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IN THIS ISSUE

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

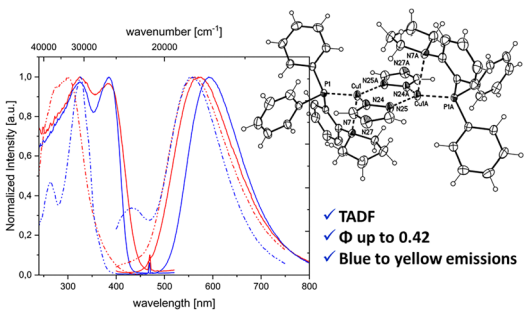
Cover
See Wim Klopper, Stefan Bräse *et al.*, pp. 12468–12475. Image reproduced by permission of Vincenzo Pani from *New J. Chem.*, 2025, **49**, 12468.

PAPERS

12468

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

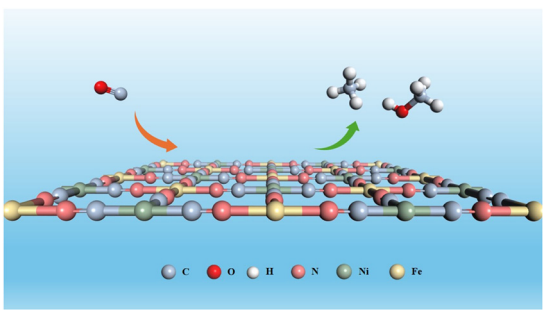
Valentina Ferraro, Xuemin Gan, Florian R. Rehak, Philipp Ralle, Martin Nieger, Andreas Steffen, Wim Klopper* and Stefan Bräse*



12476

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

Xiaoliang Liu, Pengbo Lyu* and Lizhong Sun*



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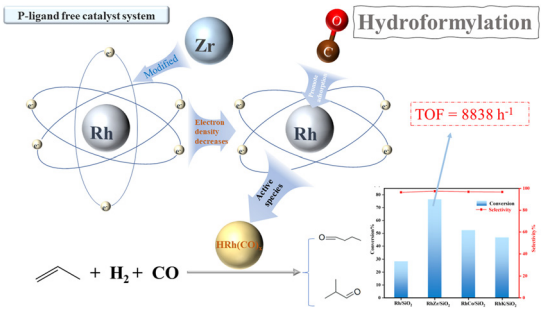
12485

Enhancing effect of Zr on Rh/SiO_2 catalysts in propylene hydroformylation: experimental and DFT computational study

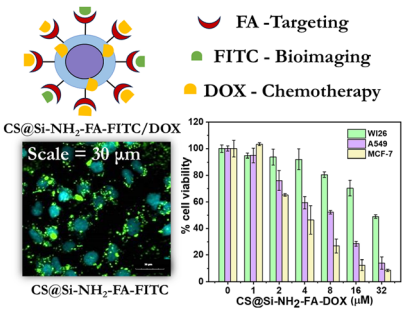
Hong Zhang, Wenlong Lu, Chen Li, Xinyu Chen, Lei Wang,* Hui Wan* and Guofeng Guan



12497

Water-dispersible monodispersed nanoparticles of magnetic γ-Fe_2O_3 and non-magnetic γ-Fe_2O_3@ZnO, γ-$Fe_{2-2x}Zn_{2x}O_3$ for targeting, imaging and therapy of cancer

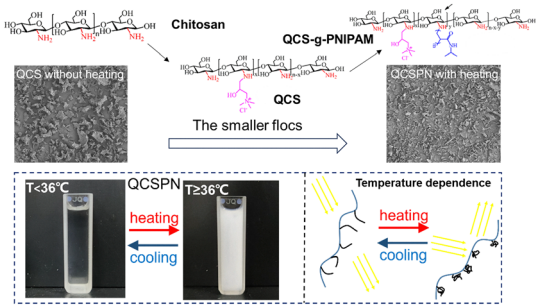
Ruchi Agrawal, Sandeep Balu Shelar, Manas Srivastava and Raghumani Singh Ningthoujam*



