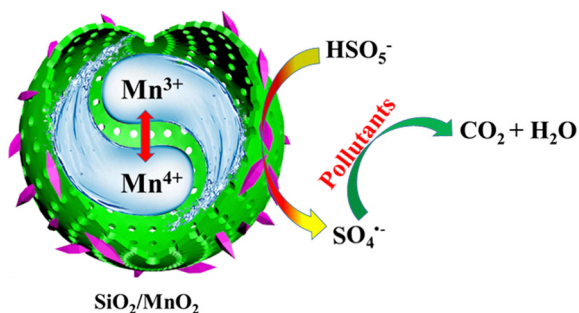
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### A novel neutral red derivative loaded into polymeric nanoparticles: study of its photoinactivation against *Staphylococcus aureus*

Luciana Pereyra, Virginia Aiassa, Cecilia Alvarez Igarzabal, Jimena Vara, Cristina Ortiz\* and Maria S. Gualdesi\*

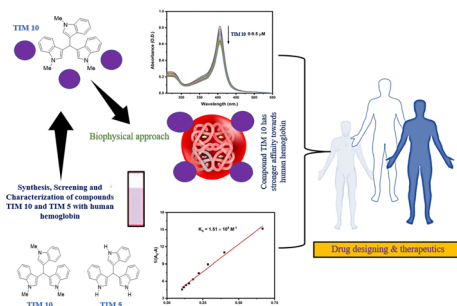
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### Hollow $\text{SiO}_2/\text{MnO}_2$ structures for efficient and stable degradation of phenol and tetracycline under low-oxidant conditions

Yanting Zhang, Manni Li, Rui Zhao, Zhengliang Yin, Kun Zhang, Qingchao Liu and Zeyu Wang\*

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### Synthesis of tris-indolylmethanealkaloids by harnessing the nucleophilic reactivity of Indole-BX and studying their interactions with hemoglobin

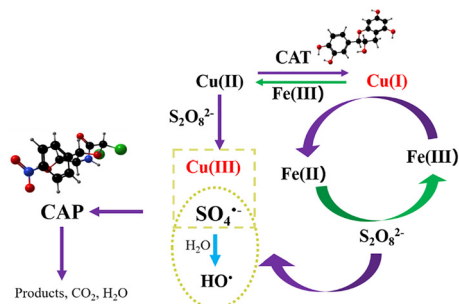
Sukanya Das, Mangal Deep Burman, Sagar Bag, Ranjit Soren, Brindaban Roy, Sudipta Bhowmik\* and Raj K. Nandi\*



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### Synergistic activation of persulfate by Cu(II) and Fe(III) enhanced with catechin for chloramphenicol removal from soil

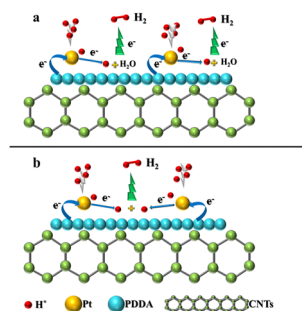
Yanlin Wu,\* Ruixin Ji, Tian Qiu, Olivier Monfort,\*  
Wenbo Dong and Jie Guan



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### Synergistic charge transfer and proton enrichment in Pt/PDDA-modified CNTs for enhanced hydrogen evolution reaction

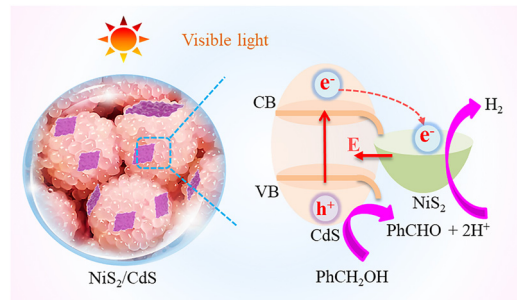
Yuxue Dai,\* Dayong Song, Mingju Wang, Lianyu Zhang,  
Yong Zhang, Wenwen Liu,\* Xuejing Liu and  
Chuannan Luo



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### Stable photocatalytic H<sub>2</sub> production and selective oxidation of phenylcarbinol *via* regulating charge separation over NiS<sub>2</sub>/CdS under visible light

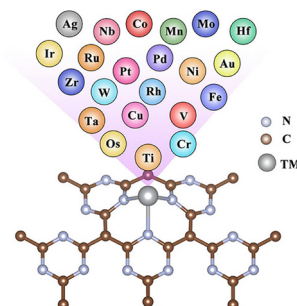
Zhenyu Liu,\* Zhenyu Zhang, Yaming Zhao, Cheng Xue,  
Chenggong Gong, Canghao Li, Weisheng Liu\* and  
Felipe de Jesus Silerio-Vázquez



