

## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 49(44) 19073-19458 (2025)



### Cover

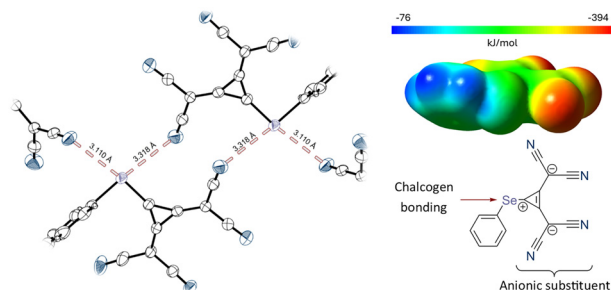
See Toshiyuki Moriuchi *et al.*, pp. 19091–19095. Image reproduced by permission of Toshiyuki Moriuchi from *New J. Chem.*, 2025, 49, 19091.

## COMMUNICATION

19086

### “Anti-electrostatic” (inter-anion) chalcogen bonding interactions

Margarita Yanbaeva, Tim Steinke, Elric Engelage, Robert Weiss\* and Stefan M. Huber\*



## PAPERS

19091

### Catalytic dehydroxylative homo-coupling reaction of alcohols by using iron/L-ascorbic acid system

Kento Okabayashi, Masumi Itazaki and Toshiyuki Moriuchi\*



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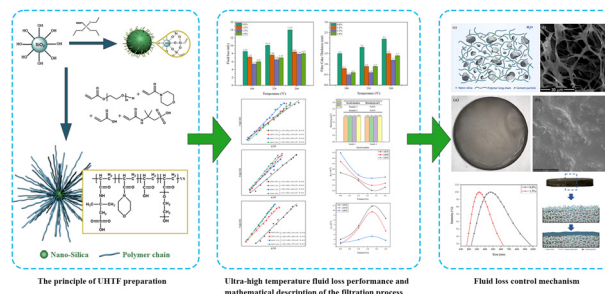
[rsc.li/professional-development](https://rsc.li/professional-development)



19096

### Preparation, performance and the fluid loss control mechanism of a rigid-flexible coupled ultra-high temperature oil well cement fluid loss additive

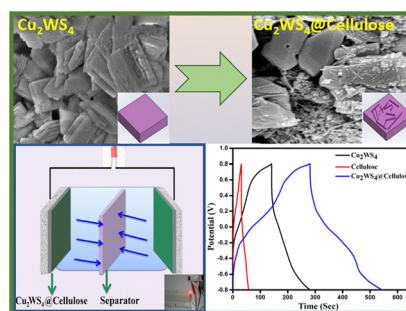
Qian Feng,\* Tianhai Yi, Hongxiang Peng, Haojun Zhang and Yong Zheng



19110

### Sustainable $\text{Cu}_2\text{WS}_4$ -cellulose composites for high-performance supercapacitors: synergistic effect of a metal sulfide and a biopolymer matrix

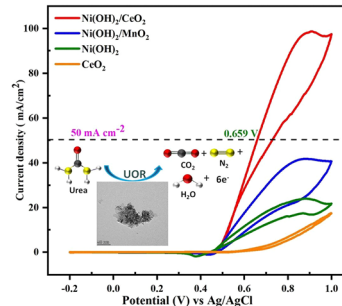
Poonam Lakhiwal, B. G. Abhilekshmi, Abhijeet Singh, V. A. Anjali and Santosh Kumar Mahapatra\*



19121

### $\text{Ni}(\text{OH})_2/\text{CeO}_2$ heterointerface catalysts for energy-efficient urea electrooxidation

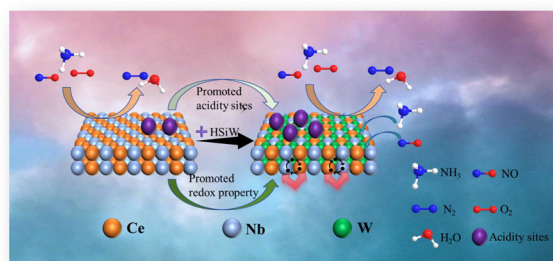
Machireddy Narendra Reddy, Yellatur Chandra Sekhar\* and Loka Subramanyam Sarma\*



