

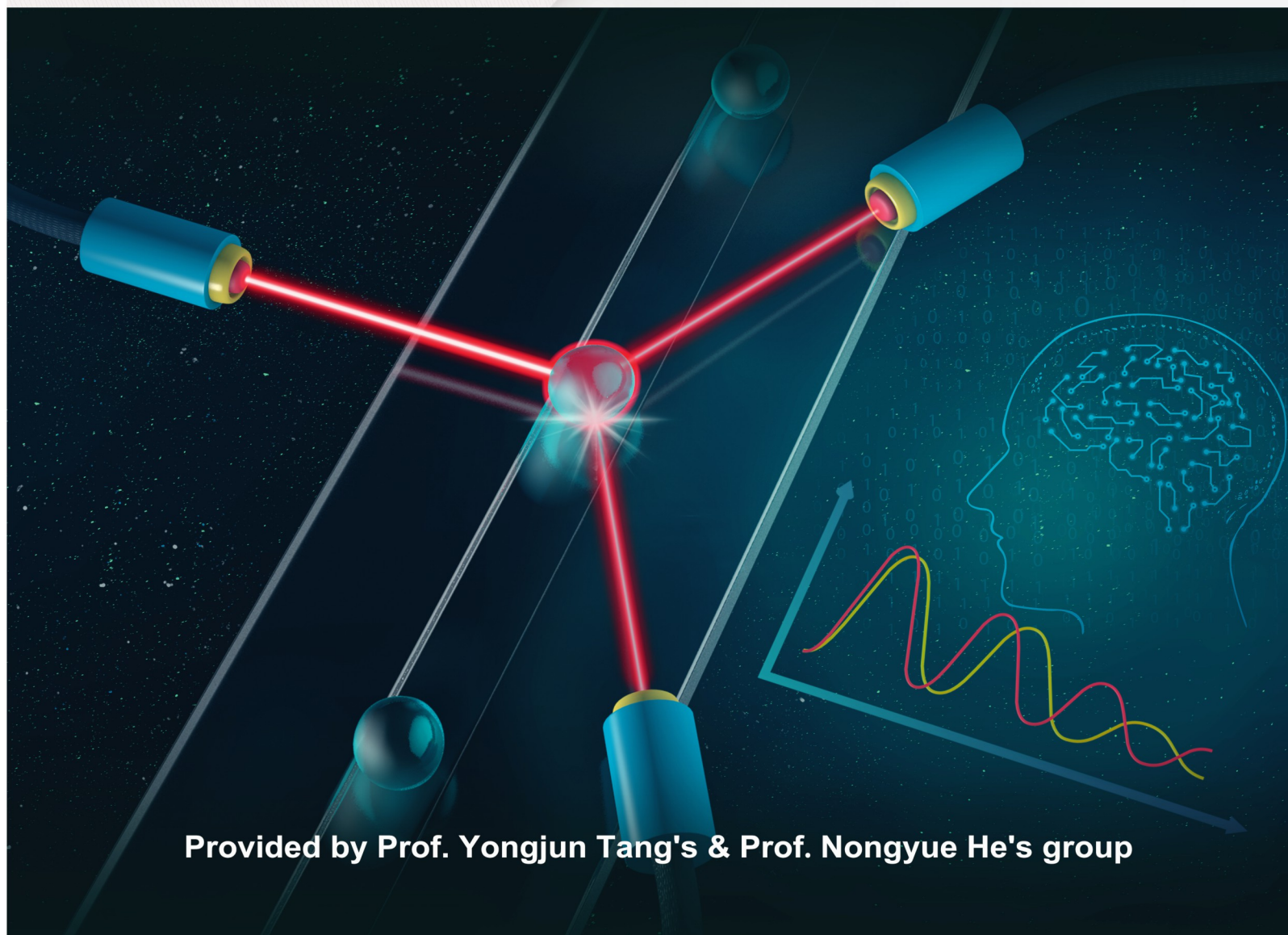
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## Chinese Chemical Letters (中国化学快报)

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Provided by Prof. Yongjun Tang's & Prof. Nongyue He's group



#### COMMUNICATION

Jinmin Zhao, Zhipeng Gu, Jun Wu et al.  
Natural lotus root-based scaffolds for bone  
regeneration

#### COMMUNICATION

Miao Wang, Xu Hou et al.  
Hydrophilic carbon nanotube membrane  
enhanced interfacial evaporation for desalination

Chinese Chemical Society

Institute of Materia Medica, Chinese Academy of Medical Sciences

万方数据



## Graphical Abstracts/Chin Chem Lett 33 (2022) iii–xxvi

## Editorial

## MOFs for water purification

Chinese Chemical Letters 33 (2022) 1647

Huifen Fu<sup>a</sup>, Chong-Chen Wang<sup>a</sup>, Wen Liu<sup>b</sup>

<sup>a</sup> Beijing Key Laboratory of Functional Materials for Building Structure and Environment Remediation/Beijing Energy Conservation & Sustainable Urban and Rural Development Provincial and Ministry Co-construction Collaboration Innovation Center, Beijing University of Civil Engineering and Architecture, Beijing 100044, China

<sup>b</sup> College of Environmental Sciences and Engineering, Peking University, The Key Laboratory of Water and Sediment Sciences, Ministry of Education, Beijing 100871, China

This editorial introduces the recent advances of MOFs for pollutant detection in water and water purification by adsorption and catalysis reported in Chinese Chemical Letters in the past five years.



## Perspective

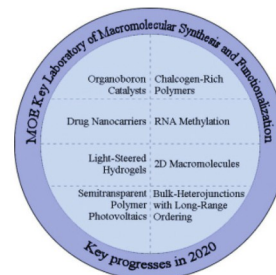
## Key progresses of MOE key laboratory of macromolecular synthesis and functionalization in 2020

Chinese Chemical Letters 33 (2022) 1650

Jie Ren, Xiao Shu, Ya Wang, Di Wang, Guangpeng Wu, Xinghong Zhang, Qiao Jin, Jianzhao Liu, Ziliang Wu, Zhen Xu, Chang-Zhi Li, Hanying Li

MOE Key Laboratory of Macromolecular Synthesis and Functionalization, Department of Polymer Science and Engineering, Zhejiang University, Hangzhou 310027, China

This paper provides a brief review of the key progresses in 2020 of MOE Key Laboratory of Macromolecular Synthesis and Functionalization in Zhejiang University, China.



## Reviews

## Small nanoparticles bring big prospect: The synthesis, modification, photoluminescence and sensing applications of carbon dots

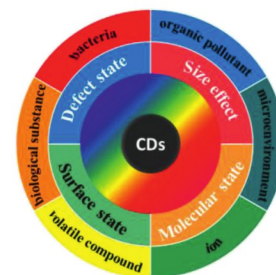
Chinese Chemical Letters 33 (2022) 1659

Pengli Gao<sup>a</sup>, Zhigang Xie<sup>b</sup>, Min Zheng<sup>a</sup>

<sup>a</sup> School of Chemistry and Life Science, Advanced Institute of Materials Science, Changchun University of Technology, Changchun 130022, China

<sup>b</sup> State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, China

This review summarizes the recent advances of carbon dots in synthesis, modification, photoluminescence and sensing applications. We believe that this type of small nanoparticles will bring about big prospect in the near future.





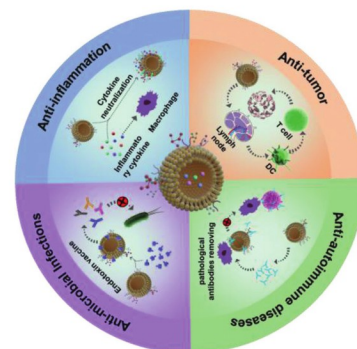
## Cell membrane-coated nanoparticles for immunotherapy

Hang Liu, Zhaohua Miao, Zhengbao Zha

School of Food and Biological Engineering, Hefei University of Technology, Hefei 230009, China

This review mainly summarized the latest development of cell membrane-coated nanoparticles for immunotherapy in treating immune-related diseases including microbial infections, inflammation, tumor and autoimmune diseases.

Chinese Chemical Letters 33 (2022) 1673



## Diketopyrrolopyrrole-derived organic small molecular dyes for tumor phototheranostics

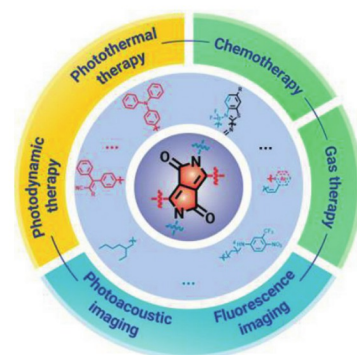
Qianli Ma<sup>a</sup>, Xu Sun<sup>a</sup>, Weili Wang<sup>a</sup>, Dongliang Yang<sup>a</sup>, Cangjie Yang<sup>b</sup>, Qian Shen<sup>a</sup>, Jinjun Shao<sup>a</sup>

<sup>a</sup>Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Nanjing Tech University (NanjingTech), Nanjing 211800, China

<sup>b</sup>Department of Chemistry, Boston College, Chestnut Hill, Massachusetts 02467, United States

Phototherapy, including photodynamic therapy (PDT) and photothermal therapy (PTT), is an emerging light-triggered cancer treatment and shows the advantages of non-invasiveness and low side effects. Diketopyrrolopyrrole (DPP) is a small molecular organic dye featuring outstanding photophysical properties, and this review summarizes the recent progress of various DPP-based organic small molecules on phototheranostics.

Chinese Chemical Letters 33 (2022) 1681



## Exosome based miRNA delivery strategy for disease treatment

Zhengwen Fang<sup>a</sup>, Xinyu Zhang<sup>b</sup>, Hai Huang<sup>c</sup>, Jun Wu<sup>a</sup>

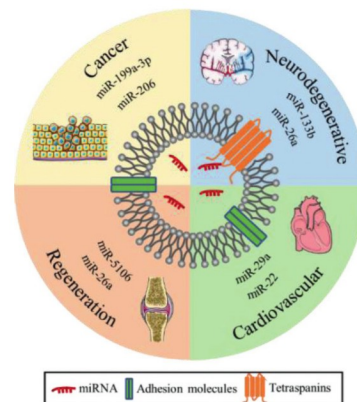
<sup>a</sup>School of Biomedical Engineering, Sun Yat-sen University, Shenzhen 518107, China

<sup>b</sup>Department of Drug Clinical Trial Institution, National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital & Shenzhen Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Shenzhen 518116, China

<sup>c</sup>Department of Urology, Sun Yat-sen Memorial Hospital, Sun Yat-sen University, Guangzhou 510220, China

Exosomes are excellent carriers for miRNA with the advantages of non-immunogenicity, non-toxicity. This review systematically expounds on the application and development prospect of miRNA-loaded exosomes in the fields of cancers, neurodegenerative diseases, cardiovascular diseases, and regenerative medicine.

Chinese Chemical Letters 33 (2022) 1693



## Recent advances in targeted stimuli-responsive nano-based drug delivery systems combating atherosclerosis

Yilin Song<sup>a</sup>, Huaqing Jing<sup>a</sup>, Long Binh Vong<sup>c,d</sup>, Jinping Wang<sup>b</sup>, Nan Li<sup>a</sup>

<sup>a</sup>Tianjin Key Laboratory of Drug Delivery & High-Efficiency, School of Pharmaceutical Science and Technology, Tianjin University, Tianjin 300072, China

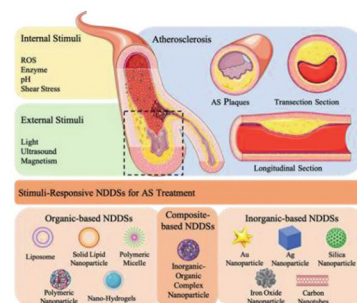
<sup>b</sup>Key Laboratory of Molecular Biophysics of Hebei Province, Institute of Biophysics, School of Sciences, Hebei University of Technology, Tianjin 300401, China

<sup>c</sup>School of Biomedical Engineering, International University, Ho Chi Minh 700000, Vietnam

<sup>d</sup>Vietnam National University Ho Chi Minh City (VNU-HCMC), Ho Chi Minh 700000, Vietnam

Herein, we have systematically summarized the recent advances in stimuli-responsive nano-based drug delivery systems (NDDSs) for atherosclerosis (AS) treatments. Besides, we have also summarized in detail the classification of stimuli-responsive NDDSs for AS.

Chinese Chemical Letters 33 (2022) 1705



## Applying nanotechnology to boost cancer immunotherapy by promoting immunogenic cell death

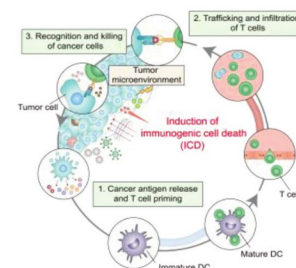
Lvqin Fu<sup>a</sup>, Xianbin Ma<sup>b</sup>, Yuantong Liu<sup>a</sup>, Zhigang Xu<sup>b</sup>, Zhijun Sun<sup>a</sup>

<sup>a</sup> The State Key Laboratory Breeding Base of Basic Science of Stomatology (Hubei- MOST) & Key Laboratory of Oral Biomedicine Ministry of Education, School & Hospital of Stomatology, Wuhan University, Wuhan 430079, China

<sup>b</sup> Key Laboratory of Luminescence Analysis and Molecular Sensing, Ministry of Education, School of Materials and Energy & Chongqing Engineering Research Center for Micro-Nano Biomedical Materials and Devices, Southwest University, Chongqing 400715, China

In this review, we introduced the basic concepts and molecular mechanisms underlying the induction of immunogenic cell death (ICD). Furthermore, we also summarized and discussed the progress in the application of nanotechnology in immunotherapy to promote tumor ICD.

