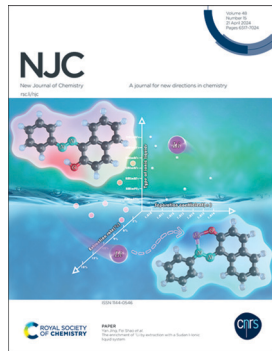


## IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 48(15) 6517–7024 (2024)



### Cover

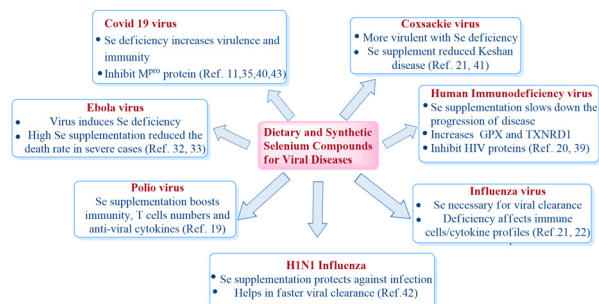
See Yan Jing, Fei Shao  
et al., pp. 6562–6570.  
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from *New J. Chem.*,  
2024, **48**, 6562.

## PERSPECTIVE

6534

### Selenium compounds as promising antiviral agents

Vimal K. Jain\* and K. Indira Priyadarsini

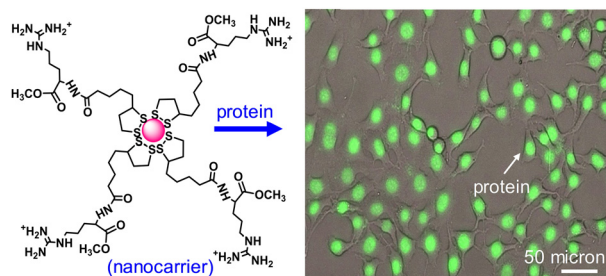


## COMMUNICATIONS

6553

### Guanidinium-terminated gold nanoparticles for protein delivery to the cell nucleus

Nayana Mukherjee, Ankan Kumar Sarkar, Prasanta Panja and Nikhil R. Jana\*



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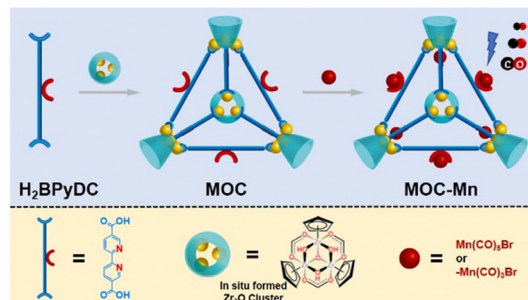


## COMMUNICATIONS

6557

### A biocompatible Mn-decorated metal–organic cage with sustainable CO release

Xiaomei Ning, Peilin Yin, Lixia Zhang, Feng Gao,\*  
Youfu Wang\* and Jinghui Yang\*

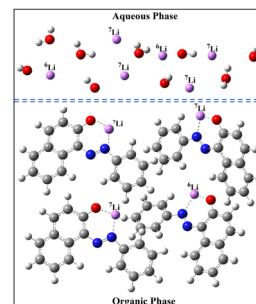


## PAPERS

6562

### The enrichment of $^7\text{Li}$ by extraction with a Sudan I-ionic liquid system

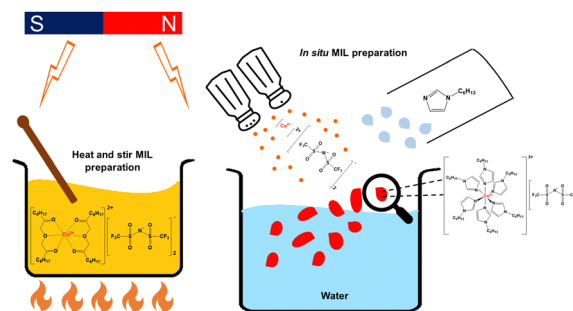
Huangda Li, Jinhe Sun, Yongzhong Jia, Pengrui Zhang,  
Huiqun Ju, Lianjing Mao, Zhiyu Zhao, Xiao Li, Bo Li,  
Yan Jing\* and Fei Shao\*



6571

### Neat and rapid preparation of hydrophobic magnetic ionic liquids composed of transition metal chelates featuring *in situ* formation capabilities in aqueous matrices

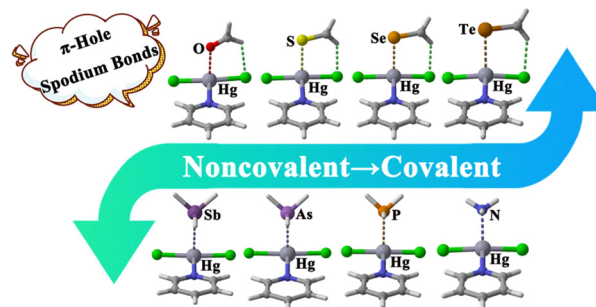
Nabeel Mujtaba Abbasi, Pravin S. Shinde,  
Kathryn E. O'Harra, Anis Biswas, Jason E. Bara and  
Jared L. Anderson\*