12512

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

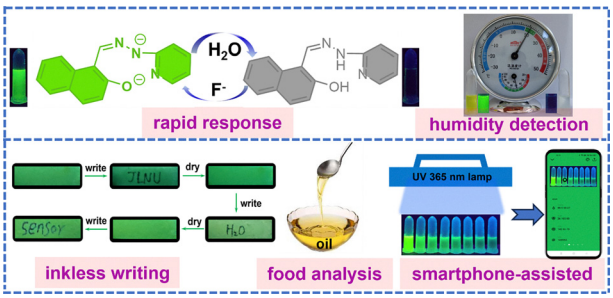
Mengyun Zhao, Jie Yang, Mengyue Wang, Wenzheng Ban, Tao Li,* Xi Lu* and Bin Yan



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*



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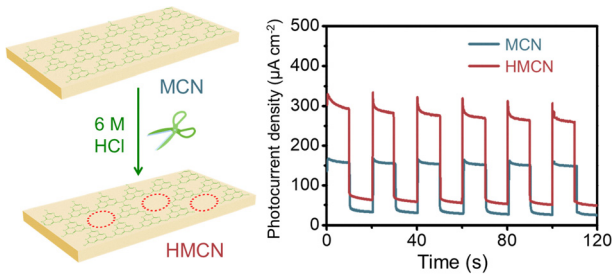
PAPERS

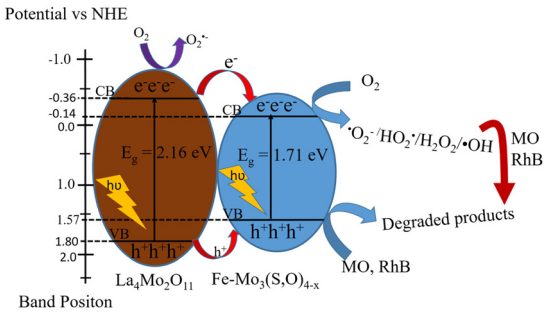
12532



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*

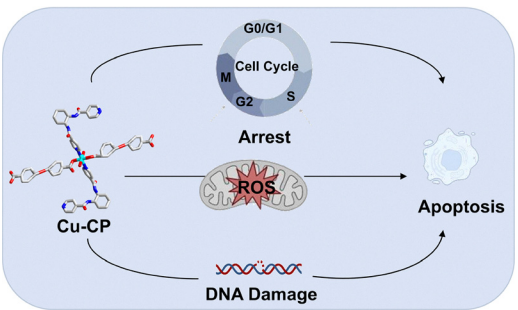
12542



Facile one-step synthesis of Fe-doped $Mo_3(O,S)_{4-x}$/$La_4Mo_2O_{11}$ nanocomposites for efficient photodegradation of dye pollutants

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

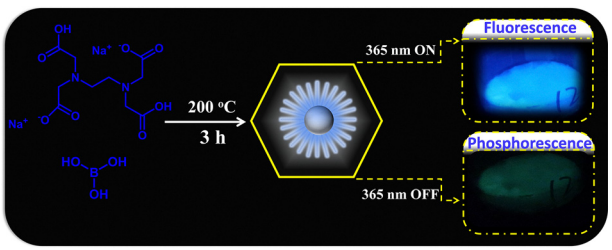
12561



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*

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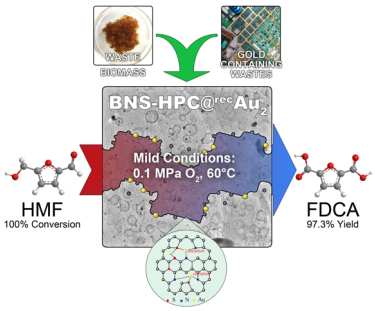
12576