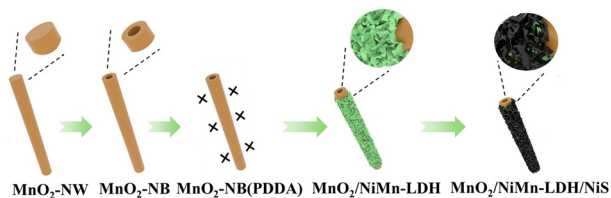
19133

### The promotional effect of HSiW doping on CeNb for $\text{NH}_3$ selective catalytic reduction of $\text{NO}_x$

Deming Gu, Ruihua Guo, Xuejun Zhang, Min Zhou, Zhenzhen Huang,\* Pan Chen, Huixin Yu,\* Yanli Mao and Zhongxian Song\*



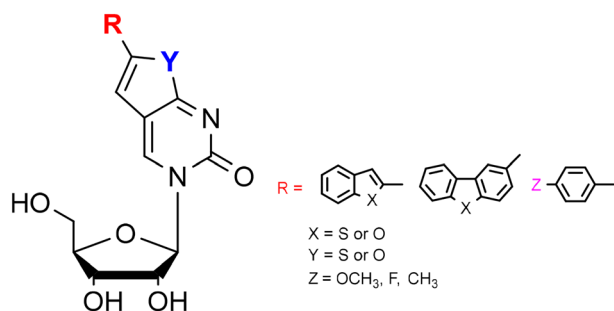
19148



### A hollow core–shell $\text{MnO}_2\text{-NT/NiMn-LDH/NiS}$ electrode for enhanced supercapacitor performance

Jiahong Zheng,\* Yuhan Wang and Jingyun Yang

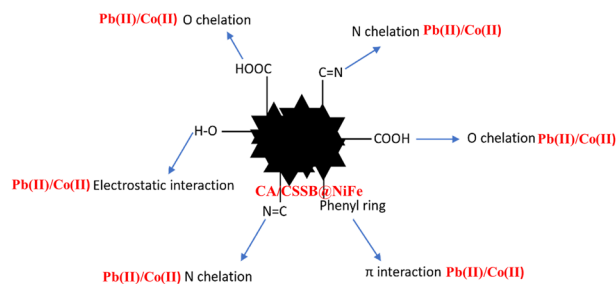
19159



### Synthesis and photophysical properties of the biaryl systems of pyrrocytidine and furouridine with benzothiophene, benzofuran, and benzene as the aromatic extended moiety

Jianquan Hong,\* Jie Wang, Wei Zhang, Xiaoxiao Zhang, Xinxin Gong, Yingying Fu, Shuai Huang, Yupeng Yang, Ge Fang and Changge Zheng\*

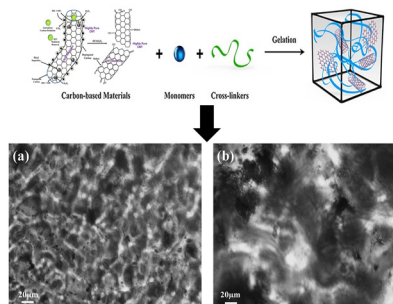
19167



### $\text{Pb(II)}$ and $\text{Co(II)}$ ion removal from aqueous solutions using chitosan–Schiff base– $\text{NiFe}_2\text{O}_4$ magnetic nanocomposite adsorbent

Aliakbar Dehno Khalaji\* and Waheed Ahmad Khanday\*

19181



### A PVP-assisted Fenton approach for MWCNT purification and its application in conductive hydrogel fabrication

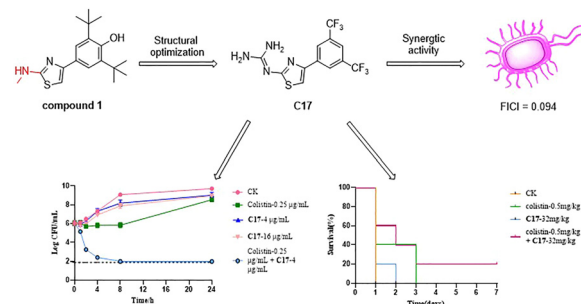
Lei Wang, Zhao jin Lu, Zhi wen Wang, Long yao Pei, Zhi wei Pang, Ji hao Qi, Xin Chen,\* Jin Sha\* and Zhi shan Bai