6582

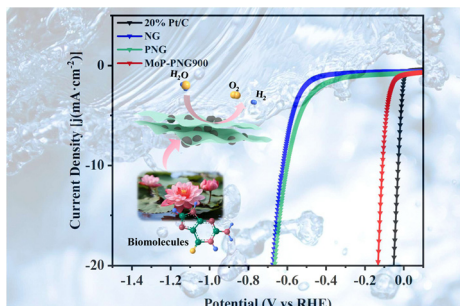
### The nature of $\pi$ -hole spodium bonds in the $\text{HgLCl}_2$ ( $\text{L}$ = pyrrole, pyrazole, imidazole, pyridine, pyridazine, and pyrimidine) complexes: from noncovalent to covalent interactions

Rong Tian, Yanli Zeng, Xiaoyan Li and Xueying Zhang\*



## PAPERS

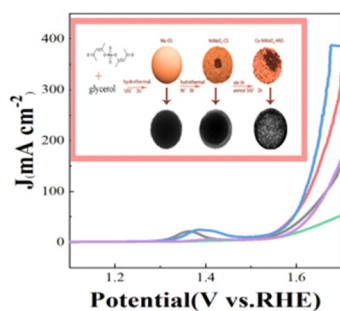
6590



**Molybdenum phosphide nanoparticles encapsulated with biomolecule-derived N, P-codoped carbon nanosheets for the synergistic hydrogen evolution reaction**

Yixin Peng, Qianyi Liu and Baobing Huang\*

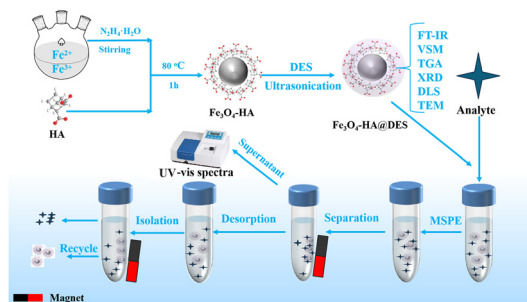
6599



**Oxygen defect based cobalt-doped-NiMoO<sub>4</sub> hierarchical hollow nanosheet-based-nanosphere for oxygen evolution reaction**

Zhuoxun Yin,\* Min Zhou, Xinpeng Li, Xiangcun Liu, Xinzhi Ma,\* Yang Zhou,\* Wei Chen, Jinlong Li, Lina Liu and Jun Lv

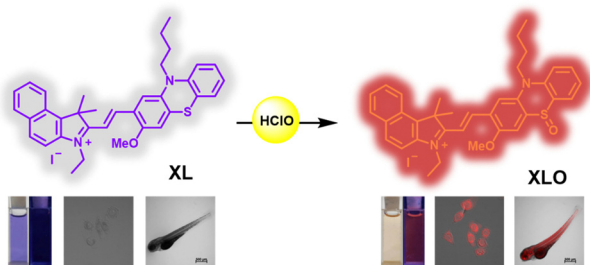
6608



**Humic acid-based biomass-derived magnetic nanocomposites modified by a deep eutectic solvent for the efficient adsorption of trypsin**

Jing Chen,\* Heqiong Li and Yuzhi Wang\*

6618



**A phenothiazine and semi-cyanine based colorimetric and fluorescent probe for the rapid detection of hypochlorous acid**

Zhongchao Lin and Xuefei Wang\*



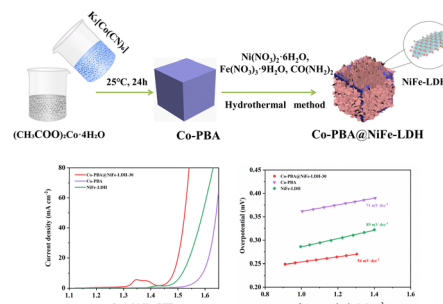


## PAPERS

6625

# A high-efficiency oxygen evolution electrocatalyst based on a $\text{Co}_3[\text{Co}(\text{CN})_6]_2@ \text{NiFe}$ LDH composite material

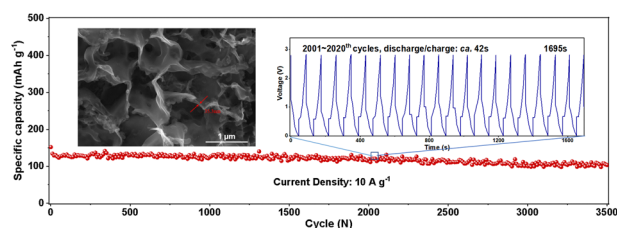
Jiaan Yu, Ruru Fu, Suyu Ge, Chao Yang, Yun Zhao,\*  
Caihong Feng, Qingze Jiao and Hansheng Li



6633

# Rational synthesis of macroporous nanocarbon with phosphorus-doping from pitch for high-rate sodium ion batteries

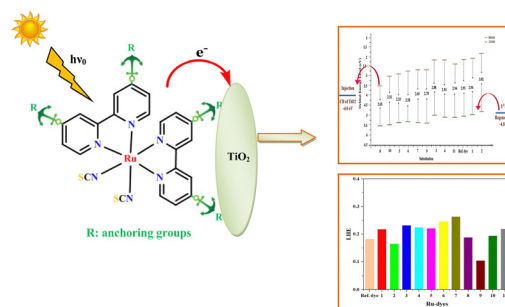
Ying-Mei Li, Shu-Feng Liu, Wei Sun, Ruifang Lu,\*  
Chan Liu and Qiang Sun\*