Chinese Chemical Letters 33 (2022) 1718



## Recent advances in droplet microfluidics for microbiology

Ziyi He<sup>a</sup>, Hao Wu<sup>a,b</sup>, Xianghua Yan<sup>b,c,d,e,f</sup>, Wu Liu<sup>g</sup>

<sup>a</sup> State Key Laboratory of Agricultural Microbiology, College of Veterinary Medicine, Huazhong Agricultural University, Wuhan 430070, China

<sup>b</sup> Interdisciplinary Sciences Institute, Huazhong Agricultural University, Wuhan 430070, China

<sup>c</sup> State Key Laboratory of Agricultural Microbiology, College of Animal Sciences and Technology, Huazhong Agricultural University, Wuhan 430070, China

<sup>d</sup> Hubei Hongshan Laboratory, Wuhan 430070, China

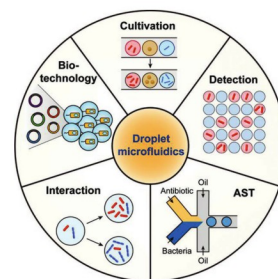
<sup>e</sup> The Cooperative Innovation Center of Sustainable Pig Production, Wuhan 430070, China

<sup>f</sup> Hubei Provincial Engineering Laboratory for Pig Precision Feeding and Feed Safety Technology, Wuhan 430070, China

<sup>g</sup> Institute of Pharmaceutical Analysis, School of Pharmaceutical Sciences, Cheeloo College of Medicine, Shandong University, Ji'nan 250012, China

Latest applications of droplet microfluidics in various fields of microbiology are summarized in this review.

Chinese Chemical Letters 33 (2022) 1729



## Recent progress on microfluidic biosensors for rapid detection of pathogenic bacteria

Gaowa Xing<sup>a,b</sup>, Weifei Zhang<sup>c</sup>, Nan Li<sup>b</sup>, Qiaosheng Pu<sup>a</sup>, Jin-Ming Lin<sup>b</sup>

<sup>a</sup> College of Chemistry and Chemical Engineering, Lanzhou University, Lanzhou 730000, China

<sup>b</sup> Beijing Key Laboratory of Microanalytical Methods and Instrumentation, Department of Chemistry, Tsinghua University, Beijing 100084, China

<sup>c</sup> Division of Chemical Metrology and Analytical Science, National Institute of Metrology, Beijing 100029, China

Within this progress report, advances in the rapid detection of bacteria using microfluidic biosensors are introduced. The target capture and separation strategies, detection methods, applications and possible future development in various aspects are discussed.

Chinese Chemical Letters 33 (2022) 1743



## Nanofluidics for single-cell analysis

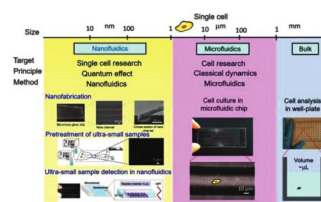
Zengnan Wu<sup>a,b</sup>, Ling Lin<sup>a</sup>

<sup>a</sup> Department of Bioengineering, Beijing Technology and Business University, Beijing 100048, China

<sup>b</sup> State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, China

Here we review the recent developments of single-cell analysis methods based on nanofluidic technologies. The principles of analysis, applications and prospects of these platforms in the fields of cell biology are discussed.

Chinese Chemical Letters 33 (2022) 1752





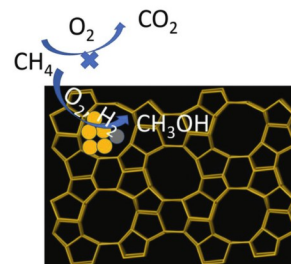
## Methane oxidation by green oxidant to methanol over zeolite-based catalysts

Sufeng Cao, Ke Zhang, Brian Hanna, Essam Al-Sayed

Aramco Services Company, Aramco Research Centre-Boston, 400 Technology Square, Cambridge, MA 02139, United States

Direct methane oxidation to methanol has the potential to reduce greenhouse gas emission. With green oxidant  $O_2$  and reductive  $H_2$ , zeolites-based catalyst shows promising results in improving the activity and selectivity of methane oxidation to methanol.

Chinese Chemical Letters 33 (2022) 1757



## Recent advances in soot combustion catalysts with designed micro-structures

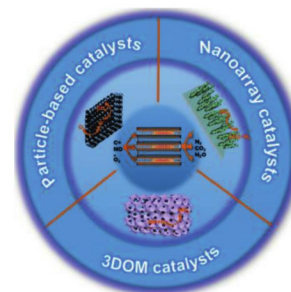
Jiang Shao<sup>a,b</sup>, Xianen Lan<sup>b</sup>, Chaoxin Zhang<sup>b</sup>, Chunmei Cao<sup>a</sup>, Yifu Yu<sup>b</sup>

<sup>a</sup>School of Chemical Engineering, Zhengzhou University, Zhengzhou 450000, China

<sup>b</sup>Institute of Molecular Plus, Department of Chemistry, School of Science, Tianjin University, Tianjin 300072, China

This review summarized recent advances in soot combustion catalysts with designed micro-structures, aiming to guide the synthesis of advanced soot combustion catalysts.

Chinese Chemical Letters 33 (2022) 1763



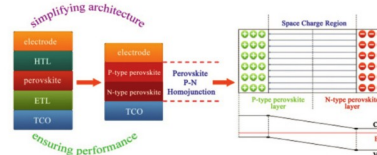
## A mini review: Constructing perovskite p-n homojunction solar cells

Yanan Sun, Wei Chen, Zhengyi Sun

Key Laboratory of Flexible Electronics (KLOFE), Institute of Advanced Materials (IAM), Nanjing Tech University, Nanjing 211816, China

Perovskite material has ambipolar charge transport characteristics, so it could functionalize as both the optical absorption layer and carrier transport layer. Constructing perovskite p-n homojunction could enhance the built-in electric field and promote oriented carrier transport. Accordingly, we could simplify the architecture of the device while ensuring the performance.

Chinese Chemical Letters 33 (2022) 1772



## Revisiting lithium-storage mechanisms of molybdenum disulfide

Chun Sun<sup>a</sup>, Mingming Liu<sup>a</sup>, Longlu Wang<sup>a</sup>, Lingbin Xie<sup>b</sup>, Weiwei Zhao<sup>b</sup>, Jianmin Li<sup>a</sup>, Shujuan Liu<sup>b</sup>, Dafeng Yan<sup>c</sup>, Qiang Zhao<sup>a,b</sup>

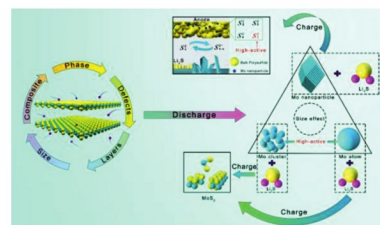
<sup>a</sup>College of Electronic and Optical Engineering & College of Microelectronics, Institute of Flexible Electronics (Future Technology), Nanjing University of Posts & Telecommunications (NUPT), Nanjing 210023, China

<sup>b</sup>Key Laboratory for Organic Electronics and Information Displays & Jiangsu Key Laboratory for Biosensors, Institute of Advanced Materials (IAM), Nanjing University of Posts & Telecommunications, Nanjing 210023, China

<sup>c</sup>College of Chemistry and Environmental Engineering, Shenzhen University, Shenzhen 518060, China

This review aims to dissect all possible side reactions during charging and discharging process, uncover internal and external factors inducing various anode reactions and finally put forward strategies of controlling high cycling capacity and super-stable lithium storage capability of  $MoS_2$ .

Chinese Chemical Letters 33 (2022) 1779



## Carbon–sulfur bond formation via photochemical strategies: An efficient method for the synthesis of sulfur-containing compounds

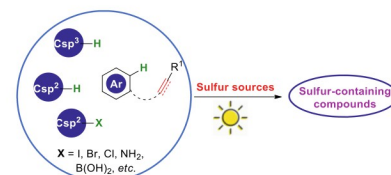
Daoshan Yang<sup>a</sup>, Qjuli Yan<sup>a</sup>, Enjie Zhu<sup>a</sup>, Jian Lv<sup>a</sup>, Wei-Min He<sup>b</sup>

<sup>a</sup>Key Laboratory of Optic-electric Sensing and Analytical Chemistry for Life Science, MOE, State Key Laboratory Base of Eco-Chemical Engineering, College of Chemistry and Molecular Engineering, Qingdao University of Science and Technology, Qingdao 266042, China

<sup>b</sup>School of Chemistry and Chemical Engineering, University of South China, Hengyang 421001, China

In this review, we highlight the recent advances of C–S bond formation via visible-light photoredox catalysis, and analyze the reaction mechanism of various transformations in detail. We hope that this review will provide chemists with a synthetic tool and open new avenues for further development of organosulfur chemistry.

Chinese Chemical Letters 33 (2022) 1798



## Recent development and progress of structural energy devices

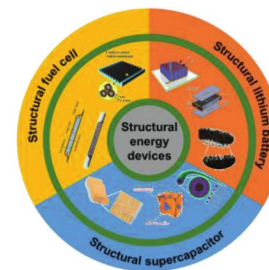
Yong Liu<sup>b</sup>, Zhongxun Yu<sup>b</sup>, Jia Chen<sup>b</sup>, Chenxi Li<sup>b</sup>, Zhengjie Zhang<sup>a</sup>, Xiaoyu Yan<sup>a</sup>, Xinhua Liu<sup>a</sup>, Shichun Yang<sup>a</sup>

<sup>a</sup>Beihang University, Beijing 100191, China

<sup>b</sup>College of Materials Science and Engineering, Beijing University of Chemical Technology, Beijing 100029, China

This review proposes the concept of structural energy devices. Recent developments of structural energy devices are reviewed, including fuel cells, lithium-ion batteries, lithium metal batteries and supercapacitors. The structural design of fuel cell components are summarized, and the skin-core sandwich structure of structural fuel cell is discussed. Structural design of lithium anode for lithium metal batteries is highlighted. Structural lithium-ion batteries and supercapacitors from micro to macro scale are summarized. Flexible supercapacitors with diversified shapes are shown. The future research prospects of structural energy devices are highlighted. The proposed concept of structural energy devices has broad prospects in the effective use of space and quality saving.

Chinese Chemical Letters 33 (2022) 1817



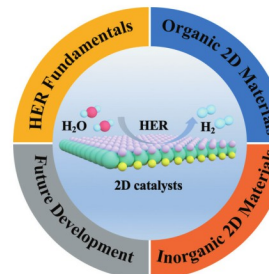
## Emerging two-dimensional nanocatalysts for electrocatalytic hydrogen production

Hong Chen, Yansong Zhou, Wei Guo, Bao Yu Xia

Key Laboratory of Material Chemistry for Energy Conversion and Storage (Ministry of Education), Hubei Key Laboratory of Material Chemistry and Service Failure, Hubei Engineering Research Center for Biomaterials and Medical Protective Materials, Wuhan National Laboratory for Optoelectronics, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology (HUST), Wuhan 430074, China

This review summarized the emerging nanocatalysts in two-dimensional nanoarchitectures for electrocatalytic hydrogen production.

Chinese Chemical Letters 33 (2022) 1831



## Recent research and development of DYRK1A inhibitors

Liyun Zhao<sup>a</sup>, Xuan Xiong<sup>a</sup>, Li Liu<sup>a</sup>, Qi Liang<sup>b</sup>, Rongsheng Tong<sup>a</sup>, Xuanlin Feng<sup>c</sup>, Lan Bai<sup>a</sup>, Jianyou Shi<sup>a</sup>

<sup>a</sup>Personalized Drug Therapy Key Laboratory of Sichuan Province, Sichuan Academy of Medical Science & Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu 610072, China

<sup>b</sup>College of Medicine, Southwest Jiaotong University, Chengdu 610031, China

<sup>c</sup>Emergency Intensive Care Unit, Personalized Drug Therapy Key Laboratory of Sichuan Province, Sichuan Academy of Medical Science & Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu 610072, China

Dual specificity tyrosine phosphorylation regulated kinase 1A (DYRK1A) is closely related to many diseases. Lys188, Leu241, Glu239 and Phe238 are important amino acid residues of DYRK1A, and the compound interact with them has good inhibitory activity on DYRK1A. In addition to the above amino acids, the inhibitors can also form hydrogen bonds or  $\pi$ - $\pi$  interactions with other amino acids of DYRK1A. These ligand–protein interactions provide a theoretical basis for the strong inhibitory effect of these inhibitors on DYRK1A. In addition, some DYRK1A inhibitors can inhibit DYRK1A at the nmol/L level.

Chinese Chemical Letters 33 (2022) 1841





## Communications

### Highly fluorescence Ta<sub>4</sub>C<sub>3</sub> MXene quantum dots as fluorescent nanoprobe for heavy ion detection and stress monitoring of fluorescent hydrogels

Shouzen Li<sup>a</sup>, Junfei Ma<sup>a</sup>, Xuelin Zhao<sup>b</sup>, Peide Zhu<sup>a</sup>, Meng Xu<sup>b</sup>, Yingchun Niu<sup>a</sup>, Dixian Luo<sup>c</sup>, Quan Xu<sup>a</sup>

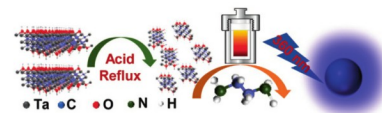
<sup>a</sup>State Key Laboratory of Shale Oil and Gas Enrichment Mechanisms and Effective Development, National Energy Shale Oil Research and Development Center, China University of Petroleum (Beijing), Beijing 102249, China

<sup>b</sup>Department of Musculoskeletal Tumor, Senior Department of Orthopedics, the Fourth Medical Center of PLA General Hospital, Beijing 100142, China

<sup>c</sup>Department of Laboratory Medicine, Huazhong University of Science and Technology Union Shenzhen Hospital (Nanshan Hospital), Shenzhen 518000, China

This is the first report of N-doped fluorescent two-dimensional quantum dots with Ta<sub>4</sub>C<sub>3</sub> as the precursor, with a quantum yield (QY) of 23.4% and used for stress monitoring.

