

## IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 49(29) 12455–12886 (2025)



### Cover

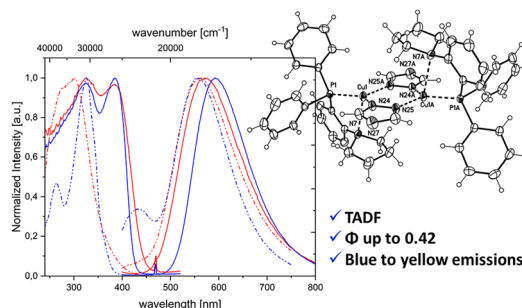
See Wim Klopper, Stefan Bräse *et al.*, pp. 12468–12475. Image reproduced by permission of Vincenzo Pani from *New J. Chem.*, 2025, 49, 12468.

## PAPERS

12468

### Blue to yellow-emitting neutral Cu(I) complexes with $\mu$ -bridging 1,2,4-triazole: synthesis, photophysical characterization and DFT calculations

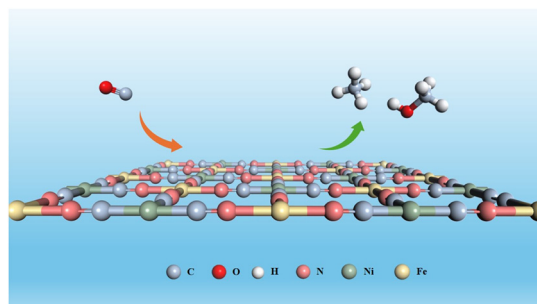
Valentina Ferraro, Xuemin Gan, Florian R. Rehak, Philipp Ralle, Martin Nieger, Andreas Steffen, Wim Klopper\* and Stefan Bräse\*



12476

### A first-principles study of 2D Ni–Fe double metal cyanides for CO electroreduction

Xiaoliang Liu, Pengbo Lyu\* and Lizhong Sun\*





**GOLD  
OPEN  
ACCESS**

# EES Solar

**Exceptional research on solar  
energy and photovoltaics**



Part of the EES family

**Join  
in**

Publish with us

[rsc.li/EESolar](https://rsc.li/EESolar)

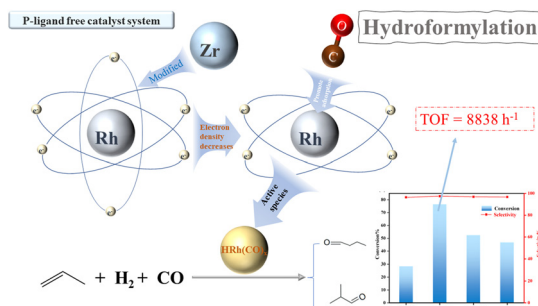


## PAPERS

12485

# Enhancing effect of Zr on Rh/SiO<sub>2</sub> catalysts in propylene hydroformylation: experimental and DFT computational study

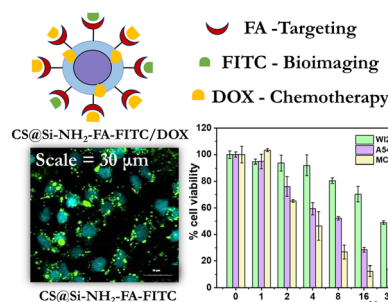
Hong Zhang, Wenlong Lu, Chen Li, Xinyu Chen, Lei Wang,\* Hui Wan\* and Guofeng Guan



12497

# Water-dispersible monodispersed nanoparticles of magnetic $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> and non-magnetic $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>@ZnO, $\gamma$ -Fe<sub>2-2x</sub>Zn<sub>2x</sub>O<sub>3</sub> for targeting, imaging and therapy of cancer

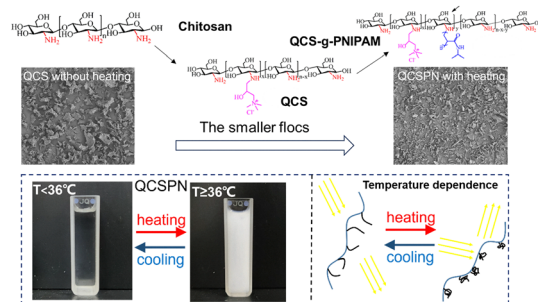
Ruchi Agrawal, Sandeep Balu Shelar, Manas Srivastava and Raghuramani Singh Ningthoujam\*