6641

# Theoretical insights into the photovoltaic properties of ruthenium(II) bipyridyl photosensitizers through variation of the anchoring groups

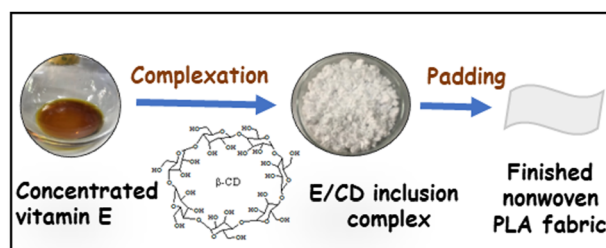
Sepideh Samiee\* and Mohades Ahmadi Manesh



6650

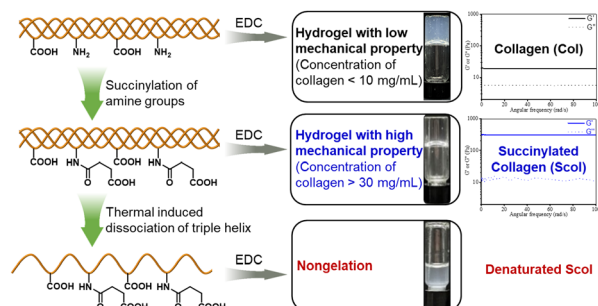
# Enhanced stability of natural vitamin E from palm oil by forming inclusion complexes with cyclodextrin and its application on PLA fabric

Mirantee Buddeesao, Thitinun Karpkird, Rayakorn Nokkaew,  
Jantip Setthayanond and Potjanart Suwanruji\*



## PAPERS

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### Insights into the 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide (EDC)-induced gelation of fully carboxylated collagen and the fabrication of hydrogels with enhanced mechanical properties

Juntao Zhang, Haofei Xu, Yang Liu, Peishan Sui, Fen Deng, Mingming Zheng, Tianyi Liu, Benmei Wei, Chengzhi Xu and Haibo Wang\*

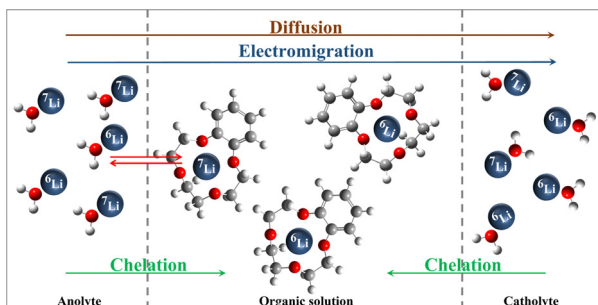
6670



### Phen-2NO, a new $C_2$ -symmetric rigid-featured tetradentate ligand, and its application in the asymmetric alkylation reaction of indoles

Zi-Yue Chen, Ke-Lan Xu, Xi-Rui Wang, Pan Hu, Wei-Yan Jiang,\* Yi-Feng Dai, Li-Jun Peng and Xiong-Li Liu\*

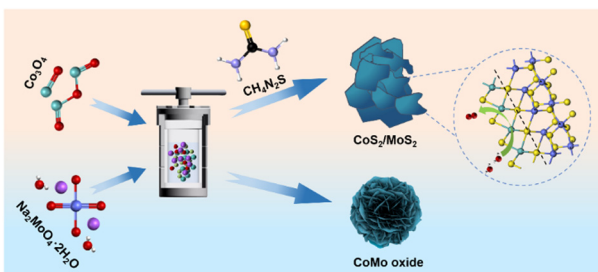
6676



### Electromigration separation of lithium isotopes with B12C4, B15C5 and B18C6 systems

Zhiyu Zhao, Xiaolong Zhou, Qingfen Meng, Pengrui Zhang, Fei Shao, Xiao Li, Huangda Li, Lianjing Mao, Tianyu Zheng, Yan Jing, Yongzhong Jia, Shuxuan Wang\* and Jinhe Sun\*

6688



### Abundant heterointerfaces in $\text{CoS}_2/\text{MoS}_2$ nanosheet array electrocatalysts for the enhanced oxygen evolution reaction

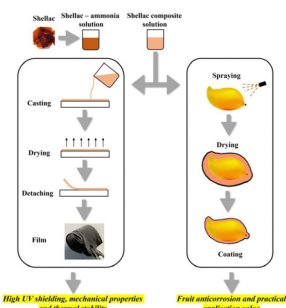
Zhaojin Li, Qian Ma, Shaofei Zhang, Di Zhang, Huan Wang, Qiujuan Wang, Huilan Sun and Bo Wang\*