Chinese Chemical Letters 33 (2022) 1850



### Ultrasensitive detection of IgE levels based on magnetic nanocapturer linked immunosensor assay for early diagnosis of cancer

Yongxin Liu<sup>a</sup>, Mengda Cao<sup>c</sup>, Zhongxi Huang<sup>a</sup>, Changmin Yu<sup>a,d</sup>, Naidi Yang<sup>a</sup>, Qiong Wu<sup>a</sup>, Liang Shi<sup>b</sup>, Wenjie Duan<sup>b</sup>, Yi Zhu<sup>f</sup>, Jifu Wei<sup>b</sup>, Lin Li<sup>a</sup>, Wei Huang<sup>e</sup>

<sup>a</sup>Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Nanjing Tech University (NanjingTech), Nanjing 211816, China

<sup>b</sup>Research Division of Clinical Pharmacology & Clinical Allergy Center, the First Affiliated Hospital of Nanjing Medical University; Department of Pharmacy, Jiangsu Institute of Cancer Research & the Affiliated Cancer Hospital of Nanjing Medical University, Nanjing 210009, China

<sup>c</sup>Department of Pharmacy, Zhongda Hospital, School of Medicine, Southeast University, Nanjing 210044, China

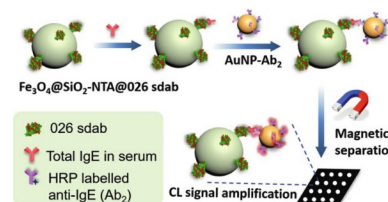
<sup>d</sup>State Key Laboratory of Coordination Chemistry, Nanjing University, Nanjing 210023, China

<sup>e</sup>Shaanxi Institute of Flexible Electronics (SIFE), Northwestern Polytechnical University (NPU), Xi'an 710072, China

<sup>f</sup>The First Affiliated Hospital of USTC, Division of Life Sciences and Medicine, University of Science and Technology of China, Hefei 230001, China

Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-NTA@026 sdab was used as a capture probe to isolate IgE from patients' serum samples by rapid magnetic separation. Numerous HRP-labeled Ab<sub>2</sub> were modified onto AuNPs surface as signal amplification platform for ultrasensitive detection of IgE levels in real samples.

Chinese Chemical Letters 33 (2022) 1855



### The exquisite integration of ESIPT, PET and AIE for constructing fluorescent probe for Hg(II) detection and poisoning

Xiang Cheng<sup>a,b,c</sup>, Shuai Huang<sup>a,b,c</sup>, Qian Lei<sup>a,b,c</sup>, Fei Chen<sup>a,b,c</sup>, Fan Zheng<sup>a,b,c</sup>, Shibo Zhong<sup>a,b,c</sup>, Xueyan Huang<sup>a,b,c</sup>, Bin Feng<sup>a,b,c</sup>, Xueping Feng<sup>d</sup>, Wenbin Zeng<sup>a,b,c</sup>

<sup>a</sup>Xiangya School of Pharmaceutical Sciences, Central South University, Changsha 410013, China

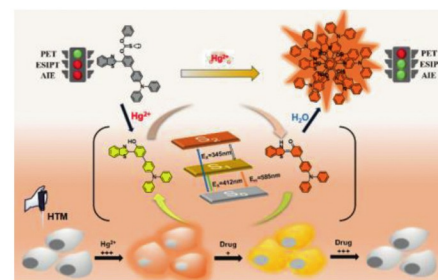
<sup>b</sup>The Molecular Imaging Research Center, Central South University, Changsha 410013, China

<sup>c</sup>Hunan Key Laboratory of Diagnostic and Therapeutic Drug Research for Chronic Diseases, Central South University, Changsha 410013, China

<sup>d</sup>Xiangya Hospital, Central South University, Changsha 410013, China

Based on the ingenious combination of AIE, ESIPT and PET effects for the first time, a novel fluorescent probe is constructed for detecting Hg<sup>2+</sup> with great selectivity and sensitivity. And its practical potential has been revealed in Hg<sup>2+</sup> detection in a variety of actual samples, living cells and drug evaluation.

Chinese Chemical Letters 33 (2022) 1861



## Super-resolution imaging reveals the subcellular distribution of dextran at the nanoscale in living cells

Huimin Chen<sup>a</sup>, Han Wang<sup>a,b</sup>, Yongchun Wei<sup>a</sup>, Maomao Hu<sup>a,b</sup>, Bo Dong<sup>b</sup>, Hongbao Fang<sup>c</sup>, Qixin Chen<sup>a</sup>

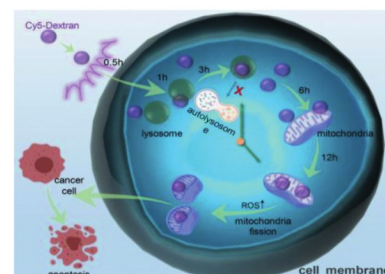
<sup>a</sup>Institute of Materia Medica, Shandong First Medical University & Shandong Academy of Medical Sciences, Ji'nan 250062, China

<sup>b</sup>Department of Cardiology, Shandong Provincial Hospital Affiliated to Shandong University, Ji'nan 250012, China

<sup>c</sup>State Key Laboratory of Coordination Chemistry, Chemistry and Biomedicine Innovation Center (ChemBIC), School of Chemistry and Chemical Engineering, Nanjing University, Nanjing 210023, China

The visualized study of Cy5-Dextran at the nanoscale is beneficial to detect its anti-tumor mechanism. Super-resolution fluorescence imaging technology realizes detecting the visualized distribution of Cy5-Dextran in living cells.

Chinese Chemical Letters 33 (2022) 1865



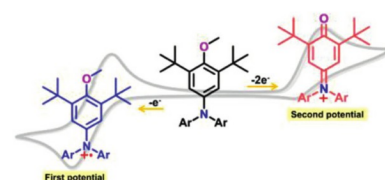
## Triphenylamines consisting of bulky 3,5-di-*tert*-butyl-4-anisyl group: Synthesis, redox properties and their radical cation species

Manfei Zhou, Lijun Mao, Yan-Fei Niu, Xiao-Li Zhao, Xueliang Shi, Hai-Bo Yang

Shanghai Key Laboratory of Green Chemistry and Chemical Processes, School of Chemistry and Molecular Engineering, East China Normal University, Shanghai 200062, China

Triphenylamines consisting of bulky 3,5-di-*tert*-butyl-4-anisyl group were found to exhibit two oxidation waves, corresponding to the formation of stable radical cation species and oxidative demethylation quinone-like product, respectively.

Chinese Chemical Letters 33 (2022) 1870



## Integrating of lipophilic platinum(IV) prodrug into liposomes for cancer therapy on patient-derived xenograft model

Zibo Li<sup>a,b</sup>, Qing Xu<sup>b</sup>, Xuefeng Lin<sup>b</sup>, Kunyi Yu<sup>b</sup>, Ling Lin<sup>b</sup>, Yangjia Liu<sup>b</sup>, Zhiqiang Yu<sup>b</sup>, Tiancai Liu<sup>c</sup>, Dixian Luo<sup>a</sup>

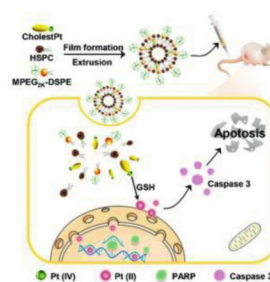
<sup>a</sup>Department of Laboratory Medicine, Huazhong University of Science and Technology Union Shenzhen Hospital (Nanshan Hospital), Shenzhen 518000, China

<sup>b</sup>Guangdong Provincial Key Laboratory of New Drug Screening, School of Pharmaceutical Sciences, Southern Medical University, Guangzhou 510515, China

<sup>c</sup>School of Laboratory Medicine and Biotechnology, Institute of Antibody Engineering, Southern Medical University, Guangzhou 510515, China

CholesPt(IV), a lipophilic platinum(IV) prodrug was synthesized for manufacture of CholesPt(IV)-Liposomes aiming to resolve the predefined obstacles encountered by platinum drugs.

Chinese Chemical Letters 33 (2022) 1875



## L-Arginine based polyester amide/hyaluronic acid hybrid hydrogel with dual anti-inflammation and antioxidant functions for accelerated wound healing

Tong Liu<sup>a</sup>, Guiting Liu<sup>b</sup>, Jianhua Zhang<sup>c</sup>, Zhangfan Ding<sup>a</sup>, Yike Li<sup>a</sup>, Krishna Sigdel<sup>a</sup>, Xiaoyi Wang<sup>a</sup>, Huixu Xie<sup>a</sup>

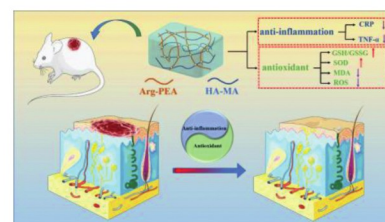
<sup>a</sup>State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, Department of Head and Neck Oncology Surgery, West China Hospital of Stomatology, Sichuan University, Chengdu 610041, China

<sup>b</sup>The State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute of Sichuan University, Chengdu 610065, China

<sup>c</sup>College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu 610065, China

In this work, we attempted to prepare a novel L-arginine based polyester amide (Arg-PEA)/hyaluronic acid (AH) hybrid hydrogel with anti-inflammation and antioxidant dual-functions for accelerated wound healing. AH hydrogel could be used for *in-situ* gelation, suitable for irregular wounds, and the physical property of hydrogel could be adjusted by the addition of Arg-PEA, furthermore, L-arginine could be released sustainably and targeted by the hydrolysis reaction of Arg-PEA in wound site to achieve anti-inflammatory and antioxidant dual-effects.

Chinese Chemical Letters 33 (2022) 1880





## On-chip classification of micro-particles using laser light scattering and machine learning

Mubashir Hussain<sup>a</sup>, Xiaolong Liu<sup>a</sup>, Jun Zou<sup>b</sup>, Jian Yang<sup>a</sup>, Zeeshan Ali<sup>a</sup>, Hamood Ur Rehman<sup>c</sup>, Nongyue He<sup>d</sup>, Jianguo Dai<sup>a</sup>, Yongjun Tang<sup>a</sup>

<sup>a</sup>Innovation Practice, Shenzhen Polytechnic, Shenzhen 518055, China

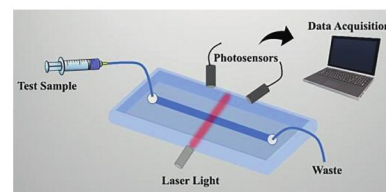
<sup>b</sup>School of Materials and Chemical Engineering, Hunan Institute of Engineering, Xiangtan 411104, China

<sup>c</sup>Department of Electrical Engineering, College of EME, National University of Sciences and Technology, H-12 Islamabad, Pakistan

<sup>d</sup>State Key Laboratory of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, China

The microfluidic system has been developed for characterizing the particle's size using laser light scattering. The embedded optical fiber in the chip facilitates on-chip detection of particles with an overall classification accuracy of 96.06%.

Chinese Chemical Letters 33 (2022) 1885



## The complexation of insulin with sodium N-[8-(2-hydroxybenzoyl)amino]caprylate for enhanced oral delivery: Effects of concentration, ratio, and pH

Huixian Weng<sup>a,b</sup>, Lefei Hu<sup>c</sup>, Lei Hu<sup>b,d</sup>, Yihan Zhou<sup>a,b</sup>, Aohua Wang<sup>b,e</sup>, Ning Wang<sup>b,e</sup>, Wenzhe Li<sup>b,e</sup>, Chunliu Zhu<sup>b</sup>, Shiyan Guo<sup>b</sup>, Miaorong Yu<sup>b</sup>, Yong Gan<sup>a,b,e,f</sup>

<sup>a</sup>School of Chinese Materia Medica, Nanjing University of Chinese Medicine, Nanjing 210046, China

<sup>b</sup>State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai 201203, China

<sup>c</sup>School of Pharmacy, Nanjing University of Chinese Medicine, Nanjing 210023, China

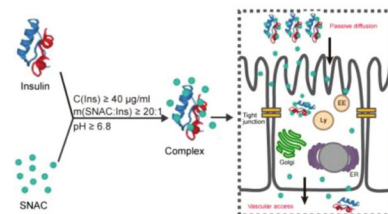
<sup>d</sup>Nano Science and Technology Institute, University of Science and Technology of China, Nanjing 215123, China

<sup>e</sup>University of Chinese Academy of Sciences, Beijing 100049, China

<sup>f</sup>NMPA Key Laboratory for Quality Research and Evaluation of Pharmaceutical Excipients, National Institutes for Food and Drug Control, Beijing 100050, China

The specific interactions between SNAC and insulin can provide an SNAC-based oral insulin delivery system with enhanced intestinal mucosal permeability of insulin, leading to a high oral bioavailability and friendly medication guidance.

Chinese Chemical Letters 33 (2022) 1889



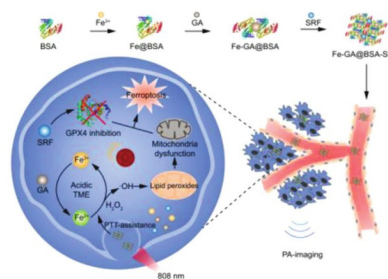
## Metal-polyphenol-coordinated nanomedicines for Fe(II) catalyzed photoacoustic-imaging guided mild hyperthermia-assisted ferroustherapy against breast cancer

Xinying Yu, Tongyi Shang, Guodong Zheng, Hailong Yang, Yuwei Li, Yanjun Cai, Guoxi Xie, Bin Yang

The Sixth Affiliated Hospital, Department of Biomedical Engineering, School of Basic Medical Sciences, Guangzhou Medical University, Guangzhou 511436, China

Metal-polyphenol-coordinated nanomedicine Fe-GA@BSA-SRF was established by self-assembly and drug loading. Fe-GA@BSA-SRF showed photoacoustic imaging ability and mild hyperthermia-assisted ferroustherapy.

Chinese Chemical Letters 33 (2022) 1895



## Effect of tetrahedral DNA nanostructures on LPS-induced neuroinflammation in mice

Xiao Yang<sup>a</sup>, Fan Zhang<sup>b,c</sup>, Yue Du<sup>a</sup>, Weitong Cui<sup>b</sup>, Yikai Dou<sup>a</sup>, Yunfeng Lin<sup>b,d</sup>, Zhihe Zhao<sup>b</sup>, Xiaohong Ma<sup>a</sup>

<sup>a</sup>Psychiatric Laboratory and Mental Health Center, West China Hospital of Sichuan University, Chengdu 610041, China

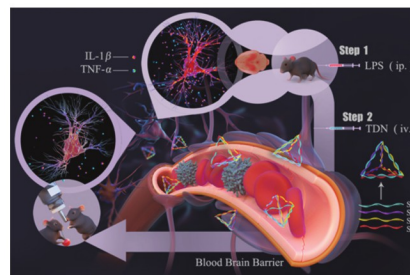
<sup>b</sup>State Key Laboratory of Oral Diseases, National Clinical Research Center for Oral Diseases, West China Hospital of Stomatology, Sichuan University, Chengdu 610041, China

<sup>c</sup>Physical Examination Center, West China Hospital, Sichuan University, Chengdu 610041, China

<sup>d</sup>College of Biomedical Engineering, Sichuan University, Chengdu 610041, China

TDNs attenuated the LPS-induced secretion of inflammatory factors and consequently alleviated depression-like behavior.