19190

### Design, synthesis, and synergistic activities of 2-aminothiazolyl compounds as potent colistin adjuvants against *Acinetobacter baumannii*

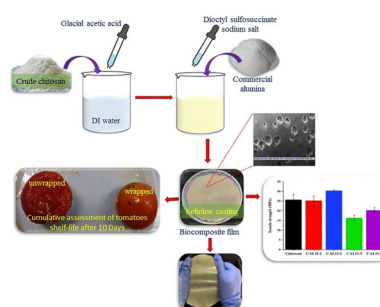
Kunkun Shen, Yuce Chen, Ting Lin, Daijie Chen, Zhong Li\* and Xiaoyong Xu\*



19196

### Fabrication of crude chitosan-based biocomposite films enhanced with aluminum oxide nanofillers

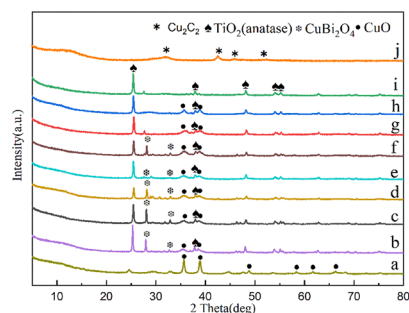
Anik Ghosh, Chandra Jeet Singh,\* Chetna Verma, Mayuri Srivastava, Bhuvanesh Gupta and Samrat Mukhopadhyay\*



19206

### Hollow core-shell 30Cu6Ce/0.6Si@Ti catalysts for 1,4-butyne diol synthesis via ethynylation of formaldehyde: the formation path of polyacetylene

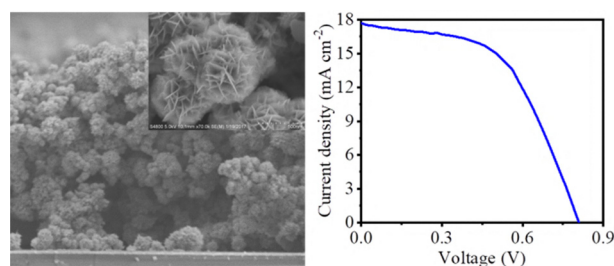
Guihua Yang,\* Rui Wang, Jiali Chen, Wanting Li and Wei Zhang



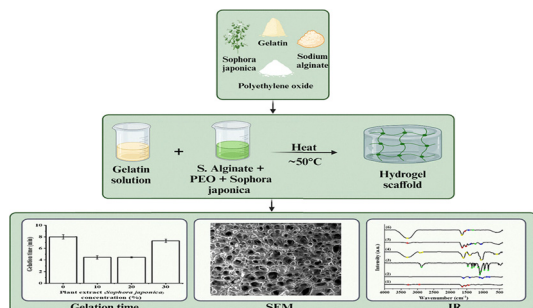
19218

### One-step preparation of 3D hydrangea-like nickel sulfide films as electrocatalysts for efficient dye-sensitized solar cells

Dapeng Cao,\* Ziyi Zhang, Ru Li, Xiaohui Yu and Xiangyu Zhang



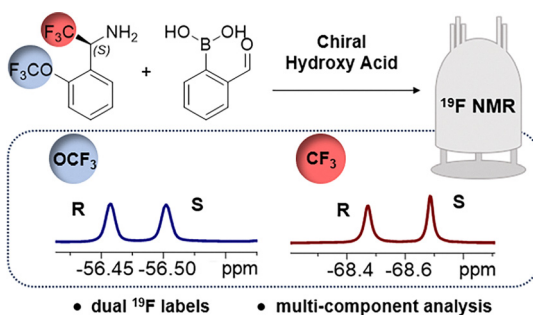
19226



### Evaluation of an *in situ* forming composite hydrogel based on gelatin–sodium alginate–polyethylene oxide for biomedical applications: effect of incorporated *Sophora japonica* on hydrogel performance

Tasneem Abed, Shaza H. Aly, Samar A. Salim, Shahira H. EL-Moslamy, Esraa B. Abdelazim, Mohamed S. Helmy, Ahmed A. Ali, Noura G. Eissa, Mahmoud Elsabahy\* and Elbadawy A. Kamoun\*