6696

## High UV shielding and mechanical properties of shellac composite film for fruit packaging

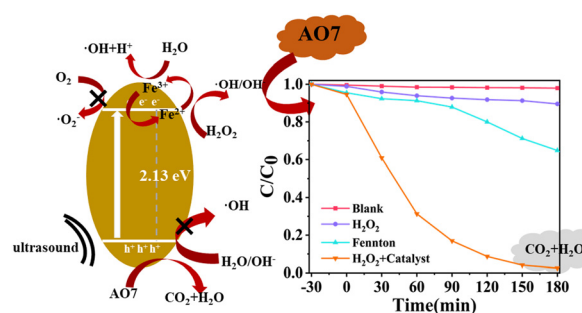
Lingsu Zhang, Deyan Du, Weifu Dong, Tatsuo Kaneko, Hongji Zhang, Mingqing Chen and Dongjian Shi\*



6704

## One-pot hydrothermal synthesis of FeNbO<sub>4</sub> microspheres for effective sonocatalysis

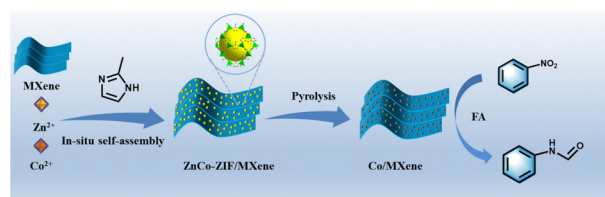
Min He, Defa Li, Yu Liu, Taohai Li, Feng Li,\* Javier Fernández-Catalá and Wei Cao\*



6714

## Synthesis of an MXene supported Co nanoparticle catalyst for efficient catalytic transfer hydrogenation of nitro compounds with formic acid

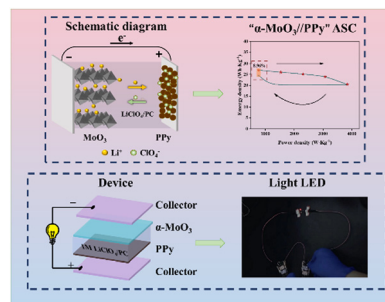
Mingyuan Jian, Kekan Dou, Deqiong Xie, Gaomei Tu, Weidong Zhu and Fumin Zhang\*



6723

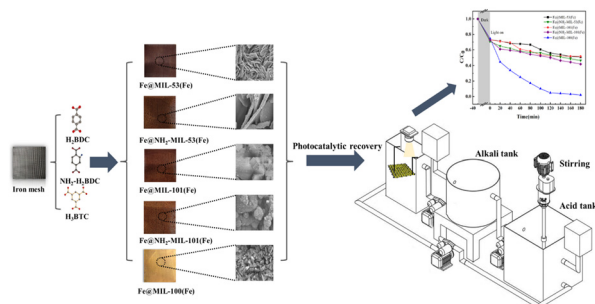
## An effective strategy to construct $\alpha$ -MoO<sub>3</sub>/PPy toward high-energy-density asymmetric supercapacitors

Min Sun, Yu Zhang, Zhijun Liang, Rui Zhang, Kai Zhang, Yanhong Lin, Dejun Wang and Tengfeng Xie\*





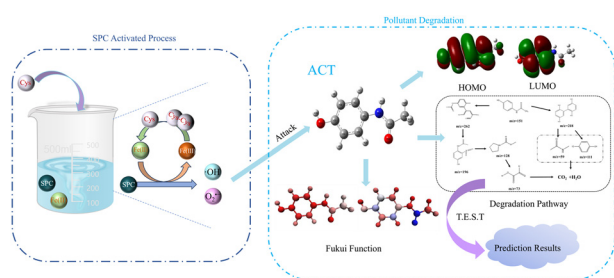
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### Efficient and convenient strategy for recovering hexavalent chromium ions from wastewater using a novel photocatalytic iron-based metal–organic framework mesh

Yu Gao, Siyu Liu, Xu Huang, Weiwen Lu, Jian Huang, Hua Zhang, Yong Zhang, Jinhua Wang, Shanshan Xi, Jun Liu and Tao Luo\*

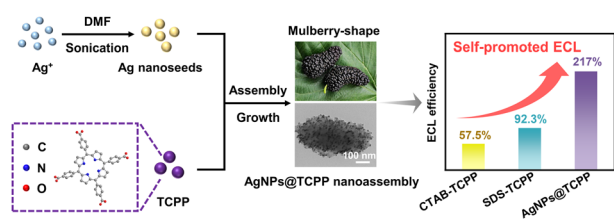
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### Activation of sodium percarbonate by cysteine complexation of Fe(II) for the degradation of acetaminophen in water

Yingzi Lin,\* Ningning Sun, Qingyu Zhang, Lei Chen, Shengbo Sun, Hong Yang, Jing Chen, Qixuan Weng and Shuang Xue

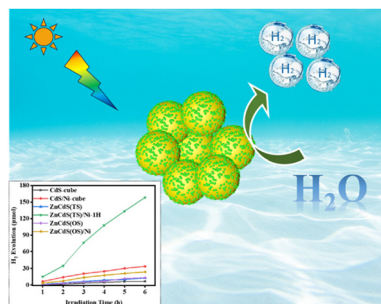
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### Facile one-pot synthesis of mulberry-shape silver nanoparticle-doped porphyrin nanoassembly with self-promoted electrochemiluminescence