Chinese Chemical Letters 33 (2022) 1901



## Sonodynamic cancer therapy by novel iridium-gold nanoassemblies

Jiayi Zhu<sup>a,b</sup>, Ai Ouyang<sup>a</sup>, Zhuanglin Shen<sup>a</sup>, Zhihao Pan<sup>a</sup>, Samya Banerjee<sup>c</sup>, Qianling Zhang<sup>a</sup>, Yantao Chen<sup>a</sup>, Pingyu Zhang<sup>a</sup>

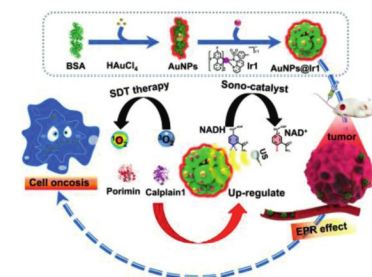
<sup>a</sup> College of Chemistry and Environmental Engineering, Shenzhen University, Shenzhen 518060, China

<sup>b</sup> College of Physics and Optoelectronic Engineering, Shenzhen University, Shenzhen 518060, China

<sup>c</sup> Department of Chemistry, Indian Institute of Technology (BHU), Varanasi, UP 221005, India

Bio-compatible AuNPs@Ir1 rapidly enters in the cancer cells, produces  $^1\text{O}_2$  and catalytically oxidizes endogenous NADH to  $\text{NAD}^+$  under ultrasound (US) irradiation, which results in oncosis type cancer cell death. AuNPs@Ir1 highly efficiently inhibits growth of mice tumors under US stimulation without any long-term toxicity to other organs, providing novel mechanism of action for cancer sono-therapy.

Chinese Chemical Letters 33 (2022) 1907



## A simple AuNPs-based colorimetric aptasensor for chlorpyrifos detection

Yuan Liu<sup>a</sup>, Taotao Li<sup>b</sup>, Gaojian Yang<sup>a</sup>, Yan Deng<sup>c</sup>, Xianbo Mou<sup>d</sup>, Nongyue He<sup>a,c</sup>

<sup>a</sup> State Key Laboratory of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, China

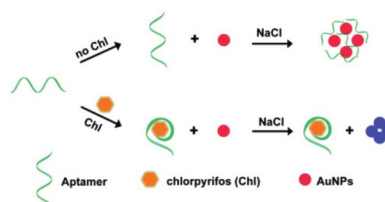
<sup>b</sup> Hunan Provincial Key Lab of Dark Tea and Jin-Hua, School of Materials and Chemical Engineering, Hunan City University, Yiyang 413000, China

<sup>c</sup> Hunan Key Laboratory of Biomedical Nanomaterials and Devices, Hunan University of Technology, Zhuzhou 412007, China

<sup>d</sup> Medical School of Ningbo University, Ningbo 315211, China

A simple label-free AuNPs based colorimetric biosensor was developed for chlorpyrifos (Chl) detection using an aptamer as the capture probe. The Chl-aptamer was obtained using ssDNA library immobilized streptavidin-magnetic beads SELEX technique. Besides, tap water, cucumber and cabbage samples were tested.

Chinese Chemical Letters 33 (2022) 1913



## Co-delivery of enzymes and photosensitizers via metal-phenolic network capsules for enhanced photodynamic therapy

Qian Wang<sup>a</sup>, Zhiliang Gao<sup>a</sup>, Kaijie Zhao<sup>a</sup>, Peiyu Zhang<sup>a</sup>, Qi-Zhi Zhong<sup>a,b</sup>, Qun Yu<sup>a</sup>, Shumei Zhai<sup>a</sup>, Jiwei Cui<sup>a,c</sup>

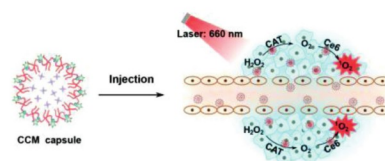
<sup>a</sup> Key Laboratory of Colloid and Interface Chemistry of the Ministry of Education, School of Chemistry and Chemical Engineering, Shandong University, Ji'nan 250100, China

<sup>b</sup> ARC Centre of Excellence in Convergent Bio-Nano Science and Technology, and the Department of Chemical Engineering, The University of Melbourne, Parkville, VIC 3010, United States

<sup>c</sup> State Key Laboratory of Microbial Technology, Shandong University, Qingdao 266237, China

In this study, multifunctional metal-phenolic network (MPN) capsules (denoted as CCM capsules), which contain catalase (CAT) and chlorin e6 (Ce6), were prepared to relieve the hypoxic environment of tumor and enhance the efficacy of photodynamic therapy.

Chinese Chemical Letters 33 (2022) 1917



## Near-infrared light (NIR)-responsive nanoliposomes combining photodynamic therapy and chemotherapy for breast tumor control

Guangzhao Lu<sup>a</sup>, Xiqing Gao<sup>a</sup>, He Zhang<sup>a</sup>, Yeye Zhang<sup>b</sup>, Yuan Yu<sup>a</sup>, Zhiguo Sun<sup>a</sup>, Wei Li<sup>c</sup>, Wei Wu<sup>d</sup>, Ying Lu<sup>a</sup>, Hao Zou<sup>a</sup>

<sup>a</sup> Department of Pharmaceutical Sciences, School of Pharmacy, Naval Medical University, Shanghai 200433, China

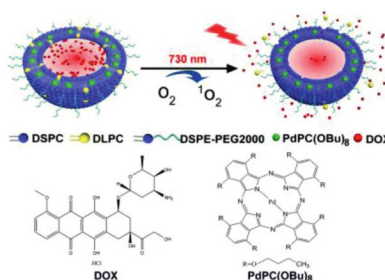
<sup>b</sup> Department of Pharmacy, Zhongshan Hospital, Fudan University, Shanghai 200032, China

<sup>c</sup> Laboratory of Nano Biomedicine & International Joint Cancer Institute, Naval Medical University, Shanghai 200433, China

<sup>d</sup> Key Laboratory of Smart Drug Delivery of MOE, School of Pharmacy, Fudan University, Shanghai 200032, China

A novel near-infrared light (NIR)-responsive liposome was designed to achieve light-triggered local drug release, combining photodynamic therapy and chemotherapy for breast tumor control, holding great promise for future cancer therapy.

Chinese Chemical Letters 33 (2022) 1923





## Precisely engineering a dual-drug cooperative nanoassembly for proteasome inhibition-potentiated photodynamic therapy

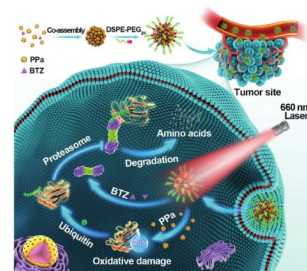
Fujun Yang<sup>a</sup>, Qingyu Ji<sup>a</sup>, Rui Liao<sup>a</sup>, Shumeng Li<sup>a</sup>, Yuequan Wang<sup>a</sup>, Xuanbo Zhang<sup>a</sup>, Shenwu Zhang<sup>a</sup>, Haotian Zhang<sup>b</sup>, Qiming Kan<sup>b</sup>, Jin Sun<sup>a</sup>, Zhonggui He<sup>a</sup>, Bingjun Sun<sup>a</sup>, Cong Luo<sup>a</sup>

<sup>a</sup> Department of Pharmaceutics, Wuya College of Innovation, Shenyang Pharmaceutical University, Shenyang 110016, China

<sup>b</sup> Department of Pharmacology, School of Life Science and Biopharmaceutics, Shenyang Pharmaceutical University, Shenyang 110016, China

Precise combination of photodynamic photosensitizers and proteasome inhibitors is expected to perform proteasome inhibition-potentiated photodynamic therapy. Herein, a dual-drug nanoassembly of PPa and BTZ with the optimal molar ratio demonstrates multiple therapeutic advantages *in vitro* and *in vivo*.

Chinese Chemical Letters 33 (2022) 1927



## Highly sensitive smartphone-based detection of *Listeria monocytogenes* using SYTO9

Sha Liu<sup>a</sup>, Xuliang He<sup>b</sup>, Tao Zhang<sup>a</sup>, Kaixuan Zhao<sup>a</sup>, Changhu Xiao<sup>a</sup>, Zengrui Tong<sup>a</sup>, Lian Jin<sup>a</sup>, Nongyue He<sup>a,d</sup>, Yan Deng<sup>a,e</sup>, Song Li<sup>a,e</sup>, Yuan Guo<sup>c</sup>, Zhu Chen<sup>a,e</sup>

<sup>a</sup> Hunan Key Laboratory of Biomedical Nanomaterials and Devices, Hunan University of Technology, Zhuzhou 412007, China

<sup>b</sup> Department of General Surgery, People's Hospital of Zhuzhou City Affiliated to Changsha Medical College, Zhuzhou 412011, China

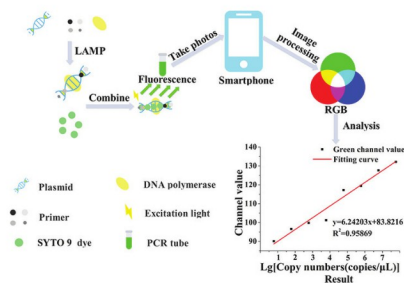
<sup>c</sup> Department of Laboratory, Central Hospital of Zhuzhou City, Zhuzhou 412007, China

<sup>d</sup> State Key Laboratory of Bioelectronics, School of Biological and Medical Engineering, Southeast University, Nanjing 210096, China

<sup>e</sup> National & Local Joint Engineering Research Center for Research and Technology of Advanced Packaging Materials, Zhuzhou 412007, China

Based on image processing combined with SYTO9, a rapid and highly sensitive detection method for *Listeria monocytogenes* was developed.

Chinese Chemical Letters 33 (2022) 1933



## Short and simple peptide-based pH-sensitive hydrogel for antitumor drug delivery

Jie Li<sup>a</sup>, Zhongshi Wang<sup>a,b</sup>, Han Han<sup>b</sup>, Zhonghua Xu<sup>a</sup>, Shasha Li<sup>c</sup>, Ying Zhu<sup>b</sup>, Yuejian Chen<sup>d</sup>, Liang Ge<sup>b,c</sup>, Yuan Zhang<sup>a</sup>

<sup>a</sup> Department of Orthopedics, Xinqiao Hospital, Army Medical University, Chongqing 400038, China

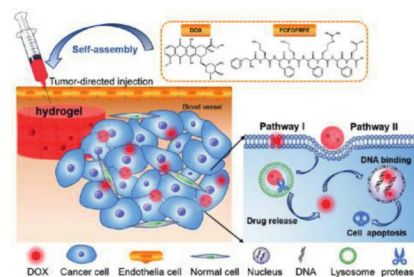
<sup>b</sup> State Key Laboratory of Natural Medicines, China Pharmaceutical University, Nanjing 210009, China

<sup>c</sup> School of Pharmacy, Xinjiang Medical University, Urumqi 830054, China

<sup>d</sup> Nanjing aifarui Pharmaceutical Technology Co., Ltd., Nanjing 210009, China

We developed a short and simple pH-responsive ionic-complementary octapeptide FOE (FOFOFRFE), which could self-assemble into stable hydrogel at pH 7.4 due to non-covalent interactions dominated by hydrophobic interactions, as an injectable drug delivery carrier for the antitumor drug doxorubicin (DOX). After peritumoral administration, the octapeptide hydrogel disassembled under acidic microenvironment (pH 5.8), accompanied by the change of microstructure from fiber networks to nanospheres, which contributed to the achievement of controlled drug delivery and enhanced drug uptake by tumor cells.

Chinese Chemical Letters 33 (2022) 1936



## Natural lotus root-based scaffolds for bone regeneration

Keqing Huang<sup>a,b</sup>, Jun Huang<sup>f</sup>, Jinmin Zhao<sup>c</sup>, Zhipeng Gu<sup>d,e</sup>, Jun Wu<sup>a,b</sup>

<sup>a</sup> School of Biomedical Engineering, Sun Yat-sen University, Shenzhen 518107, China

<sup>b</sup> Guangdong Provincial Key Laboratory of Malignant Tumor Epigenetics and Gene Regulation, Sun Yat-sen Memorial Hospital, Sun Yat-sen University, Guangzhou 510120, China

<sup>c</sup> Guangxi Engineering Center in Biomedical Materials for Tissue and Organ Regeneration, the First Affiliated Hospital of Guangxi Medical University, Nanning 530021, China

<sup>d</sup> Research Institute of Sun Yat-sen University in Shenzhen, Shenzhen 518057, China

<sup>e</sup> College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu 610065, China

<sup>f</sup> Guangdong Academy of Sciences, Institute of Biological and Medical Engineering, Guangzhou 510316, China

Lotus roots, a natural plant and delicious vegetable, have been successfully fabricated into scaffolds and shown encouraging possibility of bone tissue engineering. Lotus root could be easily mineralized and the mineralized scaffold could further improve the bone regeneration *in vivo*. Lotus root-based scaffolds possessed suitable natural architecture, and showed good biocompatibility and bioactivities with low manufacturing cost.

Chinese Chemical Letters 33 (2022) 1941



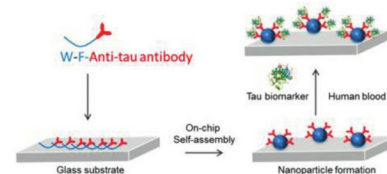
## Blood-based Alzheimer's disease diagnosis using fluorescent peptide nanoparticle arrays

Leming Sun, Yang Lei, Yuerong Wang, Dingchang Liu

Key Laboratory of Space Bioscience and Biotechnology, School of Life Sciences, Northwestern Polytechnical University, Xi'an 710072, China

The self-assembly of anti tau fluorescent peptide nanoparticle arrays can be utilized to detect tau biomarkers for Alzheimer's disease diagnosis.