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

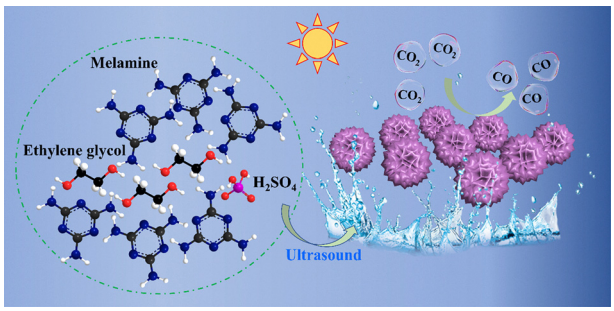
Bing Zhan, Xue-Juan Chen, Xi Hong and Xiu-Feng Hou*



12585

Ultrasound-assisted synthesis of rose-like carbon nitride nanoflowers: synergistic morphology and electronic modulation for efficient CO_2 photoreduction

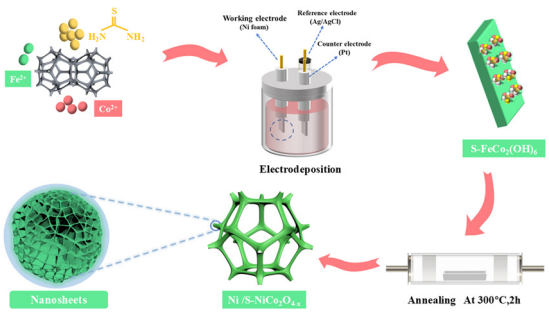
Longda Hu, Jinlong Yu, Yujing You,* Guoquan Zhou, Mengyang Yuan, Ningkun Wu, Liwei Zhao and Zhiqiang Jiang*



12594

Dual regulation strategy to synthesize rich oxygen-vacancy S-doped $FeCo_2O_4$ nanosheets as high-performance supercapacitor electrodes

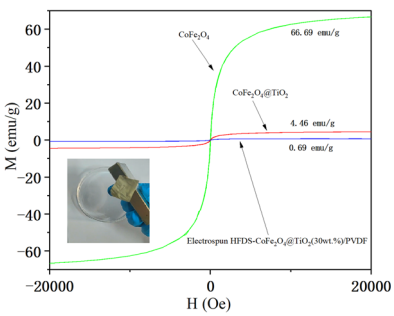
Xiaojuan Liu, Xiaohui Zhong, Jiayi Wu, Xingrong Hu, Zhifeng Li* and Chunxiang Wang*



12607

Preparation of a novel electrospun superhydrophobic magnetic $CoFe_2O_4$@TiO_2/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*



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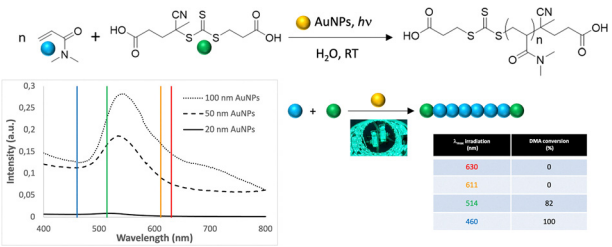
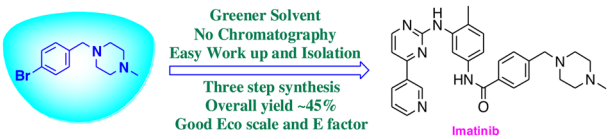
12621



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*

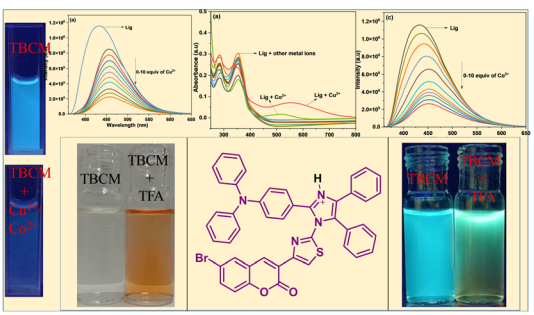
12633



Synthesis of imatinib using greener solvents: a sustainable approach

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

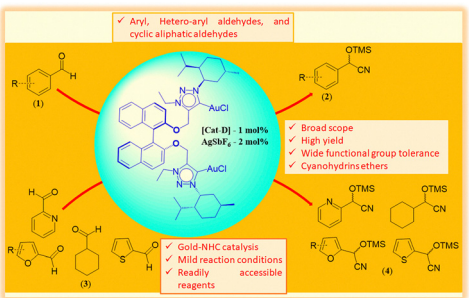
12639



Coumarin based dual fluorescent sensor for Co^{2+}, Cu^{2+} 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