Yisha Wang, Jiangnan Shu,\* Linfeng Zhuo, Manli Wang, Wei Nie and Hua Cui\*

6765



### Photodeposited nickel-loaded ZnCdS nanoparticles for hydrogen production from photocatalytic water splitting

Xiaorun Huang, Changyan Guo,\* Yanan Niu, Yanqiu Ma and Jide Wang\*

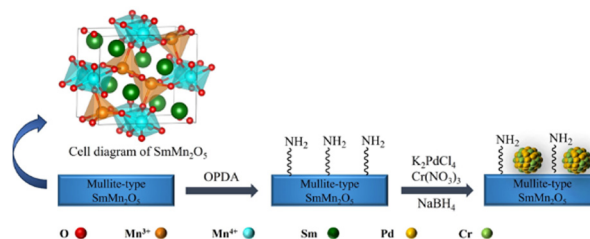


## PAPERS

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# Bimetallic palladium nickel nanoparticles loaded on ammonia-alkalized multi-walled carbon nanotubes for efficient dehydrogenation of formic acid

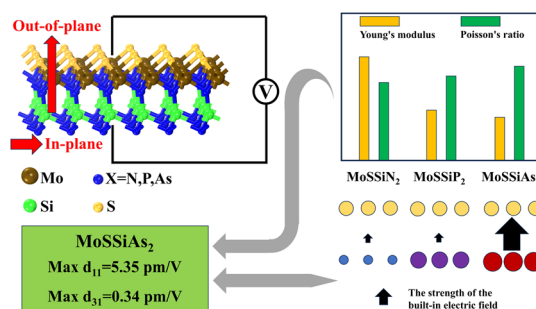
Yanqiu Yang, LinLin Xu\* and Tong Liu\*



6780

# First-principles calculation of in-plane and out-of-plane piezoelectric properties of two-dimensional Janus MoSSiX<sub>2</sub> (X = N, P, As) monolayers

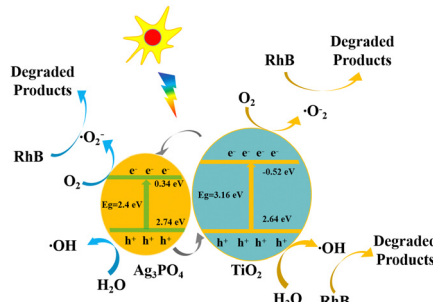
Wantao Gan, Xinguo Ma,\* Jiajun Liao, Tian Xie and Nan Ma



6789

# Combination of alkali treatment and Ag<sub>3</sub>PO<sub>4</sub> loading effectively improves the photocatalytic activity of TiO<sub>2</sub> nanoflowers

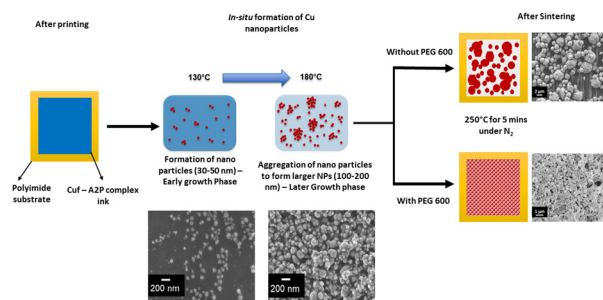
Xin Wang, Shichang Yuan, Mengyao Geng, Meiling Sun, Junkai Zhang, Aiping Zhou\* and Guangchao Yin\*



6796

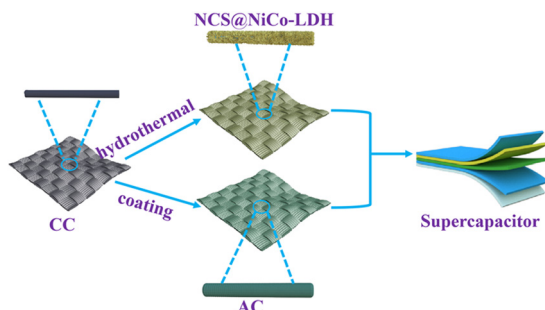
# Decomposition mechanism and morphological evolution of *in situ* realized Cu nanoparticles in Cu complex inks

Nihesh Mohan,\* Juan Ignacio Ahuir-Torres, Sri Krishna Bhogaraju, Ralf Webler, Hiren R. Kotadia, Huseyin Erdogan and Gordon Elger



## PAPERS

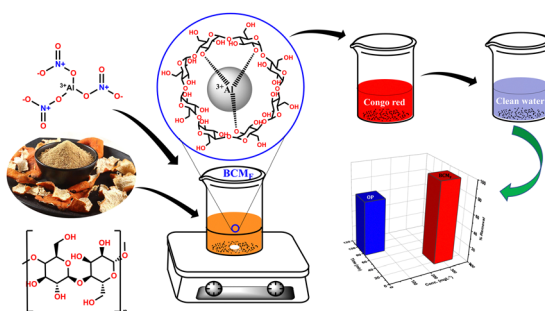
6809



### One-step preparation of $\text{NiCo}_2\text{S}_4@\text{NiCo-LDH}$ nano-array structures for high-performance supercapacitor electrodes