Chinese Chemical Letters 33 (2022) 1946



## Oxalic acid cross-linked sodium alginate and carboxymethyl chitosan hydrogel membrane for separation of dye/NaCl at high NaCl concentration

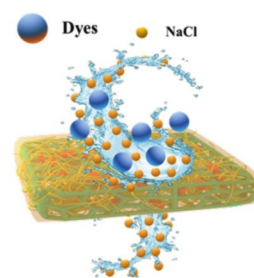
Wenbin Xie<sup>a</sup>, Kongyin Zhao<sup>a</sup>, Lijing Xu<sup>a</sup>, Ningning Gao<sup>b</sup>, Hui Zhao<sup>a</sup>, Zelong Gong<sup>a</sup>, Linan Yu<sup>a</sup>, Jun Jiang<sup>a</sup>

<sup>a</sup>State Key Laboratory of Separation Membranes and Membrane Processes/National Centre for International Joint Research on Separation Membranes, Tiangong University, Tianjin 300387, China

<sup>b</sup>SINOPEC Research Institute of Petroleum Processing, Beijing 100083, China

Compared with metal ion cross-linked alginate-based hydrogel membranes, CMCS-OA-NaAlg exhibits excellent anti-swelling properties and provides a novel strategy for the treatment of high-salt dye wastewater.

Chinese Chemical Letters 33 (2022) 1951



## Bioactive gelatin cryogels with BMP-2 biomimetic peptide and VEGF: A potential scaffold for synergistically induced osteogenesis

Lili Wang<sup>a</sup>, Long Chen<sup>b</sup>, Jiping Wang<sup>c</sup>, Liying Wang<sup>a</sup>, Chenyu Gao<sup>d</sup>, Bo Li<sup>b</sup>, Yuanzheng Wang<sup>b</sup>, Jun Wu<sup>a</sup>, Changyun Quan<sup>a</sup>

<sup>a</sup>Guangdong Provincial Key Laboratory of Sensor Technology and Biomedical Instruments, School of Biomedical Engineering, Sun Yat-sen University, Shenzhen 518107, China

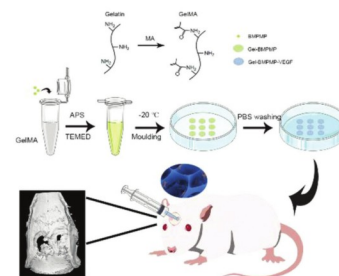
<sup>b</sup>Department of Orthopedics, Guizhou Provincial People's Hospital, Guiyang 550000, China

<sup>c</sup>School of Public Health, Yale University, New Haven, CT 06510, United States

<sup>d</sup>Department of Biomedical Engineering, Johns Hopkins University, Baltimore, MD 21218, United States

In this study, we fabricated gelatin scaffolds carrying bone morphogenetic protein-2 (BMP-2) biomimetic peptide and vascular endothelial growth factor-165 (VEGF) to achieve controlled release, cell attachment, proliferation and differentiation. The scaffolds with dual growth factors demonstrated great potential in promoting bone regeneration.

Chinese Chemical Letters 33 (2022) 1956



## In situ wound sprayable double-network hydrogel: Preparation and characterization

Chenglong Cai<sup>a,b</sup>, Ting Wang<sup>a,b</sup>, Xu Han<sup>a</sup>, Shaoqiang Yang<sup>c</sup>, Chengteng Lai<sup>c</sup>, Tao Yuan<sup>c</sup>, Zhangqi Feng<sup>d</sup>, Nongyue He<sup>a</sup>

<sup>a</sup>State Key Laboratory of Bioelectronics, National Demonstration Centre for Experimental Biomedical Engineering Education, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, China

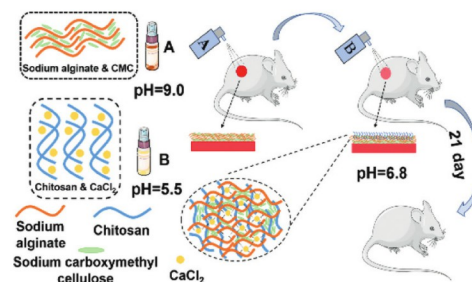
<sup>b</sup>Southeast University Jiangbei New Area Innovation Institute, Nanjing 210096, China

<sup>c</sup>Nanjing Jinling Hosp, Dept Orthoped, Nanjing 210002, China

<sup>d</sup>School of Chemical Engineering, Nanjing University of Science and Technology, Nanjing 210094, China

We developed a type of gel-like wound adhesive patch from spraying double-network hydrogel, which own the properties of self-antibacterial and can promote wound healing. By spraying, the gel-like wound adhesive patch can match the wound area immediately and form a gel-film in 10 s.

Chinese Chemical Letters 33 (2022) 1963





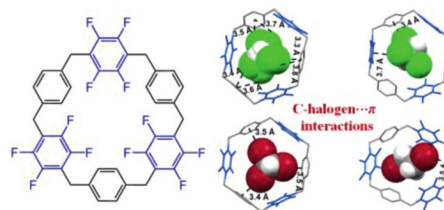
## Adsorption of polyhaloalkane vapors by adaptive macrocycle crystals of WreathArene through C-halogen... $\pi$ interactions

Shu Niu, Liang-Liang Mao, Hongyan Xiao, Yongye Zhao, Chen-Ho Tung, Li-Zhu Wu, Huan Cong

Key Laboratory of Photochemical Conversion and Optoelectronic Materials, Key Laboratory of Bio-inspired Materials and Interfacial Science, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences; School of Future Technology, University of Chinese Academy of Sciences, Beijing 100190, China

The activated WreathArene crystals can be utilized as a selective and recyclable adsorbent for polyhaloalkane vapors with excellent capacity under user-friendly conditions through C-halogen... $\pi$  interactions.

Chinese Chemical Letters 33 (2022) 1970



## The construction of aggregation-induced charge transfer emission systems in aqueous solution directed by supramolecular strategy

Weirui Qian<sup>a</sup>, Minzan Zuo<sup>b</sup>, Pengbo Niu<sup>a</sup>, Xiao-Yu Hu<sup>b</sup>, Leyong Wang<sup>a,c</sup>

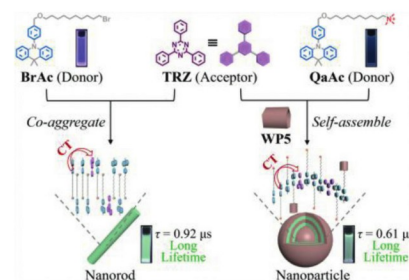
<sup>a</sup> Key Laboratory of Mesoscopic Chemistry of MOE, Jiangsu Key Laboratory of Advanced Organic Materials, School of Chemistry and Chemical Engineering, Nanjing University, Nanjing 210023, China

<sup>b</sup> College of Materials Science and Technology, Nanjing University of Aeronautics and Astronautics, Nanjing 211106, China

<sup>c</sup> Department of Chemistry, Xihua University, Chengdu 610039, China

Novel aggregation-induced charge transfer (CT) emission systems with long luminescence lifetime directed by supramolecular strategy have been successfully developed in aqueous phase.

Chinese Chemical Letters 33 (2022) 1975



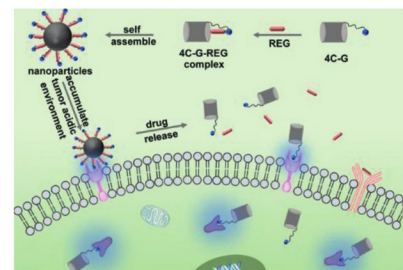
## A microenvironment sensitive pillar[5]arene-based fluorescent probe for cell imaging and drug delivery

Qing Wang, Jingwen Fan, Xiaoyan Bian, Hang Yao, Xiaohui Yuan, Ying Han, Chaoguo Yan

School of Chemistry and Chemical Engineering, Yangzhou University, Yangzhou 225002, China

A microenvironment sensitive pillar[5]arene-based fluorescent probe 4C-G could not only be applied in live-cell imaging, but also act as a favorable drug carrier for regorafenib (REG) encapsulation.

Chinese Chemical Letters 33 (2022) 1979



## Enhanced photocatalytic hydrogen production performance of pillararene-doped mesoporous TiO<sub>2</sub> with extended visible-light response

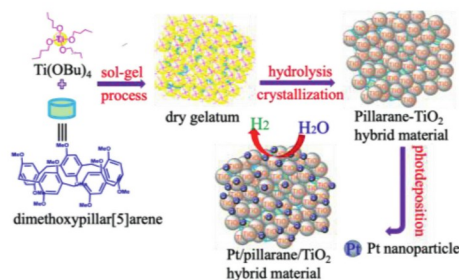
Haimei Wu<sup>a</sup>, Mengyuan Wang<sup>a</sup>, Fang Jing<sup>a</sup>, Derui Kong<sup>a</sup>, Yifan Chen<sup>a</sup>, Chunman Jia<sup>a</sup>, Jianwei Li<sup>a,b</sup>

<sup>a</sup> Hainan Provincial Key Laboratory of Fine Chemicals, Advanced Materials of Tropical Island Resources of Ministry of Education, College of Chemical Engineering and Technology, Hainan University, Haikou 570228, China

<sup>b</sup> MediCity Research Laboratory, University of Turku, Tykistökatu 6, Turku 20520, Finland

The *p*-dimethoxy pillar[5]arene (PI-OMe) and tetrabutyl titanate were employed as precursors to prepare a porous organic-inorganic hybrid material which had a good stability and an enhanced photocatalytic efficiency for hydrogen production under visible light than the pure TiO<sub>2</sub>.

Chinese Chemical Letters 33 (2022) 1983



## Cucurbit[7]uril-threaded flexible organic frameworks: Quantitative polycatenation through dynamic covalent chemistry

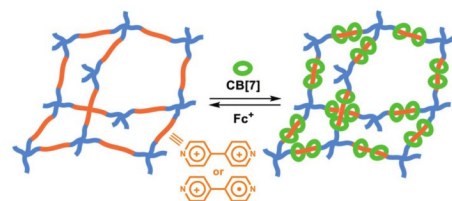
Qian Li<sup>a</sup>, Jian-Da Sun<sup>a</sup>, Bo Yang<sup>b</sup>, Hui Wang<sup>a</sup>, Dan-Wei Zhang<sup>a</sup>, Da Ma<sup>a</sup>, Zhan-Ting Li<sup>a</sup>

<sup>a</sup> Department of Chemistry, Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, Fudan University, Shanghai 200438, China

<sup>b</sup> College of Chemistry, Zhengzhou University, Zhengzhou 450001, China

Polycatenation of a 3D flexible organic framework has been realized quantitatively through CB[7] encapsulation for hydrophobic aromatic units in the linkers in water.

Chinese Chemical Letters 33 (2022) 1988



## Facile construction of aggregation-induced emission molecular liquids via Piers-Rubinsztajn reaction for green fluorescent ink

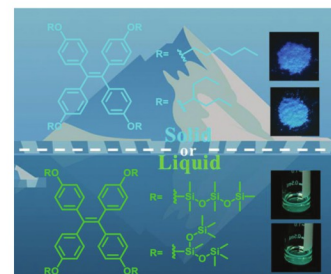
Rong Fu<sup>a</sup>, Longyue Yu<sup>a</sup>, Junying Zhang<sup>a</sup>, Huidong Yu<sup>b</sup>, Shengyu Feng<sup>a</sup>, Xing-Dong Xu<sup>a</sup>

<sup>a</sup> Key Laboratory of Special Functional Aggregated Materials of Ministry of Education, Shandong Key Laboratory of Advanced Silicone Materials and Technology, School of Chemistry and Chemical Engineering, National Engineering Research Center for Colloidal Materials, Shandong University, Ji'nan 250100, China

<sup>b</sup> Shandong Qilu Zhonghe Technology Co., Ltd., Ji'nan 250100, China

A novel AIE molecular liquid was constructed by decorating TPE with siloxane side chains through facile Piers-Rubinsztajn reaction, the obtained AIE molecular liquids have low viscosity and committed to make an environmentally friendly fluorescent ink for potential applications.

Chinese Chemical Letters 33 (2022) 1993



## Visible-light-promoted radical alkylation/cyclization of allylic amide with *N*-hydroxyphthalimide ester: Synthesis of oxazolines

Zhiyang Yan<sup>a</sup>, Bin Sun<sup>a</sup>, Panyi Huang<sup>b</sup>, Haiyun Zhao<sup>a</sup>, Hao Ding<sup>b</sup>, WeiKe Su<sup>a</sup>, Can Jin<sup>a,b</sup>

<sup>a</sup> Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou 310014, China

<sup>b</sup> College of Pharmaceutical Sciences, Zhejiang University of Technology, Hangzhou 310014, China

A metal and oxidant free alkylation/cyclization of allylic amide with *N*-hydroxyphthalimide (NHP) ester via a photocatalytic system promoted by visible light has been reported, which provides a novel avenue to prepare oxazolines under mild and green conditions.

Chinese Chemical Letters 33 (2022) 1997



## A bifunctional vinyl-sulfonium tethered peptide induced by thio-Michael-type addition reaction

Hongkun Xu<sup>a</sup>, Xuan Qin<sup>a</sup>, Yaping Zhang<sup>a</sup>, Chuan Wan<sup>a</sup>, Rui Wang<sup>b</sup>, Zhanfeng Hou<sup>b</sup>, Xiaofeng Ding<sup>c</sup>, Hailing Chen<sup>a</sup>, Ziyuan Zhou<sup>a,d</sup>, Yang Li<sup>a</sup>, Chenshan Lian<sup>b</sup>, Feng Yin<sup>b</sup>, Zigang Li<sup>a,b</sup>

<sup>a</sup> State Key Laboratory of Chemical Oncogenomics, School of Chemical Biology and Biotechnology, Peking University Shenzhen Graduate School, Shenzhen 518055, China

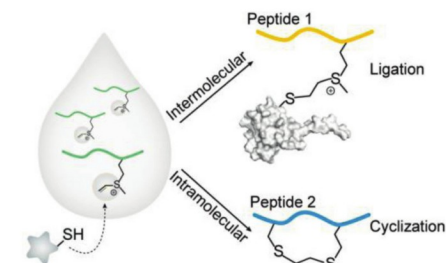
<sup>b</sup> Pingshan translational medicine center, Shenzhen Bay Laboratory, Shenzhen 518055, China

<sup>c</sup> Anhui Medical University, Hefei 230032, China

<sup>d</sup> Cancer Hospital Chinese Academy of Medical Sciences, Shenzhen Center, Shenzhen 518000, China

We constructed a novel vinyl-sulfonium tethered peptide with dual functional application. Cyclization with improved cellular uptake and good stability could be developed by thio-Michael-type addition reaction involving a cysteine residue in the peptide. Moreover, the vinyl-sulfonium in peptide could alkylate the thiol in cysteine residues of proteins of interest via the Michael-type addition, which may be a potential strategy for covalent peptide inhibitor design.