12512

# A thermo-responsive chitosan-*g*-PNIPAM flocculant: a dual-phase mechanism for enhanced water treatment efficiency

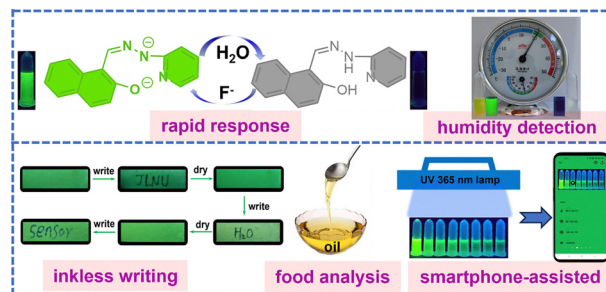
Mengyun Zhao, Jie Yang, Mengyue Wang, Wenzheng Ban, Tao Li,\* Xi Lu\* and Bin Yan



12523

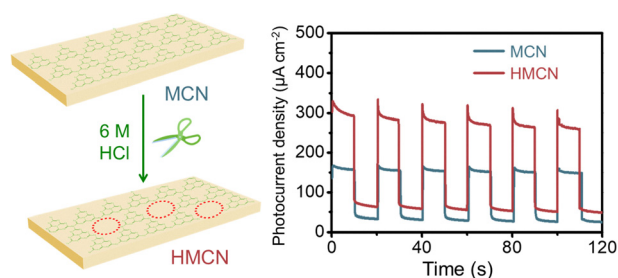
# A portable smartphone platform based on a fluorescent–colorimetric sensor for visual detection of trace water in edible vegetable oils

Dongyu Han, Haiyu Liu, Yucun Liu,\* Yi Zhang, Guosong Sun and Jiku Wang\*



## PAPERS

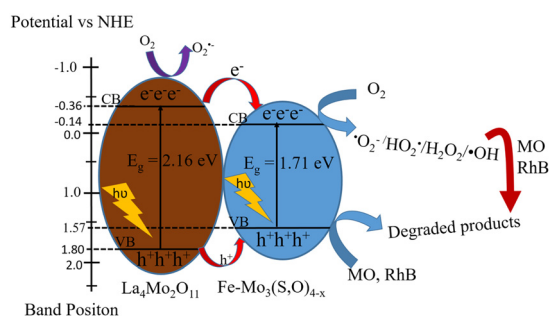
12532



### Enhanced photoelectrochemical water splitting performance of a molten-salt carbon nitride photoanode with morphology and defect regulation induced by hydrochloric acid treatment

Xiaochun Li,\* Chang Dong, Rouhua Chen, Shimin Jiang, Jiaying Lin, Shaoqi Wu, Sijie Liu, Yuxiu Li, Renping Cao and Bang Lan\*

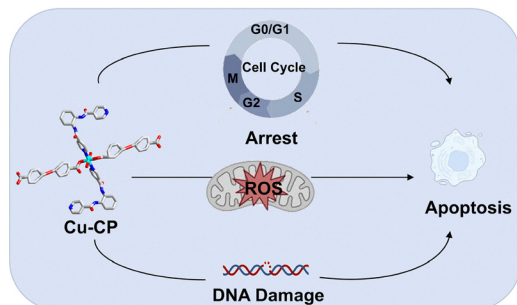
12542



### Facile one-step synthesis of Fe-doped $\text{Mo}_3(\text{O},\text{S})_{4-x}/\text{La}_4\text{Mo}_2\text{O}_{11}$ nanocomposites for efficient photodegradation of dye pollutants

Sleshi Fentie Tadesse, Worku Lakew Kebede and Dong-Hau Kuo\*

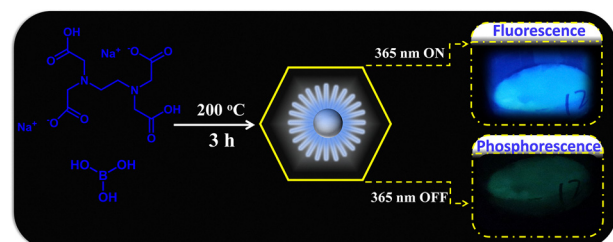
12561



### Anti-cancer potential of a new bioactive copper-based coordination polymer against cervical cancer

Lujiadai Xue, Guie Gao, Yajuan Deng, Shimin Zhou, Jian Luan,\* Shaolie Zheng\* and Xiaoyu Wang\*