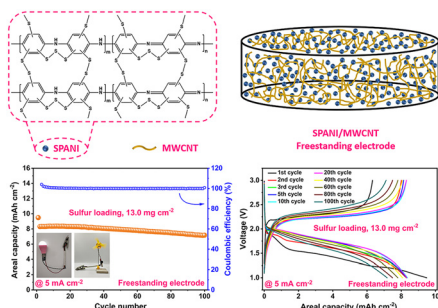
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### Unraveling the electronic origin of high activity and selectivity of single-atom catalysts for NO electroreduction

Huizi Niu, Jingwei Liu,\* Yuejie Liu\* and Jingxiang Zhao



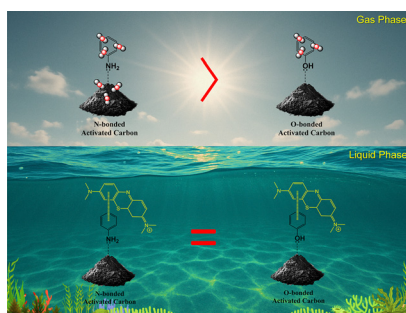
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### A high-sulfur-loading freestanding SPANI/MWCNT electrode for high-performance lithium–sulfur batteries

Caiyu Yang, Zhongxiang Zheng, Longlong Ma, Yayang Tian, Qiyun Pan, Peiyue Yang, Wenfei Wu, Ziyang Yang, Yanting Ye, Dabe Wu, Yi Cao, Jinnan Xuan, Nanfeng Xu, Lun Yang and Zhong Li\*

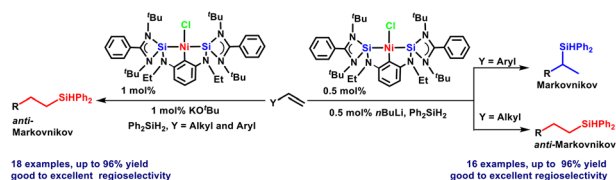
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### Comparative mechanistic study of nitrogen- and oxygen-functionalized activated carbons for dual-phase adsorption

Chandresh Bari, Sagnik Mukherjee, Harshal Kulkarni, Rahulbhai Parmar and Govind Sethia\*

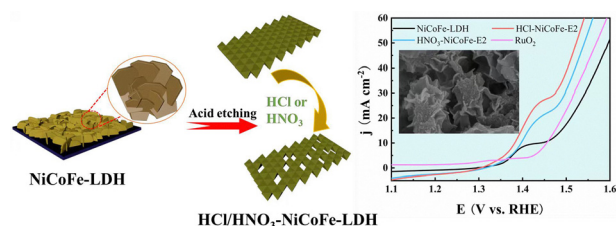
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### Additive-controlled selective hydrosilylation of aryl alkenes catalyzed by bis(silylene) pincer nickel(II) chloride

Ziyang Yang, Qingqing Fan, Xiangxu Zhang, Xiaoyan Li and Hongjian Sun\*

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### Acid-etched defective NiCoFe layered double hydroxides for enhanced oxygen evolution reaction

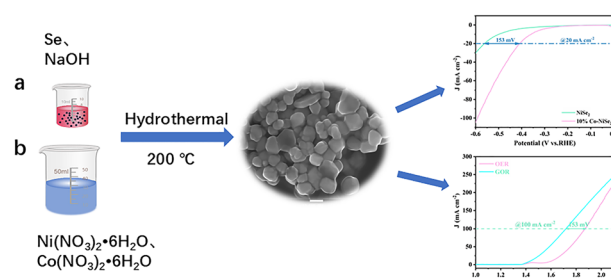
Yue Xu, Xiaopeng Yu,\* Shixiong Hao and Ying Lei



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## Co doping modulates the electronic structure of nickel diselenide and promotes the simultaneous occurrence of glycerol oxidation and hydrogen evolution reactions

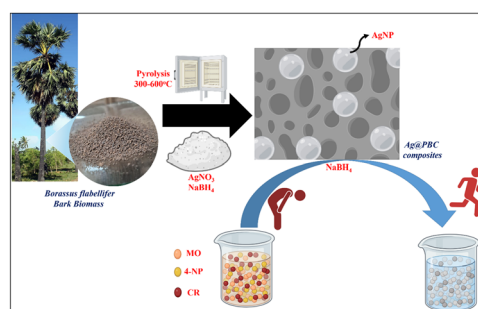
Hanbin Jin, Xiaoling Zhou, Lulu Guo, Qingtao Wang\* and Yanxia Wu\*



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## Biochar–silver nanocomposites derived from *Borassus flabellifer* bark for rapid catalytic reduction of organic pollutants in wastewater

Abraham Stuvart, Thesingu Rajan Arun\* and Natarajan Raman

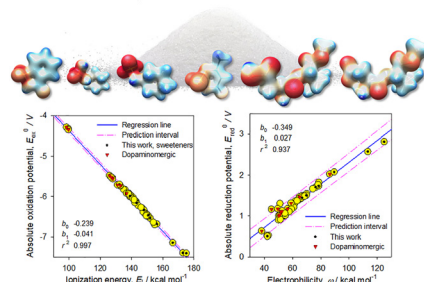


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## Molecular properties of artificial sweeteners in water