Yile Dai, Yi Jiang, Qing Wang and Jianfeng Dai\*

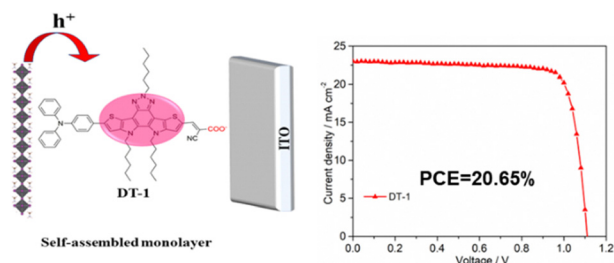
6817



### An investigation into the prospective applications of bio-catalyst metal frameworks: a novel catalyst for improved removal of Congo red from aqueous solutions

Harez Rashid Ahmed,\* Hanar Qadir Hassan and Kosar Hikmat Hama Aziz

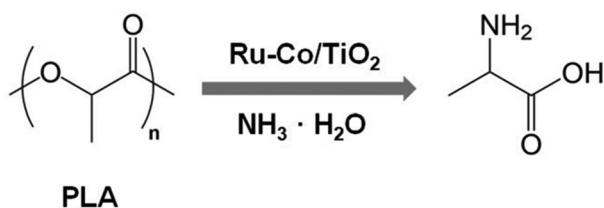
6833



### Self-assembled organic molecules with a fused aromatic ring as hole-transport layers for inverted perovskite solar cells: the effect of linkers on performance

Haoliang Cheng\* and Zu-Sheng Huang\*

6842



### Amination of polylactic acid to alanine using a Ru-Co bimetallic catalyst

Meng Cui,\* Guyue Liu, Cankun Ma, Zihan Cao, Yu Ye, Yongfu Shen and Xiuqin Zhang\*

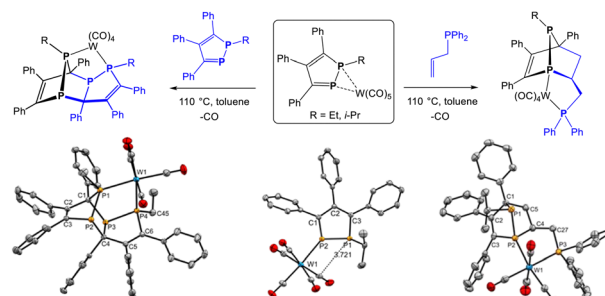




6848

### Synthesis of *P,P*-bidentate caged phosphines via tungsten pentacarbonyl-promoted cycloaddition reactions of 1-alkyl-1,2-diphospholes

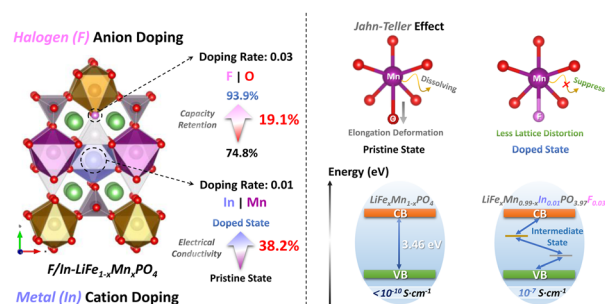
Almaz A. Zagidullin,\* Yulia S. Ganushevich,  
Denis V. Korchagin, Peter Lönnecke,  
Evamarie Hey-Hawkins and Vasil A. Miluykov



6857

### Achieving long-lasting and high-capacity $\text{LiFe}_{0.5}\text{Mn}_{0.5}\text{PO}_4$ cathodes with a synergistic F/In dual doping strategy

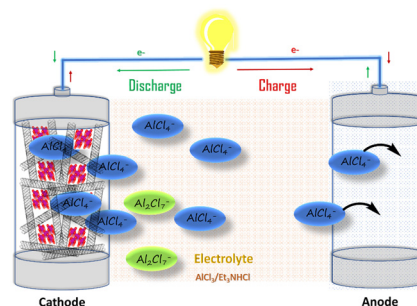
Zepeng Li, Jianhui Zhu, Maowen Xu\* and Jian Jiang\*



6864

### Manganese–carbon (Mn–C) interaction to host $\text{Al}^{3+}$ -ions in a $\beta\text{-MnO}_2$ –MWCNT composite cathode in rechargeable aluminium ion batteries

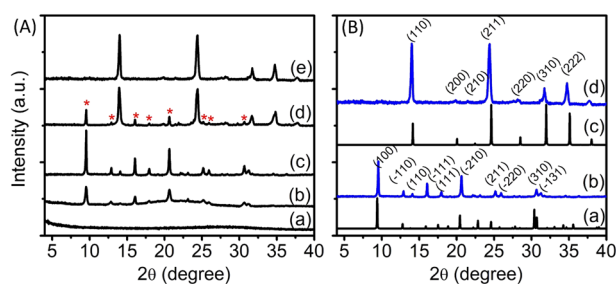
Mohan Gorle, Santosh N. Chavan, A. Vijay Kumar and Vatsala Rani Jeti\*