12568



### Matrix-free room-temperature phosphorescent boron and nitrogen co-doped carbon dots for information encryption and anticounterfeiting

Yifang Gao,\* Shaogang Lei and Chuan Dong\*



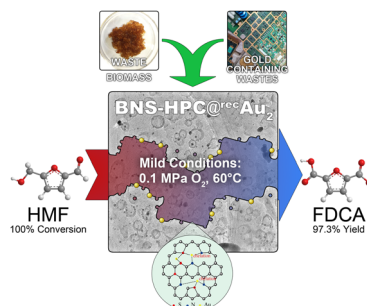


## PAPERS

12576

### Recovered gold on biomass-based hierarchical porous carbon as a catalyst for 5-hydroxymethylfurfural oxidation

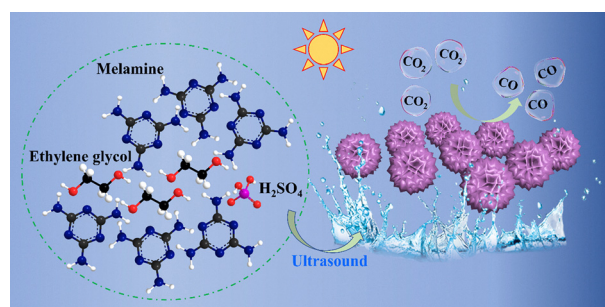
Bing Zhan, Xue-Juan Chen, Xi Hong and Xiu-Feng Hou\*



12585

### Ultrasound-assisted synthesis of rose-like carbon nitride nanoflowers: synergistic morphology and electronic modulation for efficient CO<sub>2</sub> photoreduction

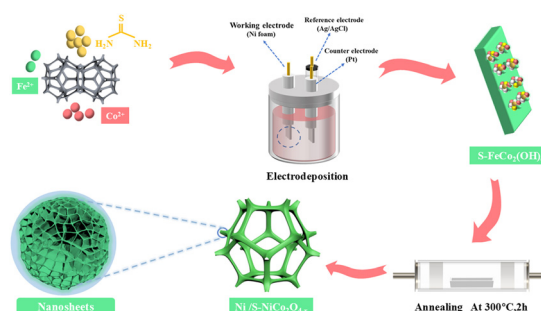
Longda Hu, Jinlong Yu, Yujing You,\* Guoquan Zhou, Mengyang Yuan, Ningkun Wu, Liwei Zhao and Zhiqiang Jiang\*



12594

### Dual regulation strategy to synthesize rich oxygen-vacancy S-doped FeCo<sub>2</sub>O<sub>4</sub> nanosheets as high-performance supercapacitor electrodes

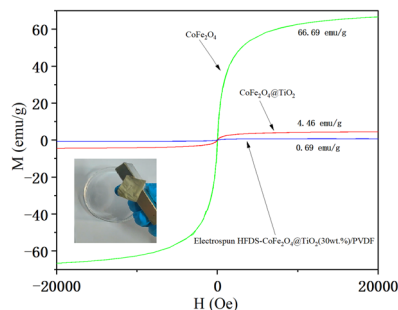
Xiaojuan Liu, Xiaohui Zhong, Jiayi Wu, Xingrong Hu, Zhifeng Li\* and Chunxiang Wang\*



12607

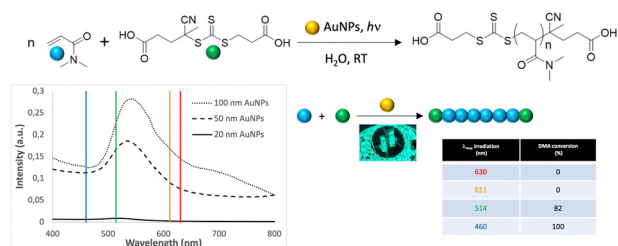
### Preparation of a novel electrospun superhydrophobic magnetic CoFe<sub>2</sub>O<sub>4</sub>@TiO<sub>2</sub>/PVDF composite film with catalytic function and enhanced polar crystal content in PVDF

Jian-Wu Xiao, Li-Wang Jiang,\* Yu-Ma Yang, Yun-Feng Zhu, Fu-An He\* and Dong-Dong Mai\*