Chinese Chemical Letters 33 (2022) 2001





## Metal-free directed C–H borylation of 2-(*N*-methylanilino)-5-fluoropyridines and 2-benzyl-5-fluoropyridines

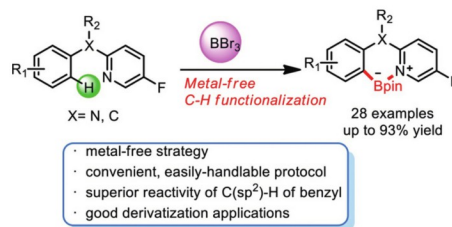
Gaorong Wu<sup>a</sup>, Xiaobo Xu<sup>a</sup>, Shuai Wang<sup>a</sup>, Lu Chen<sup>a</sup>, Binghan Pang<sup>a</sup>, Tao Ma<sup>b</sup>, Yafei Ji<sup>a</sup>

<sup>a</sup>Engineering Research Center of Pharmaceutical Process Chemistry, Ministry of Education; School of Pharmacy, East China University of Science and Technology, Shanghai 200237, China

<sup>b</sup>School of Chinese Materia Medica, Beijing University of Chinese Medicine, Liangxiang Campus, Beijing 102488, China

A novel route for C–H borylation of 2-(*N*-methylanilino)-5-fluoropyridines and 2-benzyl-5-fluoropyridines using BBr<sub>3</sub> under metal-free conditions has been described. It is a convenient, easily handled, synthetically useful protocol for constructing C–B bond.

Chinese Chemical Letters 33 (2022) 2005



## Electrochemistry enabled selective vicinal fluorosulfonylation and fluorosulfoxidation of alkenes

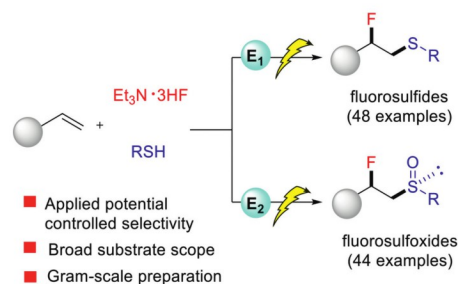
Yi Yu<sup>a</sup>, Yimin Jiang<sup>a</sup>, Shaofen Wu<sup>a</sup>, Zhaojiang Shi<sup>a</sup>, Jinnan Wu<sup>a</sup>, Yaofeng Yuan<sup>a</sup>, Keyin Ye<sup>a,b</sup>

<sup>a</sup>Key Laboratory of Molecule Synthesis and Function Discovery (Fujian Province University), College of Chemistry, Fuzhou University, Fuzhou 350108, China

<sup>b</sup>State Key Laboratory of Physical Chemistry of Solid Surfaces, Xiamen University, Xiamen 361005, China

A highly selective electrochemical process for the vicinal fluorosulfonylation and fluorosulfoxidation reactions of alkenes has been developed. The precise control of the oxidation state of sulfur moieties were enabled by the unique ability of electrosynthesis to dial in potentials on demand.

Chinese Chemical Letters 33 (2022) 2009



## Natural scaffolds-inspired synthesis of CF<sub>3</sub>-substituted macrolides enabled by Rh-catalyzed C–H alkylation macrocyclization

Tongyu Bi<sup>a,b</sup>, Yi Xu<sup>a,b</sup>, Xin Xu<sup>c</sup>, Bixi Tang<sup>a,b</sup>, Qing Yang<sup>a,b</sup>, Yi Zang<sup>a,b</sup>, Zhenyang Lin<sup>c</sup>, Jia Li<sup>a,b,d,e</sup>, WeiBo Yang<sup>a,b,d</sup>

<sup>a</sup>Chinese Academy of Sciences Key Laboratory of Receptor Research, Shanghai Institute of Materia Medica (SIMM), Chinese Academy of Sciences, Shanghai 201203, China

<sup>b</sup>University of Chinese Academy of Sciences, Beijing 100049, China

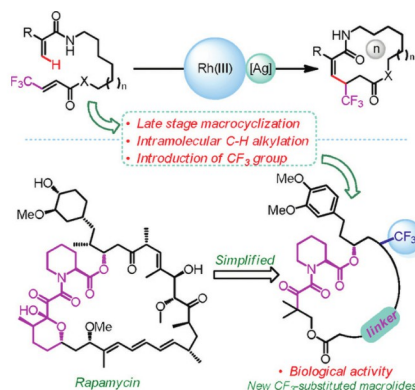
<sup>c</sup>Department of Chemistry, The Hong Kong University of Science and Technology, Hong Kong, China

<sup>d</sup>School of Pharmaceutical Science and Technology, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences, Hangzhou 310024, China

<sup>e</sup>Open Studio for Druggability Research of Marine Natural Products, Pilot National Laboratory for Marine Science and Technology (Qingdao), Qingdao 266237, China

A Rh(III)-catalyzed C–H alkylation macrocyclization method was described, which was then used in the synthesis of CF<sub>3</sub>-substituted macrolides. Inspired by the key scaffolds of rapamycin and FR252921, the obtained CF<sub>3</sub>-bearing macrolides showed potent anti-inflammation activities against TNF-α, IL-6 and CCL2 mRNA expression.

Chinese Chemical Letters 33 (2022) 2015



## Noble metal aerogels rapidly synthesized by ultrasound for electrocatalytic reaction

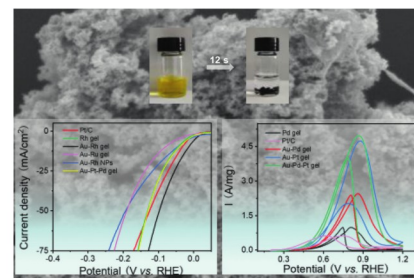
Yueyue Yuan<sup>a</sup>, Huan Zhao<sup>a</sup>, Wenxia Xu<sup>a</sup>, Dan Zhang<sup>b</sup>, Zuochao Wang<sup>a</sup>, Hongdong Li<sup>a</sup>, Yingnan Qin<sup>a</sup>, Shaoxiang Li<sup>b</sup>, Jianping Lai<sup>a</sup>, Lei Wang<sup>a,b</sup>

<sup>a</sup>Key Laboratory of Eco-chemical Engineering, Key Laboratory of Optic-electric Sensing and Analytical Chemistry of Life Science, Taishan Scholar Advantage and Characteristic Discipline Team of Eco Chemical Process and Technology, College of Chemistry and Molecular Engineering, Qingdao University of Science and Technology, Qingdao 266042, China

<sup>b</sup>Shandong Engineering Research Center for Marine Environment Corrosion and Safety Protection, College of Environment and Safety Engineering, Qingdao University of Science and Technology, Qingdao 266042, China

Combining the effects of reducing agent and ultrasonic wave on gelation process, a new method which can rapidly synthesize metal aerogels was proposed, and it was extended to synthesize alloy aerogel. This method only needs a few seconds to complete the gelation process, greatly shortens the time, and simplifies the preparation procedure for preparing aerogels. It can successfully complete the gelation process in a wide concentration range (from 0.02 mmol/L to 62.5 mmol/L). In addition, the ligament size of alloy aerogels were 10 nm or less. We also found that Au-Rh and Au-Pt-Pd have good electrocatalytic properties of HER and EOR, respectively.

Chinese Chemical Letters 33 (2022) 2021



## A highly active and selective chalcogen bond-mediated perchlorate channel

Lin Yuan<sup>a</sup>, Peng Jiang<sup>a</sup>, Jingliang Hu<sup>a</sup>, Huan Zeng<sup>a</sup>, Yanping Huo<sup>b</sup>, Zhongyan Li<sup>a</sup>, Huaqiang Zeng<sup>c</sup>

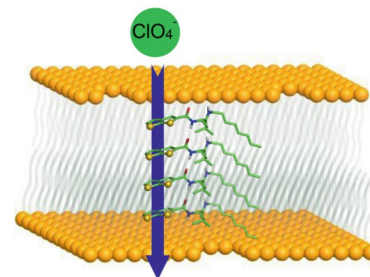
<sup>a</sup> College of Chemistry and Bioengineering, Hunan University of Science and Engineering, Yongzhou 425199, China

<sup>b</sup> Faculty of Chemical Engineering and Light Industry, Guangdong University of Technology, Guangzhou 510006, China

<sup>c</sup> Frontier Research Center for Multidisciplinary Sciences, School of Chemistry and Chemical Engineering, Northwestern Polytechnical University, Xi'an 710072, China

Applying rarely used chalcogen bonds as the driving force, we successfully developed a self-assembled mono-peptide-based anion channel capable of highly efficient and selective transport of perchlorate anions across the membrane.

Chinese Chemical Letters 33 (2022) 2026



## Is the metal involved or not? A computational study of Cu(I)-catalyzed [4 + 1] annulation of vinyl indole and carbene precursor

Xiaoqian He<sup>a</sup>, Kangbao Zhong<sup>a</sup>, Dan Heng<sup>a</sup>, Zhen Zeng<sup>a</sup>, Hao Ni<sup>a</sup>, Ruopeng Bai<sup>a</sup>, Yu Lan<sup>a,b</sup>

<sup>a</sup> School of Chemistry and Chemical Engineering, Chongqing Key Laboratory of Theoretical and Computational Chemistry, Chongqing University, Chongqing 400030, China

<sup>b</sup> College of Chemistry and Institute of Green Catalysis, Zhengzhou University, Zhengzhou 450001, China

The Cu(I)-catalyzed [4 + 1] annulation of vinyl indoles and a carbene precursor is a powerful method for constructing cyclopentaindole derivatives. Density functional theory (DFT) calculations were used to elucidate the mechanism and regioselectivity of this reaction. After Cu-assisted indole C3-alkylation, direct 1,5-annulation was favored over the Cu-assisted annulation pathway. Furthermore, the regioselectivity for 1,5-annulation was attributed to the generated five-membered-ring product being more stable than the three-membered-ring product from 1,3-annulation, which was the kinetically favored pathway.

Chinese Chemical Letters 33 (2022) 2031



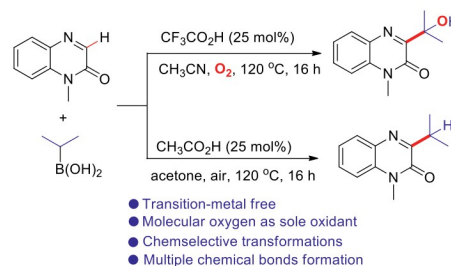
## Molecular oxygen-mediated selective hydroxyalkylation and alkylation of quinoxalin-2(1H)-ones with alkylboronic acids

Hongdou Zhang, Jun Xu, Yani Ouyang, Xiaoguang Yue, Chenxin Zhou, Zhigang Ni, Wanmei Li

College of Material, Chemistry and Chemical Engineering, Key Laboratory of Organosilicon Chemistry and Material Technology of Ministry of Education, Hangzhou Normal University, Hangzhou 311121, China

This study describes an efficient molecular oxygen-mediated method for the selective hydroxyalkylation and alkylation of quinoxalin-2(1H)-ones with alkylboronic acids under transition-metal free conditions.

Chinese Chemical Letters 33 (2022) 2036



## Construction of alkyl-substituted 7-norbornenones through Diels–Alder cycloaddition of electron-deficient olefins and a cyclopentadienone derivative generated *in situ*

Shanxiang Liu<sup>a,b,c</sup>, Jinxin Wang<sup>b,d</sup>, Yuyong Ma<sup>b</sup>, Xin Cao<sup>b</sup>, Wei-Dong Zhang<sup>a,d</sup>, Ang Li<sup>b,c</sup>

<sup>a</sup> School of Traditional Chinese Pharmacy, China Pharmaceutical University, Nanjing 211198, China

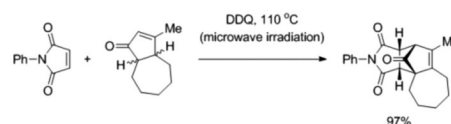
<sup>b</sup> State Key Laboratory of Bioorganic and Natural Products Chemistry, Center for Excellence in Molecular Synthesis, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, University of Chinese Academy of Sciences, Shanghai 200032, China

<sup>c</sup> State Key Laboratory of Innovative Natural Medicine and Traditional Chinese Medicine Injections, Jiangxi Qingfeng Pharmaceutical Co., Ltd., Ganzhou 341000, China

<sup>d</sup> Department of Phytochemistry, School of Pharmacy, Second Military Medical University, Shanghai 200433, China

Taking advantage of a protocol for *in situ* generation of an alkyl-substituted cyclopentadienone from a corresponding cyclopentenone, we developed an expeditious Diels–Alder approach for construction of densely substituted 7-norbornenone derivatives.

Chinese Chemical Letters 33 (2022) 2041





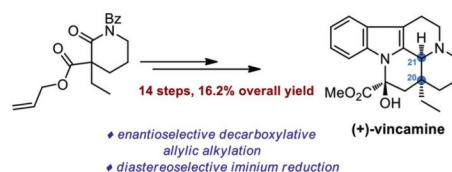
## Enantioselective total synthesis of (+)-vincamine

Fanglin Xue, Hengmao Liu, Rui Wang, Dan Zhang, Hao Song, Xiao-Yu Liu, Yong Qin

Key Laboratory of Drug-Targeting and Drug Delivery System of the Education Ministry and Sichuan Province, Sichuan Engineering Laboratory for Plant-Sourced Drug and Sichuan Research Center for Drug Precision Industrial Technology, West China School of Pharmacy, Sichuan University, Chengdu 610041, China

We present a practical and concise asymmetric total synthesis of (+)-vincamine employing enantioselective and diastereoselective transformations.