Cyril Rajnák,\* Juraj Štofko and Roman Boča\*

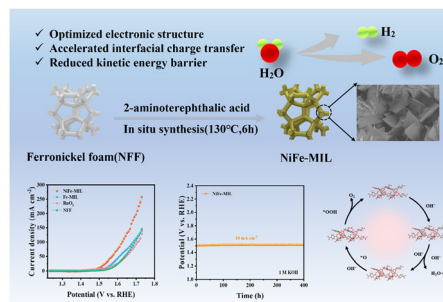
Molecular Properties of Artificial Sweeteners in Water



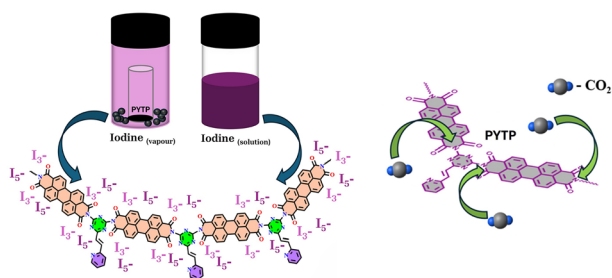
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## Construction of self-supporting bimetallic organic framework electrocatalysts and investigation of their electrocatalytic oxygen evolution reaction performance

Yixuan Cheng, Yanan Wang, Yuhan He, Wei Jiang, Yuanyuan Wu, Yantao Sun, Chunbo Liu, Guangbo Che,\* Xianyu Chu\* and Xingjing Zhang\*



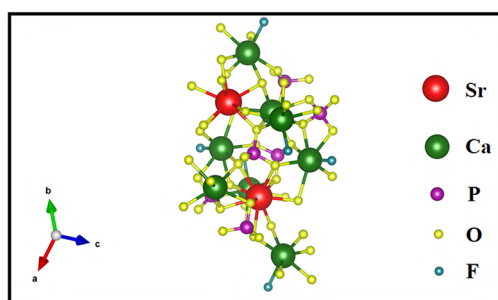
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### Design of a nitrogen-rich perylene-triazine porous organic polymer for iodine and CO<sub>2</sub> adsorption

P. Anupriya and S. Karpagam\*

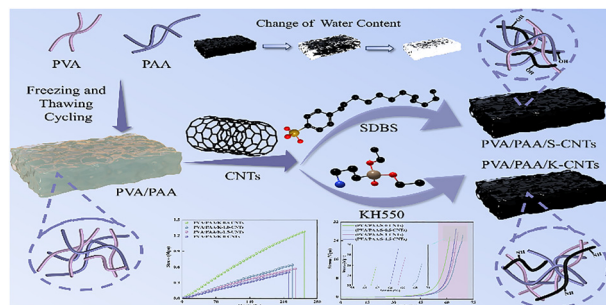
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### Spectroscopic analysis of Sr<sub>6</sub>Ca<sub>4</sub>(PO<sub>4</sub>)<sub>6</sub>F<sub>2</sub>:Dy<sup>3+</sup>/Eu<sup>3+</sup> phosphors for color-tunable LED applications

A. V. Bharati,\* Shreya Bharati and Sudha Ramnath

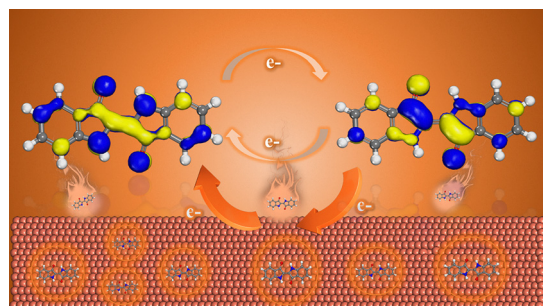
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### Novel polyvinyl alcohol/polyacrylic acid hydrogels achieve excellent electromagnetic shielding by the modification of CNTs

Teng Zhou, Kunlan Diao, Daohai Zhang,\* Yupeng Hu, Jiajia Du, Zhi Lei, Dongju Liu, Kaixiang Zou\* and Shuhao Qin\*

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### Theoretical studies of the additives for copper electroplating in PCB by DFT and MD simulations

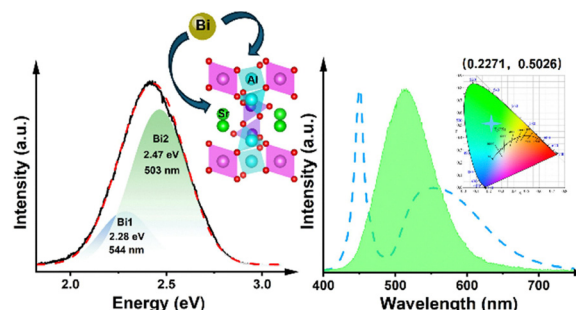
Wenjing Gao, Boyu Gao, Yiding Zhao, Yumeng Lu, Renhong Chen, Maozhong An and Anmin Liu\*