## PAPERS

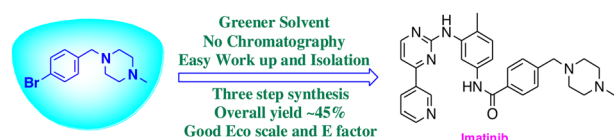
12621



### Photoinduced electron transfer RAFT polymerization of *N,N*-dimethylacrylamide via plasmonic excitation of gold nanoparticles in water

Aldine Ali, Frederic Amiard, Alexandre Benard, Marc Lamy de la Chapelle\* and Sandie Piogé\*

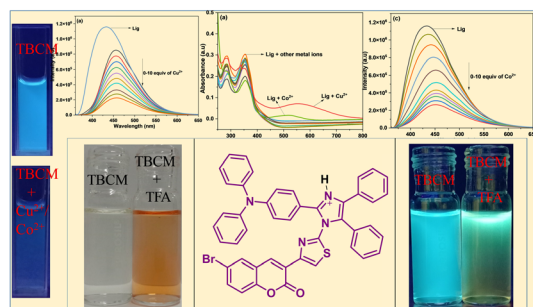
12633



### Synthesis of imatinib using greener solvents: a sustainable approach

Atul K. Godha, H. B. Nandeesh, Govindarajulu Gavara,\* Ganesh Sambasivam and C. S. Karthik\*

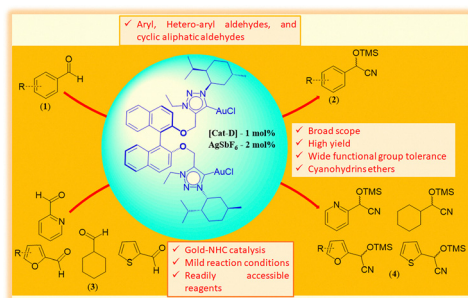
12639



### Coumarin based dual fluorescent sensor for Co<sup>2+</sup>, Cu<sup>2+</sup> ions with volatile acid vapour sensing and validation from DFT, zebrafish bioimaging studies

Aravind R. Nesaragi,\* Jyoti Nagalik, Sharanappa Chapi, Harshitha M, Venuprasad K. D., Naveen Kumar Kalagatur, Chandan Hunsur Ravikumar, Sanjeev R. Inamdar, Shivarudrappa H. P. and Nabil Al-Zaqri\*

12651



### Uncovering a solvent-free eco-friendly cyanosilylation of aldehydes through a well-defined gold(I)-NHC heterogeneous catalyst

Saurabh Kumar Tiwari,\* Ankit Kumar, Ankit Verma and Ibadur Rahman Siddiqui



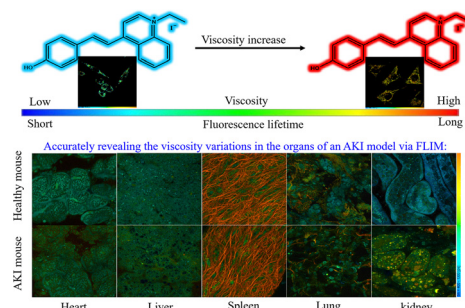


## PAPERS

12667

# Revealing the viscosity variations in the organs of an acute kidney injury model using a fluorescence lifetime probe under FLIM

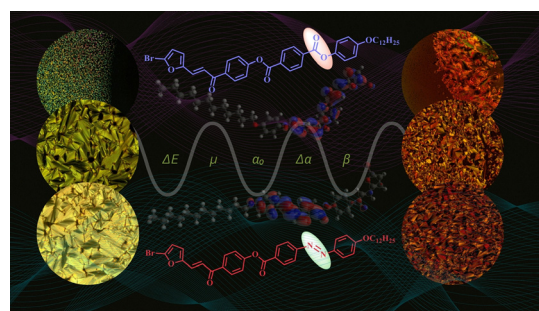
Yang Yang, Shasha Zhang, Fanyi Meng and Xiuquan He\*



12676

# Exploring the mesophase and optical behavior of novel furan-based chalcone liquid crystals with ester/azo linkages

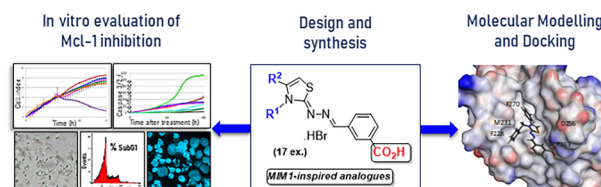
Barış Sezgin,\* Ceren Can Karanlık and Gürkan Karanlık\*