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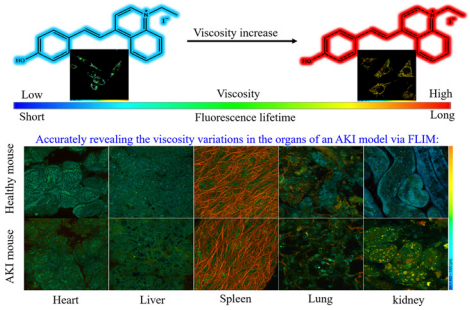
12667

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

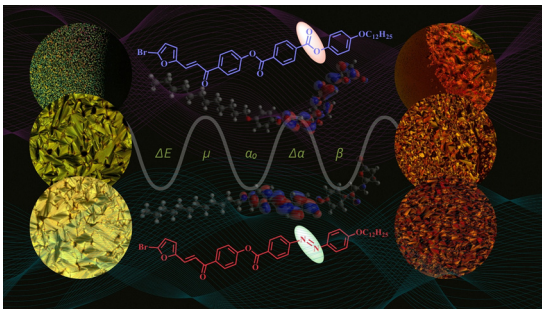
Yang Yang, Shasha Zhang, Fanyi Meng and Xiuquan He*



12676

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

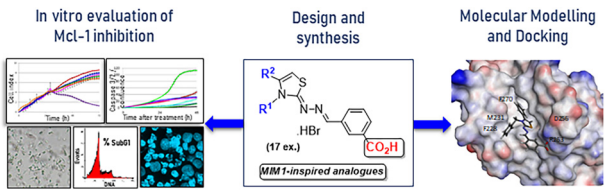
Barış Sezgin,* Ceren Can Karanlık and Gürkan Karanlık*



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

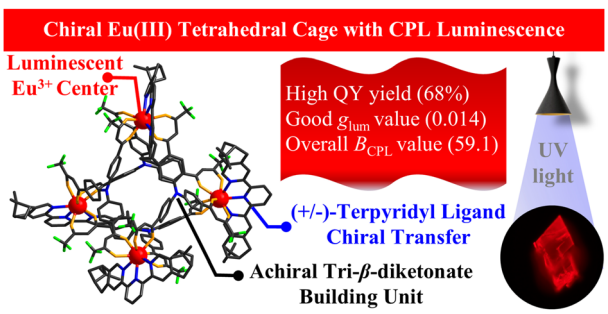
Jocelyn Pezeril, Louis-Bastien Weiswald, Ali Soulieman, Hippolyte Paysant, Ali Hachem, Emilie Brotin, Christophe Denoyelle, Anne-Sophie Voisin-Chiret, Nicolas Gouault, René Grée,* Nicolas Levoin* and Laurent Poulain*



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



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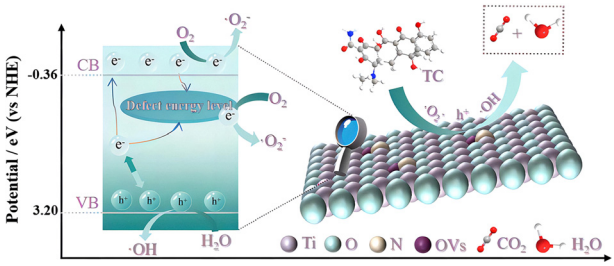


Frustrated defect pairs of oxygen vacancies and doped nitrogen in amorphous titanium dioxide for enhanced photodegradation of tetracycline