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### Bi<sup>3+</sup>-activated Sr<sub>3</sub>SbAl<sub>3</sub>Ge<sub>2</sub>O<sub>14</sub>: dual-site occupancy and broadband cyan emission for WLED spectral compensation

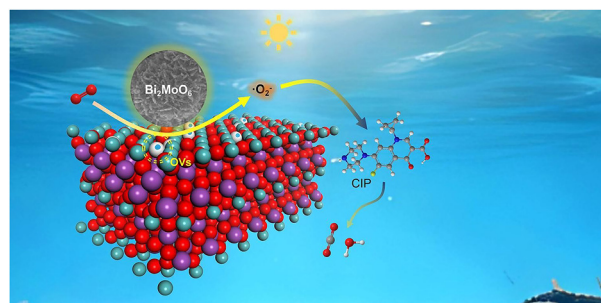
Junjie Chen, Yuxiao Ji, Kaiwen Li, Jiawen Li, Jiashun Bai and Xingxing Sheng\*



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### Solvent and temperature-mediated nanoarchitectonics of hierarchical Bi<sub>2</sub>MoO<sub>6</sub> for efficient antibiotic degradation

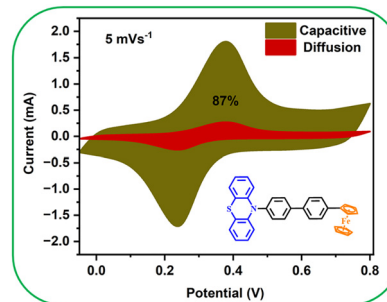
Shilin Li, Yunhui Tian, Guangxin Zhang\* and Xiangnan Wang\*



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### Ferrocenyl-functionalized phenothiazine conjugates: structure–property relationship and electrochemical energy storage studies

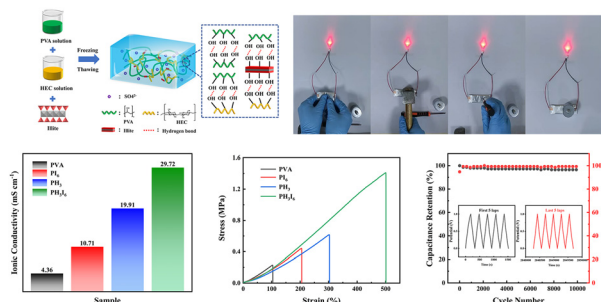
Deeksha Gupta, Nikhil Ji Tiwari, Vivak Kandpal, Prabal Pratap Singh and Rajneesh Misra\*



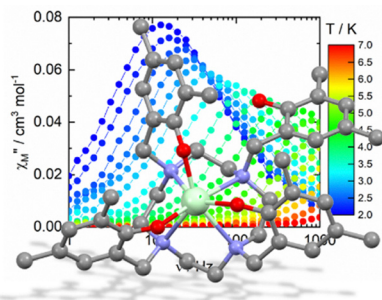
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### Synergistic crosslinking effect of illite and hydroxyethyl cellulose on improving the properties of PVA based hydrogels

Yansong Li, Zhenlin Zhong, Siyu Lv, Jing Wen, Fangfei Li and Bing Xue\*



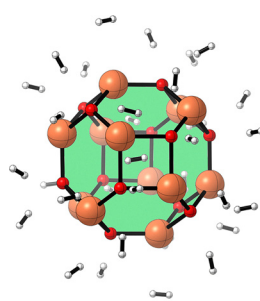
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### Structural and magnetic properties of lanthanide–tetraphenol–cyclen complexes: slow magnetic relaxation of the Nd(III) complex

Salah S. Massoud,\* Febee R. Louka, Thierry Guizouarn, Roland C. Fischer,\* Ana Torvisco, Franz A. Mautner, Asia M. Smith, Nahed M. H. Salem, Gunasekaran Velmurugan, Peter Comba\* and Fabrice Pointillart\*

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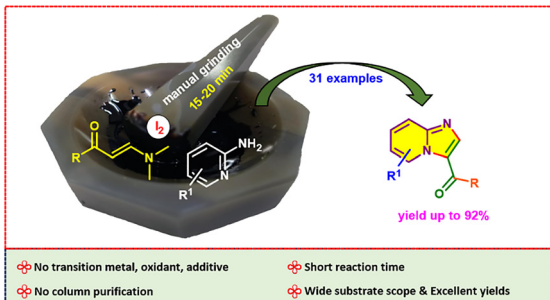
### Ca<sub>12</sub>O<sub>12</sub> nanocage for hydrogen storage

- ✓ Stable **endohedral** and **exohedral** adsorption sites
- ✓ Strongest **cooperativity** at 13 H<sub>2</sub>
- ✓ Maximum **uptake** = 9.24 wt % (34 H<sub>2</sub>)
- ✓ Favorable enthalpies for **reversible physisorption**