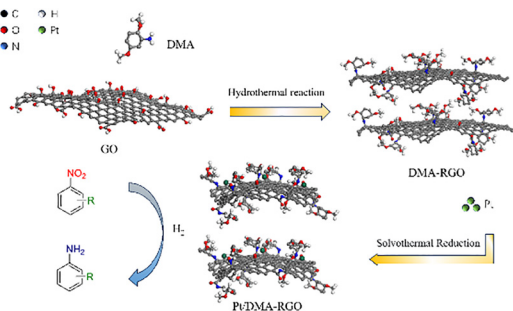
19240



### Enantiodifferentiation of chiral hydroxy acids via $^{19}\text{F}$ NMR

Yilin Zeng, Zixuan Ma and Yanchuan Zhao\*

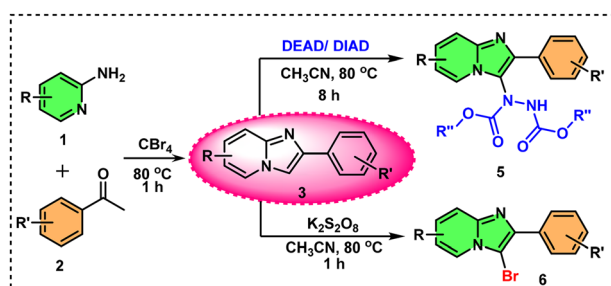
19247



### Highly selective hydrogenation of halogenated nitroarenes over Pt nanoparticles on DMA-modified graphene

Jie Li, Zhi-Ming Li, Tong-Hao Dai, Kai-Yu Mei, Zhi-Xiong Wu, Zi-Wei Xi,\* Jing-Ning Guo\* and Yong-Miao Shen\*

19256



### A sustainable approach to the synthesis of 2-arylimidazo[1,2-a]pyridines followed by sequential amino and bromo functionalization

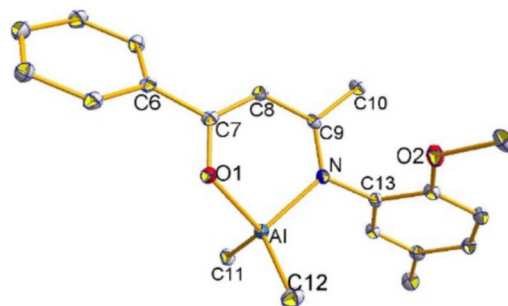
Mayurakhi Bhuyan, Rumi Borah, Srinivas Ambala and Gakul Baishya\*



19269

### Synthesis, structure and DFT calculation of bi- and tridentate ketimine ligand-assisted aluminum complexes: potential catalyst for styrene oxide–CO<sub>2</sub> cycloaddition reaction

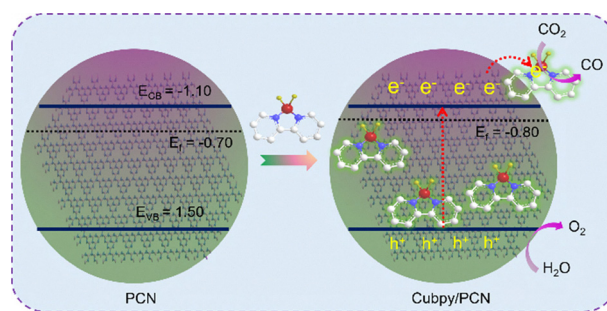
Yu-Chieh Chao, Yu-Hsuan Hung, Yu-Chia Su, Bao-Tsan Ko, Ban-Jing Cheng, Ching-Han Hu, Chien-Ling Ting, Guan-Lin Liu, Budheswar Dehury, Jui-Hsien Huang\* and Amitabha Datta\*



19281

### Constructing monomolecular active centres on polymeric carbon nitride for selective photocatalytic CO<sub>2</sub> reduction to CO

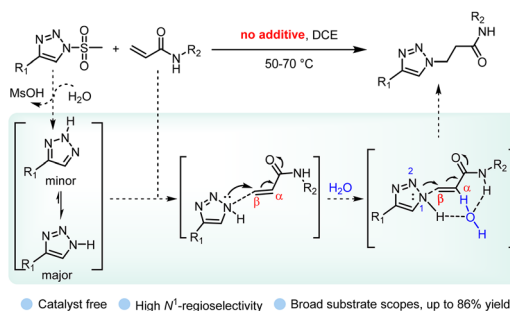
Lingxi Zhao, Qingyu Li, Maize Liu, Chang Liu, Luan Bai, Yingjie Liu, Bo Hu\* and Hongjun Dong\*