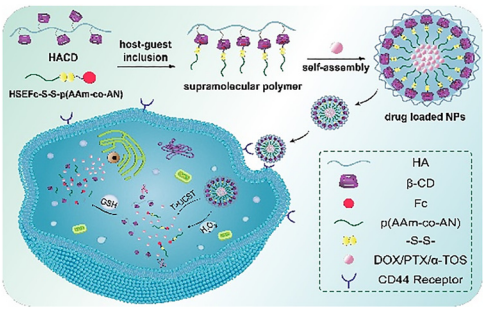
Siying Sun, Weixing Ming, Haixue Zhang, Anxin Li and Ge Xu*

12735

Eco-engineered MIL53-NH_2/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*

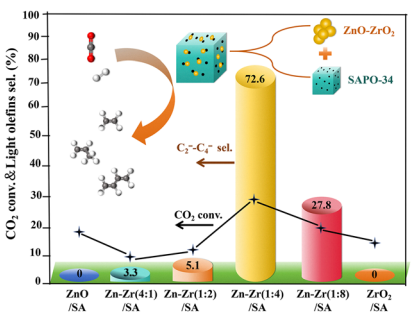
12749



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



CO_2 hydrogenation to light olefins on ZnO–ZrO_2/SAPO-34 tandem catalysts: optimizing the Zn/Zr ratio

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

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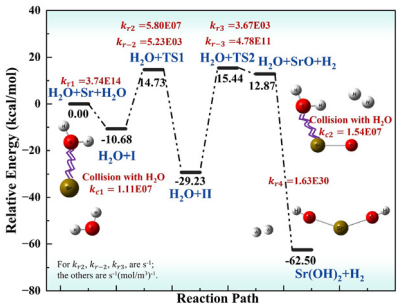
12773

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

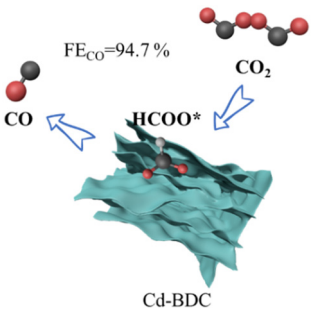
Jingni Guo, Yu Wang, Wei Peng, Feng Xie,* Peng Li and Minghua Lyu



12785

Carboxyl ligand-regulated Cd metal complexes as efficient catalysts for the electrocatalytic reduction of CO_2 to CO

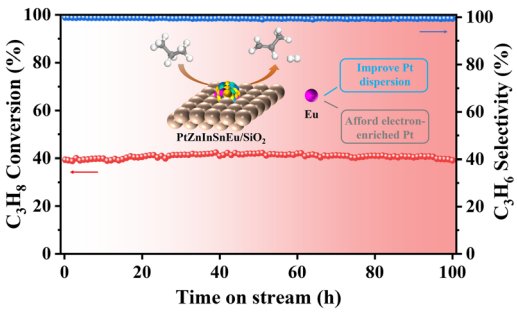
Jia Li, Tianxia Liu* and Boming Lu



12795

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

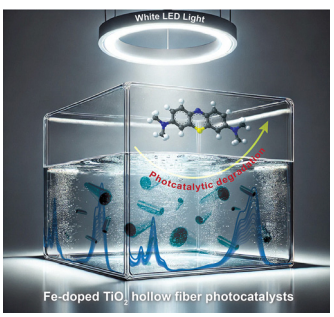
Shenghui Tao, Teng Li, Zhenjie Wang, Guomin Li, Dongyuan Yang, Shimin Liu* and Xinjiang Cui*



12804

Facile synthesis of Fe-doped TiO_2 hollow fibers for photocatalytic degradation of methylene blue under white light-emitting diode irradiation