### Engineering high-capacity hydrogen storage in pristine Ca<sub>12</sub>O<sub>12</sub> nanocages *via* cooperative adsorption

Saeedeh Kamalinahad, Aritra Roy, Pablo Gamallo\* and Felipe Fantuzzi\*

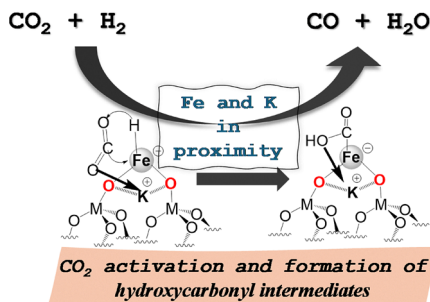
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### Fusion of β-enaminones and 2-aminopyridines to 3-oxyl-imidazo[1,2-a]pyridines induced by iodine: a mechanochemical approach

Medishetti Nagaraju, Chintha Saikrishna and Atmakur Krishnaiah\*

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### The effect of the nature of supports on the selective reduction of CO<sub>2</sub> to CO catalysed by a supported single-site heterobimetallic iron–potassium complex

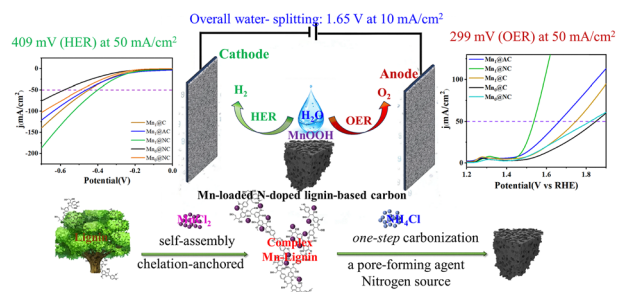
Abdulrahman Adamu Isah, Yahaya Nasiru, Fadila Hamachi, Jie Pan, Kai C. Szeto, Pierre-Yves Dugas, Cyril Godard,\* Aimery De Mallmann and Mostafa Taoufik\*



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### Fabrication of manganese-loaded lignin-derived carbon via an *in situ* anchoring strategy for water electrolysis

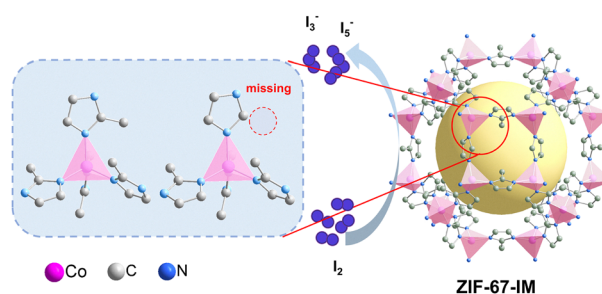
Yang Huamei, Wang Beilei, Yu Mengjun, He Haiyan and Li Changzhi\*



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### Fine-tuning of ZIF-67 pore sizes via ligand exchange: optimal active site interactions for iodine capture

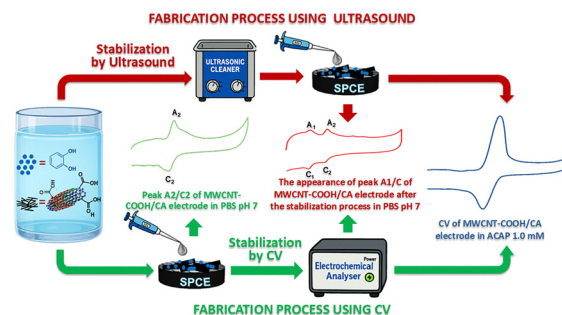
Le Chen, Jianjun Yin, Lin Nie, Junyan Qian, An Xie, Pengxiang Qiu,\* Junfeng Qian,\* Qun Chen and Zhihui Zhang\*



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### Immobilization of stable catechol form on the SPCE surface to enhance hydrophilicity, reusability, and application for acetaminophen analysis

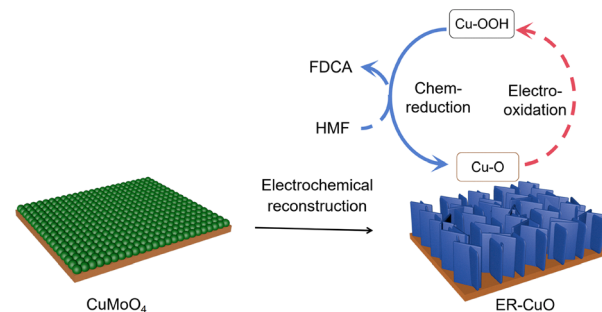
Thanh-Truc Huynh, Dang Viet Anh Dung, Khanh-Linh Kieu, Anh V. T. Le\* and Shu-Hua Cheng\*