19289

### Catalyst-free N<sup>1</sup>-regioselective aza-Michael addition of vinyl ketones with 1,2,3-triazole derivatives

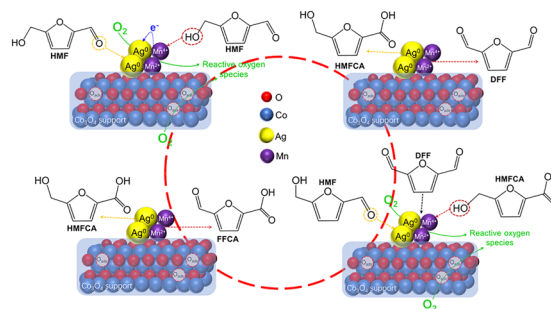
Zongjing Hu, Minghao Li, Jian Ji and Shunying Liu\*



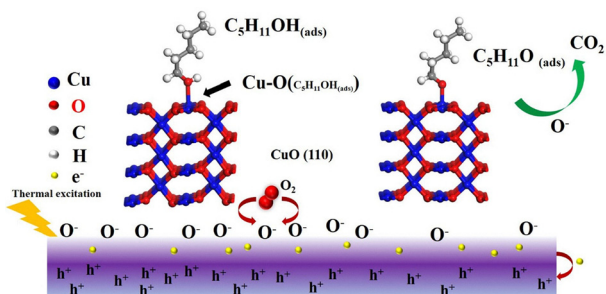
19294

### Investigation of catalytic performance regulation over Ag-, Mn-based catalysts in selective oxidation of 5-hydroxymethylfurfural

Haichen Lai, Haibo Liu, Yicheng Sun, Xueqin Ma, Gaolei Shi, Liuwei Shen and Xingguang Zhang\*



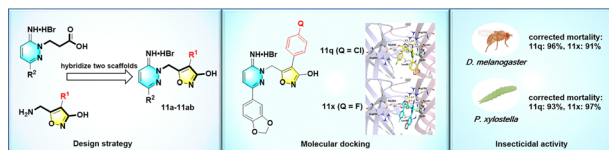
19304



### Sensing performance and mechanism of shape-tunable CuO nanocrystals for monohydric alcohol gases

Na Wang,\* Xiaofei Ren, Hongyu Sun, Jinghua Zhao and Yang Lu\*

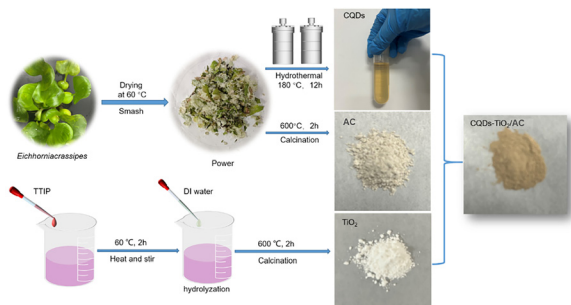
19314



### Design, synthesis, and insecticidal activity of iminopyridazine derivatives containing 3-hydroxyisoxazole

Yong Deng, Li Ma, Zihang Ye, Minghong Jiang, Shijian Li, Zhiqiang Xu, Qi Sun\* and Genyan Liu\*

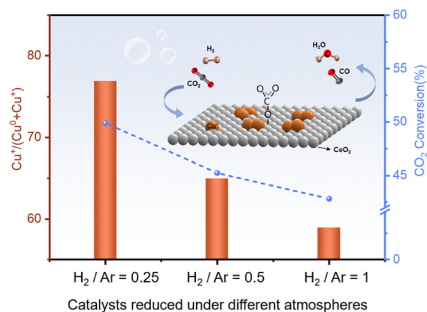
19326



### Eichhornia crassipes based carbon materials for constructing a CQDs-TiO<sub>2</sub>/activated carbon composite: a novel dual-functional material for wastewater treatment

Zhen Wu, Wanli Tang, Yuhang Li, Xinyue Ma, Tingting Pan, Huanxian Shi\* and Yanyan Zhao\*