Sittan Wongcharoen, Kasidit Janbooranapinij and Gasidit Panomsuwan*



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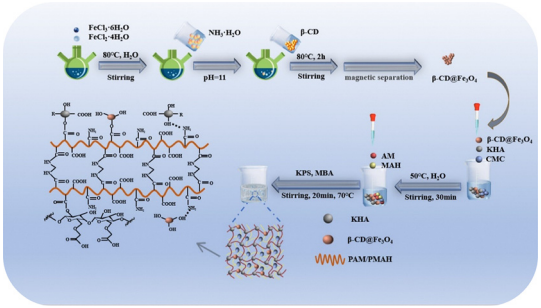
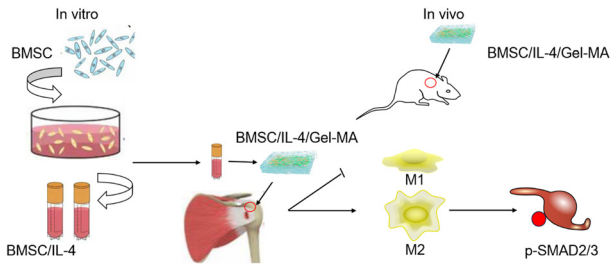
12814



Preparation of a β-CD@Fe_3O_4/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

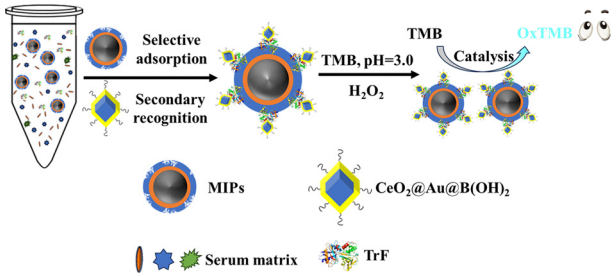
12828



Porous hydrogel loaded with BMSCs overexpressing IL-4 promotes tendon-bone healing by activating the TGF-β/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*

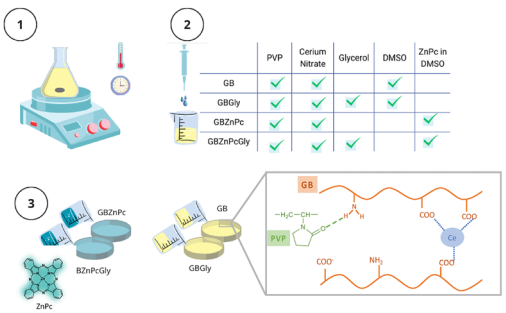
12841



Sandwich-structured imprinted polymers for colorimetric glycoprotein detection *via* functionalized CeO_2 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*

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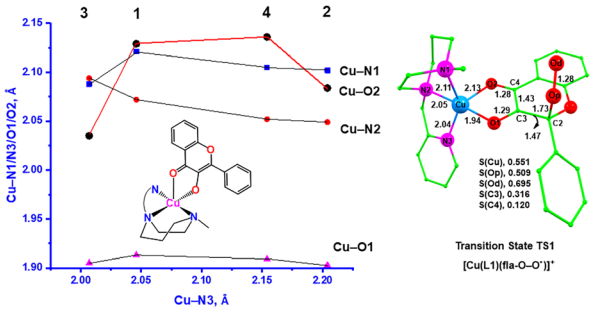
PAPERS

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

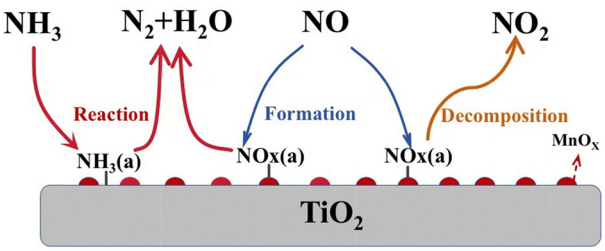
Tamilarasan Ajaykamal, Vishnubhotla V. Sai Siva Bharadwaj, Martin Köckerling, Prabha Vadivelu* and Mallayan Palaniandavar*



12875

Temperature sensitive long-term stability of MnO_x/TiO_2 catalysts for selective catalytic reduction of NO_x with 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*