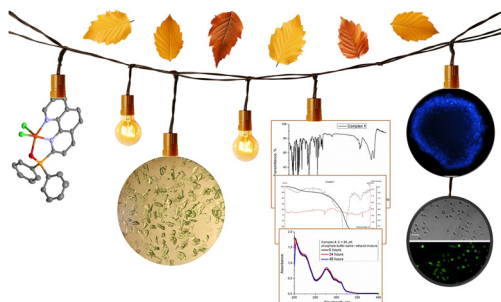
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### Electrochemical reconstruction of CuMoO<sub>4</sub> into CuO nanosheets for efficient electro-oxidation of 5-hydroxymethylfurfural

Kaiyue Yan, Junxiang Wang,\* Yukun Wan, Xinru Yu and Ruixiang Ge\*



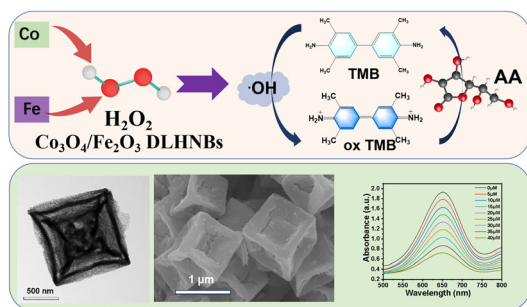
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### Copper(II) complexes with a hybrid phosphinyl-phenanthroline ligand: synthesis, crystal structures and effect of phosphinyl functionalization on the cytotoxicity

P. E. Savinykh, Yu. A. Golubeva,\* K. S. Smirnova, L. S. Klyushova, E. H. Sadykov, A. V. Artem'ev and E. V. Lider\*

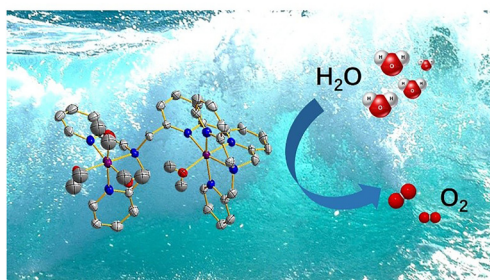
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### ZIF-derived $\text{Co}_3\text{O}_4/\text{Fe}_2\text{O}_3$ dual-layer hollow nanoboxes as bimetallic nanozymes for detection of hydrogen peroxide and ascorbic acid

Rongguan Lv, Mengting Shao, Yuan Xiao, Shufei Liu, Yongjun He, Jingjing Jiang,\* Haiyan Yu, Fang Guo,\* Ming Chen\* and Guowang Diao

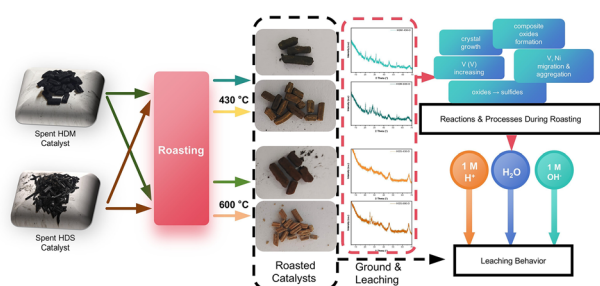
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### Synthesis, characterization and electrocatalytic activity of a novel binuclear polypyridine nickel complex

Jinfeng Dong, Zhichao Qi, Lianghui Zhang, Qianqian Li,\* Junqi Lin\* and Yanbo Qu\*

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### Influence of roasting on the structure and leaching behavior of spent residue hydrotreating catalysts

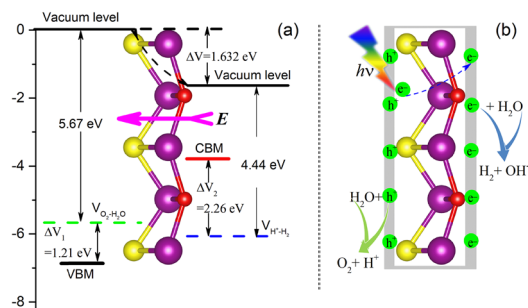
Yang Bai, Ning Pu,\* Qinghe Yang, Zhen Wang, Jianing Huo, Anpeng Hu and Dawei Hu\*



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### Janus $\text{Mn}_2\text{OS}$ monolayers with piezoelectric altermagnetism and their application in photocatalytic water splitting

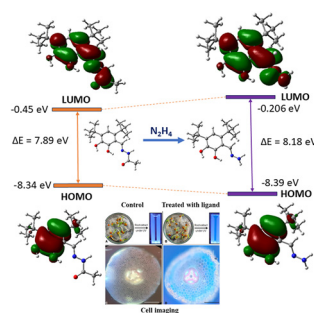
Wen-Zhi Xiao



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### Mechanistic elucidation of irreversible chemodosimetric sensing of hydrazine through structural, computational, and bioimaging analyses