12688

# Synthesis and biological studies on ovarian cancer cells of new heterocyclic molecules inspired by MIM1, an inhibitor of the anti-apoptotic protein Mcl-1

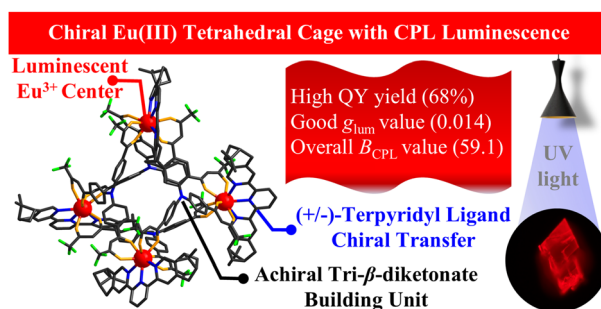
Jocelyn Pezeril, Louis-Bastien Weiswald, Ali Soulieman, Hippolyte Paysant, Ali Hachem, Emilie Brotin, Christophe Denoyelle, Anne-Sophie Voisin-Chiret, Nicolas Gouault, René Grée,\* Nicolas Levoin\* and Laurent Poulain\*



12708

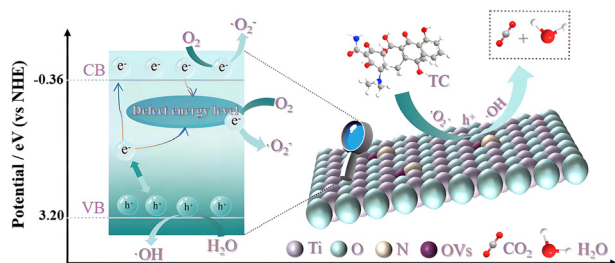
# Chiral Eu(III) tetrahedral cage: circularly polarized luminescence induced by an ancillary chiral terpyridyl ligand

Feng Guo,\* Xiao-Wei Zhang, Jin-Xiu Wu and Zhao-Gang Liu



## PAPERS

12716



### Frustrated defect pairs of oxygen vacancies and doped nitrogen in amorphous titanium dioxide for enhanced photodegradation of tetracycline

Siying Sun, Weixing Ming, Haixue Zhang, Anxin Li and Ge Xu\*

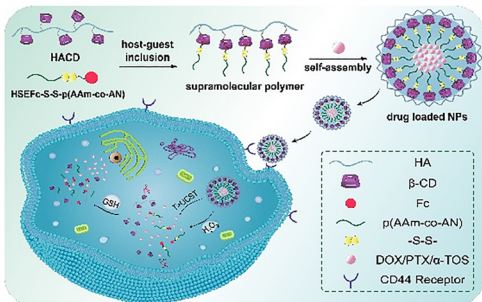
12735



### Eco-engineered MIL53-NH<sub>2</sub>/xanthan gum nanocomposite: a magnetic biosorbent for rapid eradication of ciprofloxacin and amoxicillin in polluted waters

Mohammad Mehdi Salehi, Ghazaleh Ranjbar, Leila Choopani, Fereshte Hassanzadeh-Afruzi, Ali Maleki\* and Ehsan Nazarzadeh Zare\*

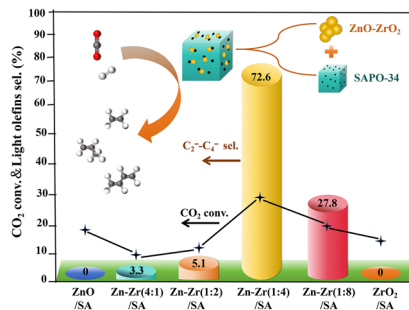
12749



### Fabrication of a hyaluronic acid-targeted supramolecular delivery platform with multi-mode drug release

Kaixuan Jiang, Yuxi Ge, Wenhui Wu, Meiran Xie, Hu He\* and Ruyi Sun\*

12760



### $\text{CO}_2$ hydrogenation to light olefins on ZnO-ZrO<sub>2</sub>/SAPO-34 tandem catalysts: optimizing the Zn/Zr ratio