Chinese Chemical Letters 33 (2022) 2044



## Facile one-pot synthesis of a novel all-carbon stair containing dimerized pentalene core from alkyne

Hui Zhao<sup>a</sup>, Rakesh Kumar Gupta<sup>a</sup>, Wei Zhang<sup>b</sup>, Jiong Jia<sup>a</sup>, Qun Yu<sup>a</sup>, Zhiyong Gao<sup>c</sup>, Guilin Zhuang<sup>b</sup>, Dacheng Li<sup>d</sup>, Xingpo Wang<sup>a</sup>, Chen Ho Tung<sup>a</sup>, Di Sun<sup>a</sup>

<sup>a</sup>Key Laboratory of Colloid and Interface Chemistry, Ministry of Education, School of Chemistry and Chemical Engineering, State Key Laboratory of Crystal Materials, Shandong University, Ji'nan 250100, China

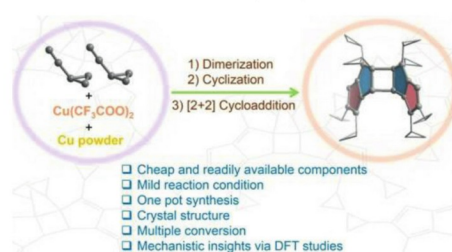
<sup>b</sup>College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou 310032, China

<sup>c</sup>School of Chemistry and Chemical Engineering, Collaborative Innovation Center of Henan Province for Green Manufacturing of Fine Chemicals, Key Laboratory of Green Chemical Media and Reactions, Ministry of Education, Henan Normal University, Xinxiang 453007, China

<sup>d</sup>Shandong Provincial Key Laboratory of Chemical Energy Storage and Novel Cell Technology, and School of Chemistry and Chemical Engineering, Liaocheng University, Liaocheng 252000, China

A facile and efficient one-pot synthetic method for substituted pentalene dimer from alkyne along with single crystal structure is reported.

Chinese Chemical Letters 33 (2022) 2047



## DNA origami-based nano-hunter enriches low-abundance point mutations by targeting wild-type gene segments

Longjie Li<sup>a,b</sup>, Kejun Dong<sup>c,d</sup>, Xinyu Wang<sup>e</sup>, Meizhou Zhang<sup>b</sup>, Jun Li<sup>b</sup>, Andreas K. Nussler<sup>f</sup>, Xianjin Xiao<sup>d</sup>, Hongbo Wang<sup>c</sup>, Yuzhou Wu<sup>b</sup>

<sup>a</sup>School of Life Science and Technology, Wuhan Polytechnic University, Wuhan 430023, China

<sup>b</sup>Hubei Key Laboratory of Bioinorganic Chemistry and Materia Medica, Hubei Engineering Research Center for Biomaterials and Medical Protective Materials, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, China

<sup>c</sup>Department of Obstetrics and Gynecology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430022, China

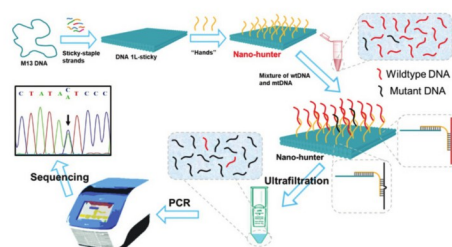
<sup>d</sup>Institute of Reproductive Health, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

<sup>e</sup>Department of Breast Surgery, Second Hospital of Jilin University, Changchun 130041, China

<sup>f</sup>Siegfried Weller Institute for Trauma Research, Eberhard-Karls-Universität Tübingen, Schnarrenbergstr. 95, D-72076, Tübingen, Germany

A nanorobot for low-abundance point mutation enrichment was constructed using DNA origami. This novel DNA nanorobot may enable the detection of tumor markers, potentially facilitating early cancer diagnosis.

Chinese Chemical Letters 33 (2022) 2052



## Meroterpenthiazole A, a unique meroterpenoid from the deep-sea-derived *Penicillium allii-sativi*, significantly inhibited retinoid X receptor (RXR)- $\alpha$ transcriptional effect

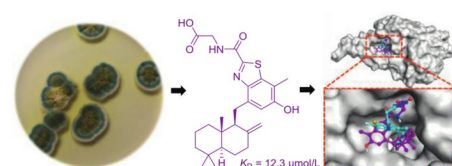
Chun-Lan Xie<sup>a,b</sup>, Duo Zhang<sup>b</sup>, Kai-Qiang Guo<sup>b</sup>, Qing-Xiang Yan<sup>a</sup>, Zheng-Biao Zou<sup>a</sup>, Zhi-Hui He<sup>a</sup>, Zhen Wu<sup>b</sup>, Xiao-Kun Zhang<sup>b</sup>, Hai-Feng Chen<sup>b</sup>, Xian-Wen Yang<sup>a</sup>

<sup>a</sup>Key Laboratory of Marine Biogenetic Resources, Third Institute of Oceanography, Ministry of Natural Resources, Xiamen 361005, China

<sup>b</sup>School of Pharmaceutical Sciences, Xiamen University, Xiamen 361102, China

Meroterpenthiazole A, a novel meroterpenoid that was isolated from the deep-sea-derived *Penicillium allii-sativi*, significantly inhibited retinoid X receptor (RXR)- $\alpha$  transcriptional effect.

Chinese Chemical Letters 33 (2022) 2057



## Boosting the photoelectrochemical water oxidation performance of bismuth vanadate by ZnCo<sub>2</sub>O<sub>4</sub> nanoparticles

Jingwei Huang<sup>a,b</sup>, Yani Wang<sup>a,b</sup>, Kaiyi Chen<sup>a</sup>, Tingting Liu<sup>b</sup>, Qizhao Wang<sup>a,b,c</sup>

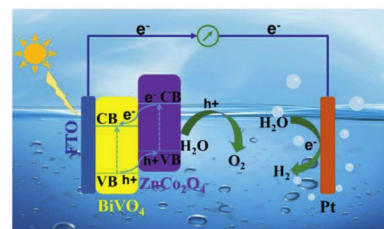
<sup>a</sup>School of Environment Science and Engineering, Chang'an University, Xi'an 710064, China

<sup>b</sup>College of Chemistry and Chemical Engineering, Northwest Normal University, Lanzhou 730070, China

<sup>c</sup>Tianjin Key Laboratory of Building Green Functional Materials, Tianjin Chengjian University, Tianjin 300384, China

The formation of p-n junctions in ZnCo<sub>2</sub>O<sub>4</sub>/BiVO<sub>4</sub> composite photoanode is proved by input voltage-output current test, which improves the photoelectrochemical water oxidation performance.

Chinese Chemical Letters 33 (2022) 2060



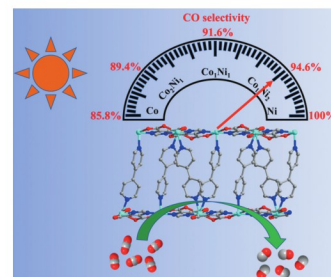
## Enhancing photocatalytic performance of metal-organic frameworks for CO<sub>2</sub> reduction by a bimetallic strategy

Jihong Zhang, Yuchen Wang, Hongjuan Wang, Dichang Zhong, Tongbu Lu

MOE International Joint Laboratory of Materials Microstructure, Institute for New Energy Materials and Low Carbon Technologies, School of Materials Science and Engineering, Tianjin University of Technology, Tianjin 300384, China

Two is better than one: A case of bimetallic Co<sub>x</sub>Ni<sub>y</sub>-MOFs exhibiting enhanced photocatalytic CO<sub>2</sub> reduction performance over monometallic Co/Ni-MOF.

Chinese Chemical Letters 33 (2022) 2065



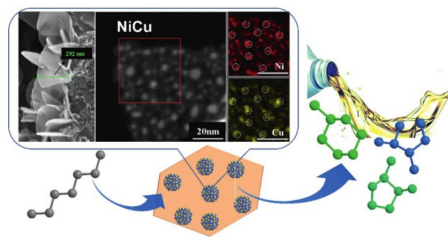
## NiCu bimetallic catalysts derived from layered double hydroxides for hydroconversion of *n*-heptane

Yanru Zhu, Minghuan Yang, Zhen Zhang, Zhe An, Jian Zhang, Xin Shu, Jing He

State Key Laboratory of Chemical Resource Engineering, Beijing Advanced Innovation Center for Soft Matter Science and Engineering, Beijing University of Chemical Technology, Beijing 100029, China

NiCu bimetallic catalyst with uniform NiCu dispersion has been demonstrated to provide higher activity than Pt catalyst while with similar selectivity in the reforming reaction of *n*-heptane. The synergies between homogeneously dispersed Ni and Cu sites account for the enhancement of activity and selectivity.

Chinese Chemical Letters 33 (2022) 2069



## A novel on-tissue cycloaddition reagent for mass spectrometry imaging of lipid C=C position isomers in biological tissues

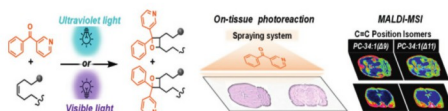
Chenglong Sun<sup>a,b</sup>, Chunxia Ma<sup>a,b</sup>, Lili Li<sup>a,b</sup>, Yuhao Han<sup>b</sup>, Daijie Wang<sup>a,b</sup>, Xiao Wan<sup>a,b</sup>

<sup>a</sup>School of Pharmaceutical Sciences, Qilu University of Technology (Shandong Academy of Sciences), Ji'nan 250014, China

<sup>b</sup>Key Laboratory for Applied Technology of Sophisticated Analytical Instruments of Shandong Province, Shandong Analysis and Test Center, Qilu University of Technology (Shandong Academy of Sciences), Ji'nan 250014, China

An isomer-resolved lipid imaging method was developed by coupling light-driven derivatization with MALDI-MS imaging technique. By introducing 3-benzoylpyridine as a novel derivatization reagent and conducting on-tissue MALDI-MS/MS imaging analysis, we successfully map the spatial distributions of lipid C=C position isomers in biological tissues.

Chinese Chemical Letters 33 (2022) 2073







## A cellular chip-MS system for investigation of *Lactobacillus rhamnosus* GG and irinotecan synergistic effects on colorectal cancer

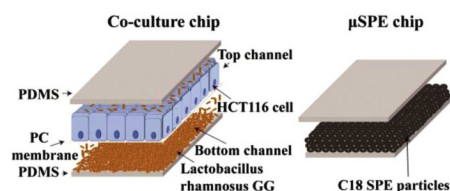
Wanting Hu<sup>a,b</sup>, Dan Gao<sup>a</sup>, Zhaochen Su<sup>a</sup>, Rui Qian<sup>a</sup>, Yu Wang<sup>b</sup>, Qionglin Liang<sup>b</sup>

<sup>a</sup>State Key Laboratory of Chemical Oncogenomics, the Graduate School at Shenzhen, Tsinghua University, Shenzhen 518055, China

<sup>b</sup>Department of Chemistry, Center for Synthetic and Systems Biology, Key Laboratory of Bioorganic Phosphorus Chemistry & Chemical Biology (Ministry of Education), Tsinghua University, Beijing 100084, China

The synergistic effect of *Lactobacillus rhamnosus* GG and irinotecan on HCT116 cells was investigated by using a cellular chip-MS system with a double-layer co-culture chip and a  $\mu$ SPE chip coupled with mass spectrometry.

Chinese Chemical Letters 33 (2022) 2096



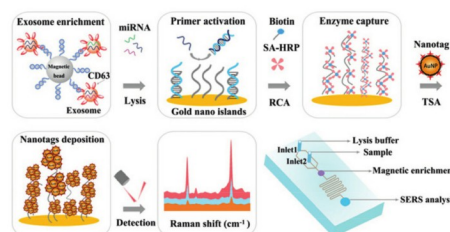
## A microfluidic surface-enhanced Raman scattering (SERS) sensor for microRNA in extracellular vesicles with nucleic acid-tyramine cascade amplification

Yue Zhao, Xiaoxing Fang, Min Bai, Jin Zhang, Huahang Yu, Feng Chen, Yongxi Zhao

Institute of Analytical Chemistry and Instrument for Life Science, The Key Laboratory of Biomedical Information Engineering of Ministry of Education, School of Life Science and Technology, Xi'an Jiaotong University, Xi'an 710049, China

A microfluidic surface-enhanced Raman scattering (SERS) sensor was proposed for an on-chip detection of exosomal miRNA based on rolling circle amplification (RCA) and tyramine signal amplification (TSA) strategy.

Chinese Chemical Letters 33 (2022) 2101



## Efficient removal of tetracycline by H<sub>2</sub>O<sub>2</sub> activated with iron-doped biochar: Performance, mechanism, and degradation pathways

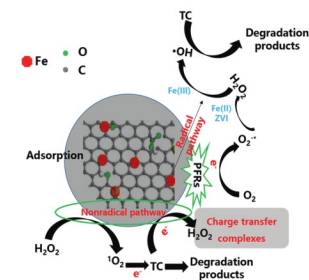
Xiang Li<sup>a</sup>, Yan Jia<sup>a</sup>, Jiajia Zhang<sup>a</sup>, Yang Qin<sup>a</sup>, Yijia Wu<sup>a</sup>, Minghua Zhou<sup>b</sup>, Jianhui Sun<sup>a</sup>

<sup>a</sup>School of Environment, Henan Normal University, Key Laboratory of Yellow River and Huai River Water Environment and Pollution Control, Ministry of Education, Henan Key Laboratory for Environmental Pollution Control, International Joint Laboratory on Key Techniques in Water Treatment, Henan Province, Henan Engineering Laboratory of Environmental Functional Materials and Pollution Control, Xinxiang 453007, China

<sup>b</sup>Key Laboratory of Pollution Process and Environmental Criteria, Ministry of Education, Tianjin Key Laboratory of Environmental Technology for Complex Trans-Media Pollution, Tianjin Advanced Water Treatment Technology International Joint Research Center, College of Environmental Science and Engineering, Nankai University, Tianjin 300350, China

A novel Fe-BC catalyst that is highly efficient for the removal of TC is successfully fabricated through a simple and effective method. Both radical and non-radical pathways were involved in the process of removing TC by Fe-BC/H<sub>2</sub>O<sub>2</sub> process.