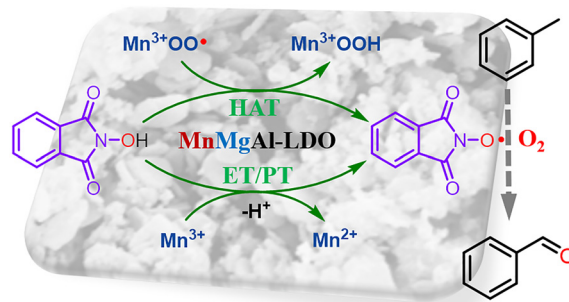
Priyanka Avala, Malavika S Kumar, Avijit Kumar Das,\*  
Ankan Sardar, Tilak Raj Maity, Aavek Samanta and Malay Dolai\*



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### A Mg-doped manganese-based layered double oxide catalyst realizes the highly selective oxidation of toluene derivatives to aldehydes

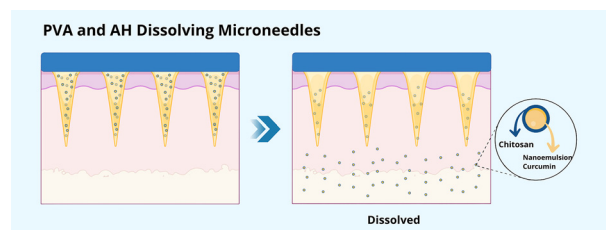
Deqin Liang, Yu Wang, Xiaojing Yin, Ziyang Liu, Jizhou Du,  
Junfeng Qian, Mingyang He\* and Weiyou Zhou\*



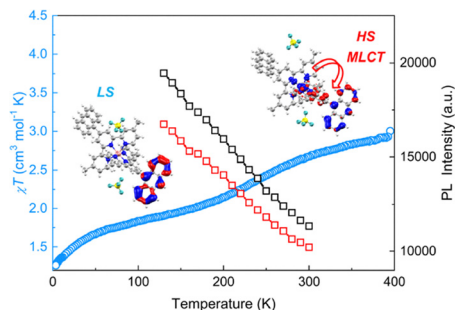
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### Fabrication and evaluation of polymeric microneedles containing a chitosan-coated curcumin nanoemulsion: structural characterization and transdermal performance

Winda Trisna Wulandari, Mia Ledyastuti,  
Marselina Irasonia Tan and I Made Arcana\*



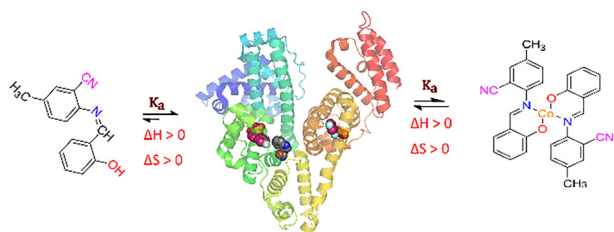
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### Construction of SCO-fluorescence bifunctional cobalt(II) complexes with anthracene-decorated terpy ligands

Yi-Ming Zhao, Duyong Chen, Cheng Yi, Ren-He Zhou, Ming-Yang Fu, Jing Li, Li-Yan Zhang, Rui Cai, Yin-Shan Meng\* and Tao Liu\*

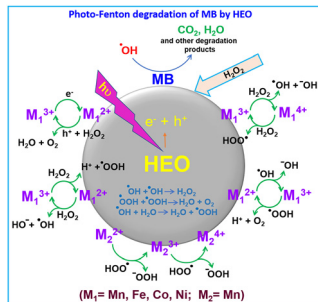
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### Binding thermodynamics of (*E*)-2-((2-hydroxybenzylidene)amino)-5-methylbenzonitrile and (*E*)-2-((2-hydroxybenzylidene)amino)-5-methylbenzonitrile cobalt(II) with HSA: an experimental and molecular dynamic study

Sheldon Sookai,\* Ibrahim Waziri, Alfred J. Muller and Monika Nowakowska\*

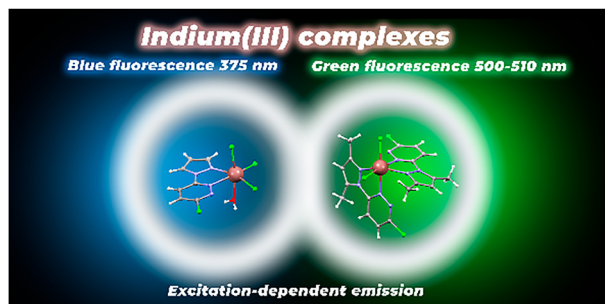
487



### Efficient photo-Fenton degradation of an organic dye by reusable magnetic (Al<sub>0.6</sub>Mn<sub>0.6</sub>Fe<sub>0.6</sub>Co<sub>0.6</sub>Ni<sub>0.6</sub>)O<sub>4</sub> high entropy oxides