Yi Xiang, Zidan Mei, Lulu Zhou, Yue Li\* and Yongdong Chen\*



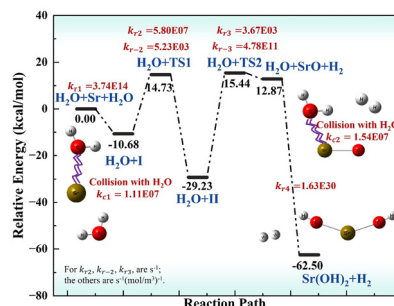


## PAPERS

12773

# Reaction between strontium and steam in the primary circuit of HTR-PM: a theoretical investigation

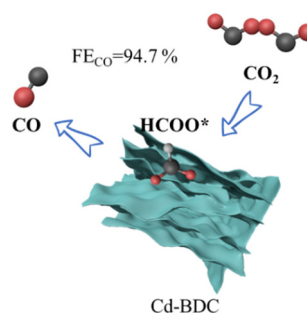
Jingni Guo, Yu Wang, Wei Peng, Feng Xie,\*  
Peng Li and Minghua Lyu



12785

# Carboxyl ligand-regulated Cd metal complexes as efficient catalysts for the electrocatalytic reduction of CO<sub>2</sub> to CO

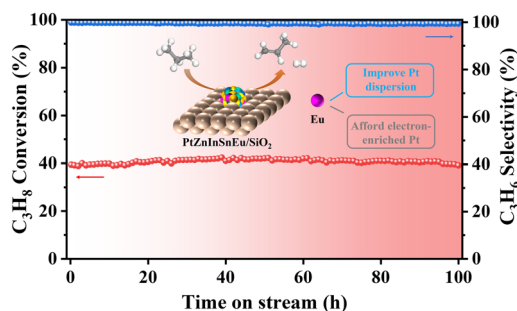
Jia Li, Tianxia Liu\* and Boming Lu



12795

# High-entropy intermetallic compounds induced by rare-earth europium as efficient catalysts for propane dehydrogenation

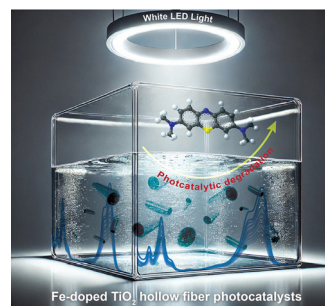
Shenghui Tao, Teng Li, Zhenjie Wang, Guomin Li,  
Dongyuan Yang, Shimin Liu\* and Xinjiang Cui\*



12804

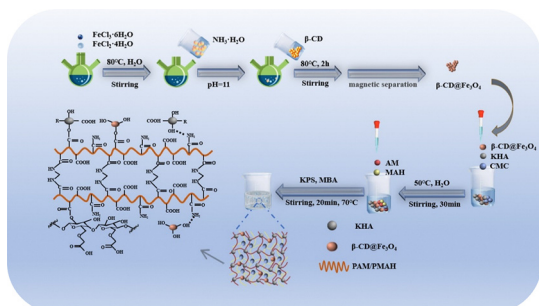
# Facile synthesis of Fe-doped TiO<sub>2</sub> hollow fibers for photocatalytic degradation of methylene blue under white light-emitting diode irradiation

Sittan Wongcharoen, Kasidit Janbooranapinij and  
Gasidit Panomsuwan\*



## PAPERS

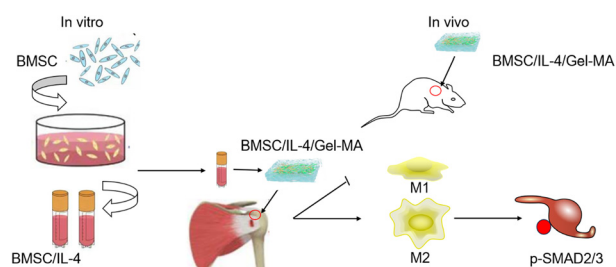
12814



### Preparation of a $\beta$ -CD@Fe<sub>3</sub>O<sub>4</sub>/KHA/CMC/AM/MAH hydrogel and its slow-release herbicidal properties against glyphosate

Jie Song,\* Yingnan Zhou, Lijun Chen, Zhiwen Yuan, Yuhua Niu, Xi Li and Liangxian Huang