19337



### Regulating the content of Cu<sup>+</sup> in Cu/CeO<sub>2</sub> catalysts for the reverse water-gas shift reaction

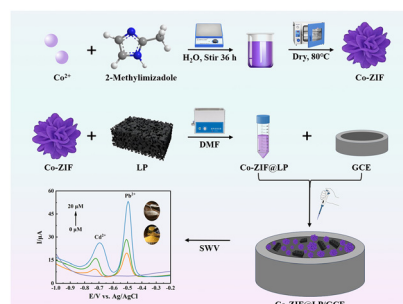
Yuanyuan Fang, Jieru Wang, Kai Yao, Yu Sun, Chenxi Han and Binran Zhao\*



19348

### Simultaneous detection of cadmium and lead ions in grains using an electrochemical sensor based on a Co-ZIF@carbonized litchi pericarp composition

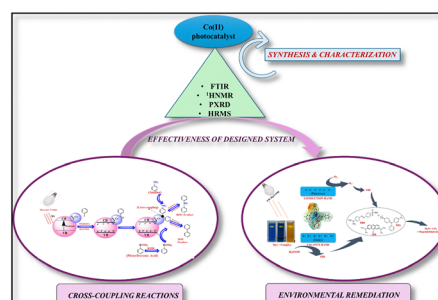
Yafeng Jin, Xueyang Zhang, Didi Tong, Yinfeng Cheng, Fangming Han, Junchao Wu and Zhiying Qin\*



19358

### Synthesis, structural characterization, and computational simulations of heteroleptic cobalt(II) complexes: toward efficient catalysis in environmental remediation and cross-coupling chemistry

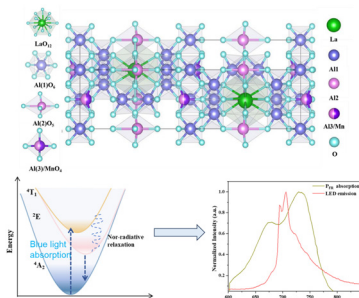
Shalima Kumari, Maridula Thakur\* and Sachin Kumar



19383

### Promising near-infrared emitting Cr<sup>3+</sup>-doped LaMnAl<sub>11</sub>O<sub>19</sub> phosphors for plant growth LEDs with excellent responsiveness to the phytochrome P<sub>FR</sub>

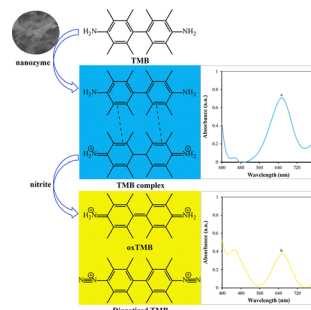
Xunxi Yin, Lijing Yu, Chengyu Cai, Min Zhong\* and Chuang Wang\*



19391

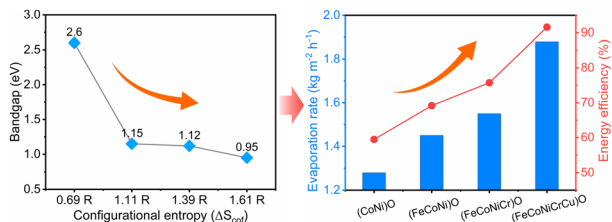
### Synthesis of high oxidase-like activity palladium-graphene quantum dot-N-doped porous carbon nanozymes for colorimetric detection of nitrite

Dan Xu,\* Mingyuan Liu, Yan Li and Qingbo Tu



19399

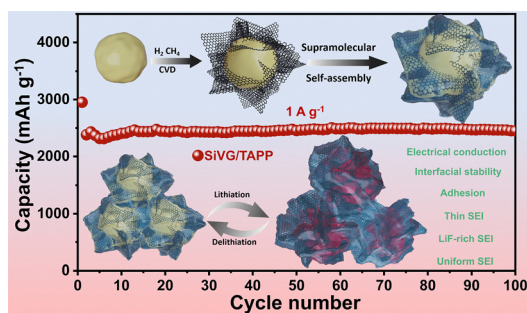
## Entropy-Driven Bandgap Engineering for Enhanced Solar-Driven Water Evaporation



## Entropy-driven bandgap engineering in high-entropy oxides for enhanced solar-driven water evaporation

Yecheng Wang, Zeqiong Tan, Yang Cao, Zubin Wu, Shishi Lin, Xuehong Jiang, Mingxin Zhang, Chengcheng Li\* and Wei Huang\*