6875

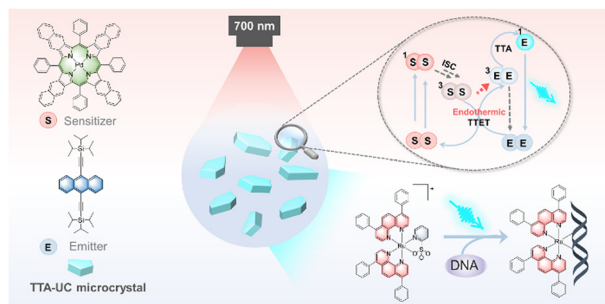
### Direct evidence of time-dependent crystallization evolution of SAPO-34 and SAPO-20 zeolites directed by trimethylbenzylammonium hydroxide for microwave-assisted ethanolysis of furfuryl alcohol

Guanchen Wang, Najla AlMasoud, Taghrid S. Alomar,  
Yasmin Nadhirah Azman, Pedro Maireles-Torres,  
Stephen Chia, Joon Ching Juan, Tau Chuan Ling,  
Zeinhom M. El-Bahy and Eng-Poh Ng\*



## PAPERS

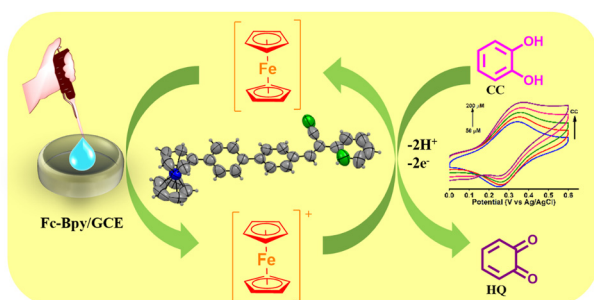
6886



### Thermally-activated upconversion based on triplet fusion for deep red photoactivation of Ru(II) complexes

Pengfei Niu, Xuwen Da, Rui Hu, Tianjun Yu, Jinping Chen, Qianxiang Zhou,\* Guiwen Luo,\* Yi Zeng\* and Yi Li

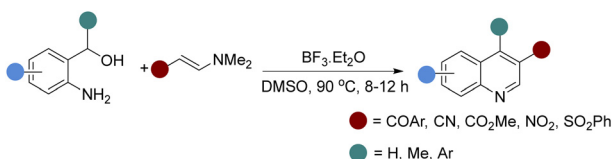
6893



### Designing a ferrocene biphenyl pyridine modified electrode for the non-enzymatic electrochemical detection of catechol

Palani Purushothaman, Devarasu Mohanapriya, Kathavarayan Thenmozhi and Subramanian Karpagam\*

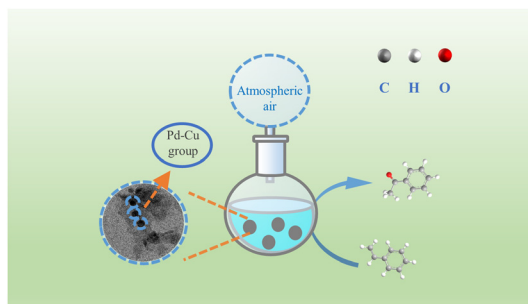
6902



### Lewis acid-mediated modular route to the synthesis of 3-substituted quinolines from 2-aminobenzyl alcohols and enamine(ones)

Aritra Ghosh, Samridhi Upadhyay, Dipak J. Dahatonde, Ruchir Kant and Sanjay Batra\*

6911



### Selective oxidation of alkenes catalyzed by palladium-based bimetallic heterogeneous catalysts under atmospheric pressure

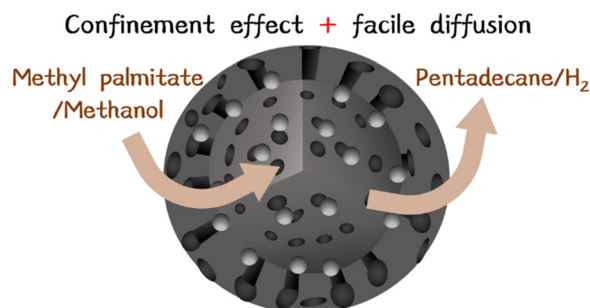
Rongfan Zhang, Shuaihui Li, Yuelei Hou, Chengke Chang and Jun Li\*



6919

### *In situ* aqueous phase hydrodeoxygenation of methyl palmitate on Ni–Co alloy particles embedded in mesoporous carbon hollow sphere catalysts

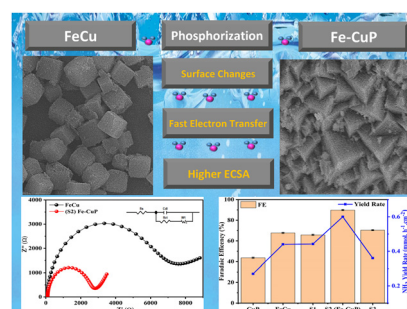
Shangzhen Feng, Hantao Zhou, Zhongze Wang, Sihao Shu, Xing Zhang and Jixiang Chen\*