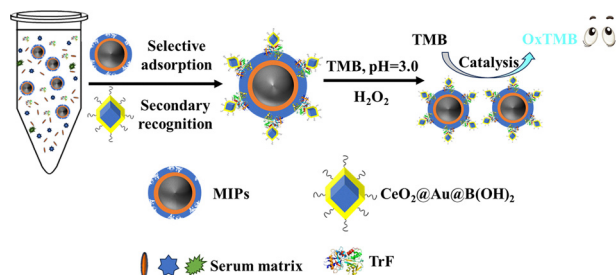
12828



### Porous hydrogel loaded with BMSCs overexpressing IL-4 promotes tendon-bone healing by activating the TGF- $\beta$ /Smad2/3 pathway

Ji-Yang Tan, Ze-Nan Huang, Xun-Hao Wang, Fei Xiong, Qiu-Wen Ying, Qian-Yuan Liu, Jun Qian\* and Jing-Yi Mi\*

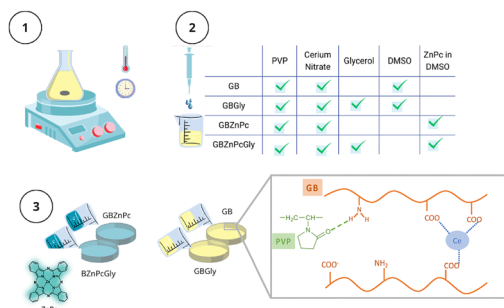
12841



### Sandwich-structured imprinted polymers for colorimetric glycoprotein detection via functionalized CeO<sub>2</sub> nanozyme catalysis

Kai-Wen Zheng, Jing-Yan Kang, Xiao-Bo Zhao, Ying-Shan Zhang and Yan-Ping Shi\*

12852



### Development of functional films for enhanced photodynamic therapy against resistant *S. aureus*

Mariana Miretti, Maria S. Gualdesi, Jimena Vara, Victoria Trivellini Wainziger and Marisa Martinelli\*



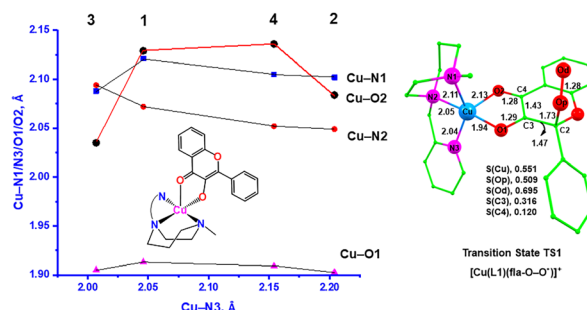


## PAPERS

12861

**Copper(II)-flavonolate complexes of sterically hindering 3N ligands as enzyme-substrate models for copper(II) quercetin 2,4-dioxygenase: experimental and computational study on the dioxygenation reactivity**

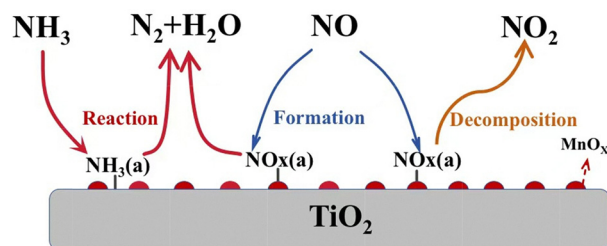
Tamilarasan Ajaykamil, Vishnubhotla V. Sai Siva Bharadwaj, Martin Köckerling, Prabha Vadivelu\* and Mallayan Palaniandavar\*



12875

**Temperature sensitive long-term stability of  $\text{MnO}_x/\text{TiO}_2$  catalysts for selective catalytic reduction of  $\text{NO}_x$  with  $\text{NH}_3$  at low temperature**

Ruoxuan Bai, Rongkun Jiang, Zixiao Yu, Junqi Wang, Yiqing Zeng\* and Shule Zhang



## CORRECTION

12884

**Correction: Preparation of a polyvinyl chloride superhydrophobic coating with high stability and strong corrosion resistance**

Chao-gang Zhou, Jia-jun Chen, Qi-ya Chen, Jin-yue Li, Wei Gong,\* Tian-xiang Yuan, Ting-zhen Li, Wei-min Gao and Chuan-bo Hu\*