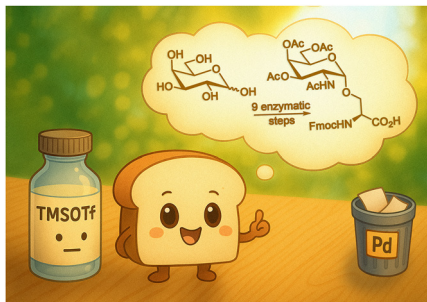
19406



## Functional organic binder-enhanced vertical graphene-silicon-based anodes for high-performance lithium-ion batteries

Hongyan Wang,\* Zixin Zhu, Yongxing Su, Guizhi Wang, Xingpeng Du, Fan Xie and Xiang Li

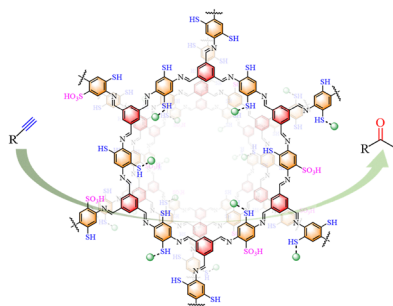
19418



## Revised efficient and reproducible synthesis of an Fmoc-protected Tn antigen

Peihan Xu, Sabrina Piazza, Michael R. Reynolds, Ryan Gaudet, Jonathan Chiamonte, Fabiola A. Chapa-Villarreal, John J. Hayward and John F. Trant\*

19426

Thiol-induced *in situ* synthesis of bifunctional Au-SH/SO<sub>3</sub>H-COP enables efficient and recyclable alkyne hydration

Zhenzhong Li,\* Haohao Chang, Zhiwei He, Zhongyang Su and Mingjian Duan

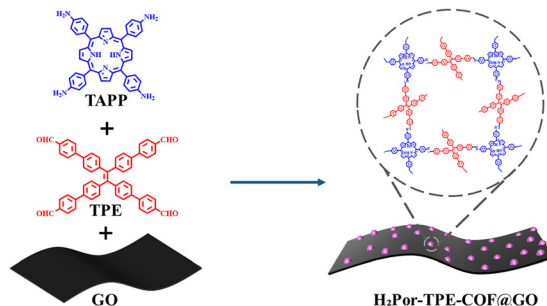


## PAPERS

19435

### Porphyrin-based covalent organic framework/graphene composite synergistically enhances the adsorption and catalysis of lithium polysulfides

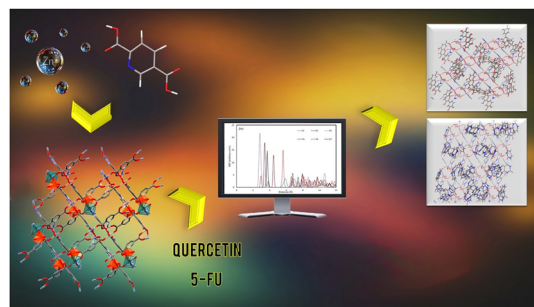
Bo Sun, Xiaoyu Xu, Lingyu Zhang, Chan Yao\* and Yanhong Xu\*



19445

### Computational investigation of the potential of a zinc-based metal–organic framework as a quercetin and 5-fluorouracil anticancer drug carrier

Monireh Bakhshandeh, Kamran Akhbari,\* Sajjad Soltani, Emmanuel Tylianakis,\* George E. Froudakis and Jonathan M. White



## CORRECTION

19454

### Correction: Enhancing the gravimetric hydrogen storage capacity and optoelectronic performance of a novel Li<sub>2</sub>GePbH<sub>6</sub> hydride perovskite: a DFT investigation

Asghar Hussain, Muhammad Khuram Shahzad,\* Abhinav Kumar,\* Lilia El Amraoui, Kais Ouni, Vineet Tirth, Ali Algahtani, Tatyana Orlova, Ankit Dilipkumar Oza, Ravinder Pal Singh and N. Sfina

## RETRACTION

19455

### Retraction: Efficient and reproducible synthesis of an Fmoc-protected Tn antigen

Sabrina M. Piazza, Michael R. Reynolds, Jonathan Chiamonte, Peihan Xu, Fabiola A. Chapa-Villarreal and John F. Trant\*