6933

### Fe–CuP nanocubes for nitrate-to-ammonia conversion

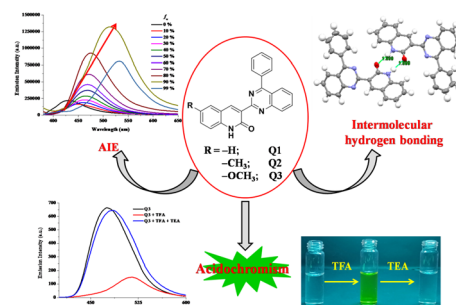
Shahid Khan, Sajid Mahmood, Mahmood ul Haq, Amjad Ali, Sufaid Shah, Ghulam Abbas Ashraf and Qingin Liu\*



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### Intermolecular hydrogen bonding-assisted aggregation induced emission in quinolone–quinazoline conjugates and their potential use in acidochromism

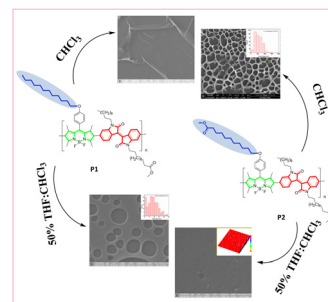
Irshad Ali, Bhupendra Kumar Dwivedi, Vishwa Deepak Singh and Daya Shankar Pandey\*



6954

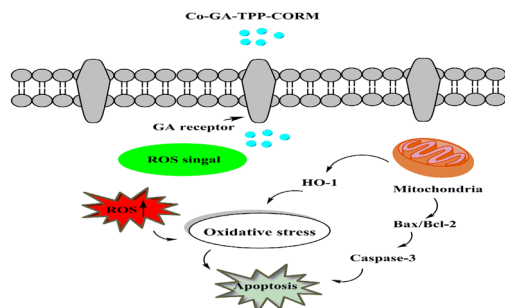
### Solvatochromism and side chain effects on the morphological behavior of bodipy-*alt*-i-Indigo copolymers

Anup Kumar Singh,\* Gitanjali Swain and Sarika Birajdar





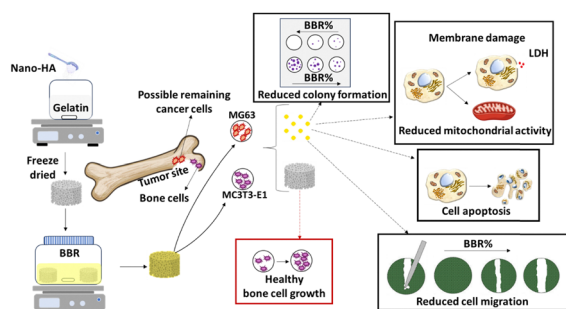
6965



### Synthesis, structural characterization, docking studies and bioactivities of carbon monoxide release molecules based on triphenylphosphonium-glycyrrhetic acid derivatives

Hua-Peng Liu,\* Ming-Zhe Ren, Yu-Jie Chen, Sheng-Yan Zhao, Yuan Liao and Xi-Cun Wang\*

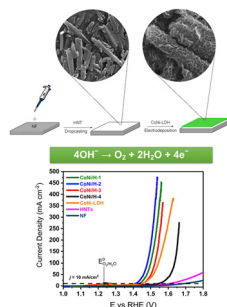
6977



### Design and synthesis of berberine loaded nano-hydroxyapatite/gelatin scaffold for bone cancer treatment

Sajjad Khajavi, Marjan Bahraminasab,\* Samaneh Arab,\* Athar Talebi, Parviz Kokhaei and Hassan Abdoos

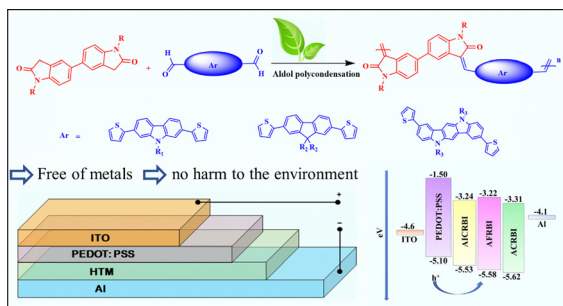
6997



### Electrodeposited CoNi-LDH nanosheets supported on halloysite nanotubes as a robust and highly efficient electrocatalyst for water oxidation

M. Hajilo and D. Taherinia\*

7007



### Synthesis and study of donor–acceptor conjugated polymers via a metal free aldol condensation polymerization strategy

Prerak R. Patel, Yash G. Kapdi, Saurabh S. Soni,\* Sanjio S. Zade and Arun L. Patel\*



## EXPRESSION OF CONCERN

7020

**Expression of concern: Naturally derived sugar-based ionic liquids: an emerging tool for sustainable organic synthesis and chiral recognition**

Priyanka Muthukuru, Krishnaraj P., Jayachandra Rayadurgam and Sabbasani Rajasekhara Reddy\*

## CORRECTION

7021

**Correction: Transition-metal-free glycosyl sulfonation of diaryliodonium salts with sodium glycosyl sulfinate: an efficient approach to access glycosyl aryl sulfones**

Jiaxin Luo, Xinyu Chen, Wenyan Ding, Jialu Ma, Zhaohui Ni, Lihuang Xie and Chunfa Xu\*