Sanjula Pradhan, C. Mohapatra, Bijaideep Dutta, K. C. Barick, M. Vasundhara and N. K. Prasad\*

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### Synthesis and luminescence of indium(III) complexes with (1*H*-pyrazol-1-yl)pyridazines

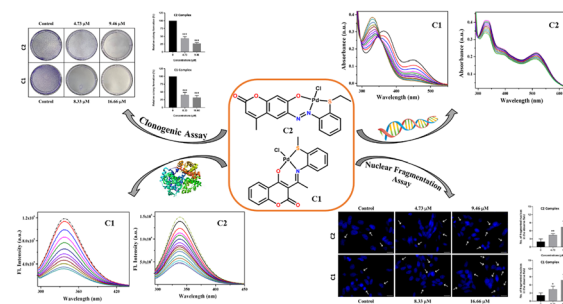
Evgeniia S. Sedykh, Iakov S. Fomenko,\* Veronika I. Komlyagina, Katerina A. Vinogradova, Mariana I. Rakhmanova and Artem L. Gushchin\*



509

### Newly developed palladium complexes featuring ONS donor ligands: synthetic method, characterization, CT-DNA interaction analysis, BSA protein binding study and *in vitro* cytotoxicity

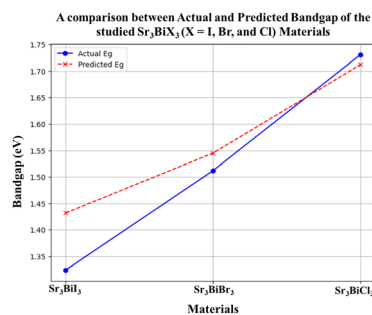
Arpan Halder, Akash Das, Subhabrata Guha, Gaurav Das, Rahul Naskar and Tapan K. Mondal\*



522

### First-principles analysis of eco-friendly $\text{Sr}_3\text{BiX}_3$ ( $\text{X} = \text{I}, \text{Br}, \text{and Cl}$ ) inorganic perovskites for optoelectronic applications: a DFT–ML hybrid approach

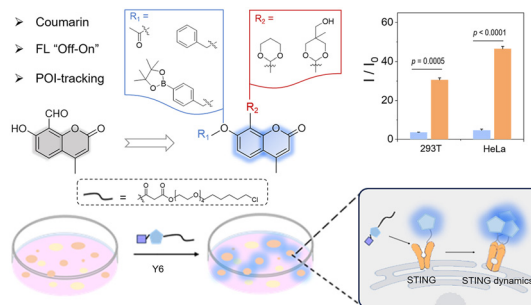
Md Rasidul Islam,\* Md Rabbi Talukder, Ovijit Das, Md Adil Hossain and Md Masud Rana\*



537

### Fluorescence monitoring of STING using a coumarin-based chemigenetic probe

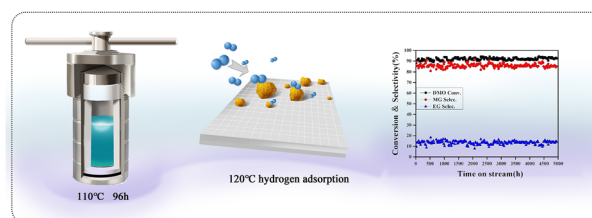
Xuekun Zhang, Yu Jiang, Ying Wang, Yaxi Li,\* Haozhou Tang, Andong Shao\* and Jianming Ni\*

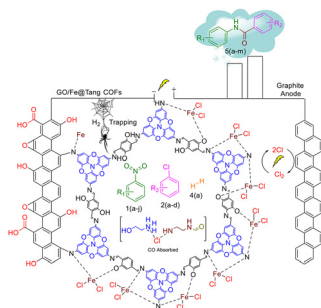


544

### Efficient $\text{Cu}/\text{SiO}_2$ catalysts for methyl glycolate synthesis via dimethyl oxalate hydrogenation under atmospheric pressure

Xian Kan, Zhikui Jiang, Peipei Lei, Qihong Xue, Jiaming Wang, Ting Fan, Shunfang Lv and Jiangang Chen\*





### Development of a novel GO/Fe@TANG composite electrode for green and sustainable electrocatalytic carbonylation and hydrogenation of *N*-phenylbenzamides

Rustamkhon Kuryazov, Karkaz Thalij,\* Ahmed Aldulaimi, Mohanad Yakdhan Saleh, Abdulrahman A. Almehizia,\* Tulkin Buzrukov, Gularam Masharipova, Bekzod. Madaminov, Shakir Mahmood Saeed and Elyor Berdimurodov

### Correction: Biogenic synthesis of copper oxide nanoparticles: comprehensive *in vitro* profiling for cervical cancer treatment and antibacterial strategies

Gouranga Dutta, Dipanjan Ghosh, Krithiga Venkatesan, Gopal Chakrabarti, Abimanyu Sugumaran\* and Damodharan Narayanasamy\*