Chinese Chemical Letters 33 (2022) 2105



## 3D dahlia-like NiAl-LDH/CdS heterosystem coordinating with 2D/2D interface for efficient and selective conversion of CO<sub>2</sub>

Xiaoyue Zhang<sup>a</sup>, Yong Yang<sup>b</sup>, Lijun Xiong<sup>b</sup>, Tianyu Wang<sup>a</sup>, Zheng Tang<sup>b</sup>, Panjie Li<sup>a</sup>, Nan Yin<sup>b</sup>, Aiwu Sun<sup>b,c</sup>, Jinyou Shen<sup>a</sup>

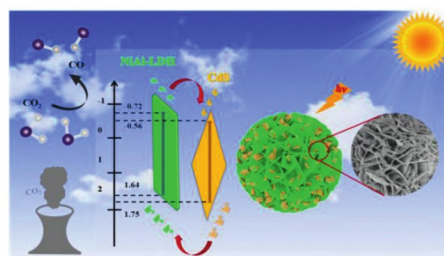
<sup>a</sup>Jiangsu Key Laboratory of Chemical Pollution Control and Resources Reuse, School of Environmental and Biological Engineering, Nanjing University of Science and Technology, Nanjing 210094, China

<sup>b</sup>Key Laboratory of Soft Chemistry and Functional Materials, Ministry of Education, School of Chemistry and Chemical Engineering, Nanjing University of Science and Technology, Nanjing 210094, China

<sup>c</sup>Faculty of Chemical Engineering, Huaiyin Institute of Technology, Huaiyin 223001, China

3D dahlia-like NiAl-LDH/CdS heterosystem coordinating with 2D/2D interface interaction is developed via in-situ decoration and on spot self-assembly process, contributing to efficient and durable photoconversion towards CO<sub>2</sub>.

Chinese Chemical Letters 33 (2022) 2111





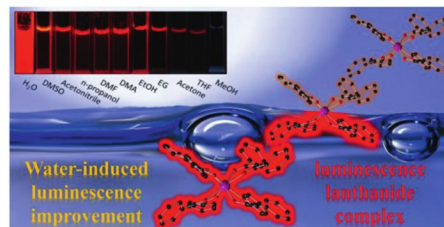
## Water-induced luminescence improvement in a lanthanide $\beta$ -diketone complex for monitoring water purity

Xiaojun Zhang, Xiaomeng Jin, Yuxin Li

Key Laboratory of Function Inorganic Material Chemistry (MOE), School of Chemistry and Material Science, Heilongjiang University, Harbin 150080, China

Water-induced luminescence improvement has been exceptionally realized in an anionic and coordination-saturated europium  $\beta$ -diketone complex nanosheet, with a 13% improvement for sensitization efficiency. This exciting luminophore could act as a chemo-sensor toward various organic solvents in water, being applicable for monitoring water purity.

Chinese Chemical Letters 33 (2022) 2117



## Ag-single atoms modified $S_{1.66}\text{-}N_{1.91}/\text{TiO}_{2-x}$ for photocatalytic activation of peroxymonosulfate for bisphenol A degradation

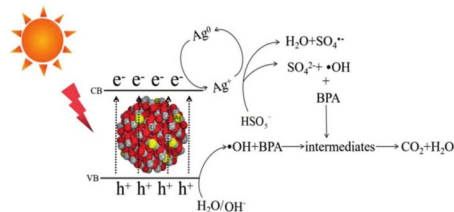
Tian Wang<sup>a</sup>, Jianjun Zhou<sup>a</sup>, Wenjuan Wang<sup>a</sup>, Yunqing Zhu<sup>a</sup>, Junfeng Niu<sup>a,b</sup>

<sup>a</sup>School of Environmental Science and Engineering, Shaanxi University of Science and Technology, Xi'an 710021, China

<sup>b</sup>School of Environment and Civil Engineering, Dongguan University of Technology, Dongguan 523808, China

$\text{Ag}_{0.23}(\text{S}_{1.66}\text{-}N_{1.91}/\text{TiO}_{2-x})$  single-atom photocatalyst was synthesized by *in-situ* photo-reducing of silver on  $\text{S}_x\text{N}_y\text{-TiO}_{2-x}$  nanocomposite and used to degrade bisphenol A (BPA) through heterogeneous activation of potassium peroxymonosulfate (PMS) under visible-light illumination.

Chinese Chemical Letters 33 (2022) 2121



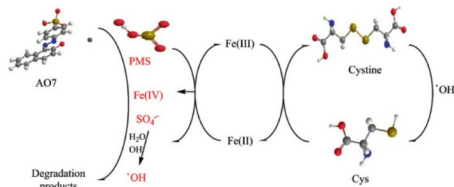
## Enhanced degradation of organic contaminants by Fe(III)/peroxymonosulfate process with L-cysteine

Chengdu Qi, Yanni Wen, Yijie Zhao, Yin hao Dai, Yanping Li, Chenmin Xu, Shaogui Yang, Huan He

School of Environment, Nanjing Normal University, Nanjing, 210023, China

The introduction of L-cysteine into the Fe(III)/peroxymonosulfate process significantly accelerated the transformation from Fe(III) to Fe(II) and thus generated more reactive species and improved the oxidation efficiency for organic contaminants including acid orange 7.

Chinese Chemical Letters 33 (2022) 2125



## Enhanced heterogeneous activation of peroxymonosulfate by boosting internal electron transfer in a bimetallic $\text{Fe}_3\text{O}_4\text{-MnO}_2$ nanocomposite

Qingqing Shi<sup>a</sup>, Shengyan Pu<sup>a,b</sup>, Xi Yang<sup>a</sup>, Peng Wang<sup>a</sup>, Bo Tang<sup>a</sup>, Bo Lai<sup>c</sup>

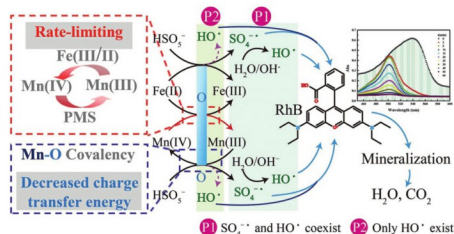
<sup>a</sup>State Key Laboratory of Geohazard Prevention and Geoenvironment Protection, Chengdu University of Technology, Chengdu 610059, China

<sup>b</sup>Department of Civil and Environment Engineering, Hong Kong Polytechnic University, Hong Kong, China

<sup>c</sup>State Key Laboratory of Hydraulics and Mountain River Engineering, College of Architecture and Environment, Sichuan University, Chengdu 610065, China

A new type of a bimetallic  $\text{Fe}_3\text{O}_4\text{-MnO}_2$  nanocomposite was designed and synthesized as the efficient and recyclable catalyst for enhancing heterogeneous activation of peroxymonosulfate by boosting internal electron transfer.

Chinese Chemical Letters 33 (2022) 2129



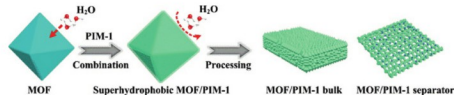
## Sub-5 nm porous polymer decoration toward superhydrophobic MOFs with enhanced stability and processability

Siyi Rong, Pengcheng Su, Shizheng Chen, Miaomiao Jia, Wanbin Li

Guangdong Key Laboratory of Environmental Pollution and Health, School of Environment, Ji'nan University, Guangzhou 511443, China

The superhydrophobic MOFs prepared by decoration of sub-5 nm porous PIM-1 layers show good pore preservation, impressive water resistance, and remarkable processability.

Chinese Chemical Letters 33 (2022) 2134



## $[(\text{CrGe}_9)\text{Cr}_2(\text{CO})_{13}]^{4-}$ : A disubstituted case of ten-vertex closo cluster with spherical aromaticity

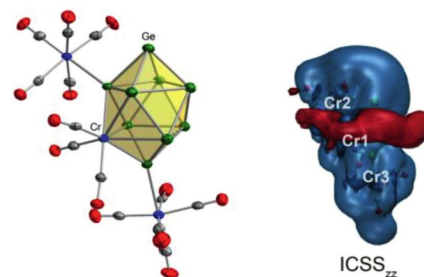
Ya-Shan Huang<sup>a</sup>, Dandan Chen<sup>b</sup>, Jun Zhu<sup>b</sup>, Zhong-Ming Sun<sup>a</sup>

<sup>a</sup>State Key Laboratory of Elemento-Organic Chemistry, Tianjin Key Lab of Rare Earth Materials and Applications, School of Material Science and Engineering, Nankai University, Tianjin 300350, China

<sup>b</sup>State Key Laboratory of Physical Chemistry of Solid Surfaces, Collaborative Innovation Center of Chemistry for Energy Materials (iChEM), College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005, China

A disubstituted hetero-ten-vertex cluster  $[(\text{CrGe}_9)\text{Cr}_2(\text{CO})_{13}]^{4-}$  with three adjacent  $\text{Cr}(\text{CO})_n$  units. Intricate multi-center bonding patterns delineate the spherical aromaticity of the title cluster.

Chinese Chemical Letters 33 (2022) 2139



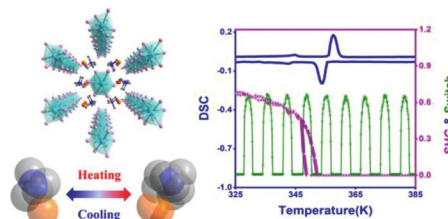
## A hybrid organic-inorganic perovskite with robust SHG switching

Mengjuan Yang, Hao Cheng, Yuqiu Xu, Mengzhen Li, Yong Ai

Ordered Matter Science Research Center, Nanchang University, Nanchang 330031, China

A lead-based HOIP with dual phase transition behavior at 345 and 358 K, TMIM- $\text{PbCl}_3$ , are investigated. It exhibits a well-defined SHG switching response.

Chinese Chemical Letters 33 (2022) 2143



## Azulenoisindigo: A building block for $\pi$ -functional materials with reversible redox behavior and proton responsiveness

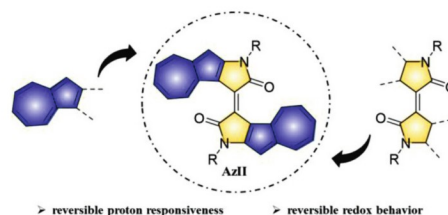
Bin Hou<sup>a</sup>, Jing Li<sup>a</sup>, Xiaodi Yang<sup>b</sup>, Jianwei Zhang<sup>b</sup>, Hanshen Xin<sup>a</sup>, Congwu Ge<sup>a</sup>, Xike Gao<sup>a</sup>

<sup>a</sup>Key Laboratory of Synthetic and Self-Assembly Chemistry for Organic Functional Molecules, Shanghai Institute of Organic Chemistry, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Shanghai 200032, China

<sup>b</sup>Experiment Center for Science and Technology, Shanghai University of Traditional Chinese Medicine, Shanghai 201203, China

Azulenoisindigo (**AzII**), an azulene-based isoindigo analogue, is designed and synthesized with reversible redox behavior and proton responsiveness.

Chinese Chemical Letters 33 (2022) 2147



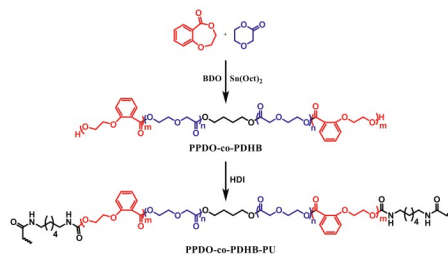
## Synthesis and characterization of poly(*p*-dioxanone)-based degradable copolymers with enhanced thermal and hydrolytic stabilities

Yi-Teng Yan, Gang Wu, Si-Chong Chen, Yu-Zhong Wang

Collaborative Innovation Center for Eco-Friendly and Fire-Safety Polymeric Materials (MoE), State Key Laboratory of Polymer Materials Engineering, National Engineering Laboratory of Eco-Friendly Polymeric Materials (Sichuan), College of Chemistry, Sichuan University, Chengdu 610064, China

The novel PPDO-based chain-extended copolymers with varied compositions are presented and the effect of the compositions on the thermal properties, mechanical properties and the hydrolytic degradability are studied in detail.

Chinese Chemical Letters 33 (2022) 2151





## Hydrophilic carbon nanotube membrane enhanced interfacial evaporation for desalination

Yaqi Hou<sup>a</sup>, Qianxiao Wang<sup>a</sup>, Shuli Wang<sup>a</sup>, Miao Wang<sup>c</sup>, Xuemei Chen<sup>d</sup>, Xu Hou<sup>a,b,e</sup>

<sup>a</sup>State Key Laboratory of Physical Chemistry of Solid Surfaces, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005, China

<sup>b</sup>Research Institute for Biomimetics and Soft Matter, Fujian Provincial Key Laboratory for Soft Functional Materials Research, Jiujiang Research Institute, College of Physical Science and Technology, Xiamen University, Xiamen 361005, China

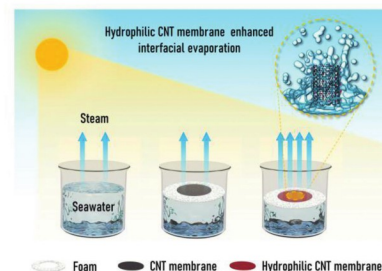
<sup>c</sup>College of Materials, Xiamen University, Xiamen 361005, China

<sup>d</sup>School of Energy and Power Engineering, Nanjing University of Science and Technology, Nanjing 210094, China

<sup>e</sup>Tan Kah Kee Innovation Laboratory, Xiamen 361102, China

The detailed microscopic mechanism behind the influence of the hydrophilic and hydrophobic surface chemistry of the interfacial evaporation membrane on the evaporation rate of solar desalination was studied using molecular dynamic simulations. The results show that the hydrophilic membrane material can significantly enhance the evaporation rate by destroying the hydrogen bonding interactions among water molecules at the interface.

Chinese Chemical Letters 33 (2022) 2155



## A series of stable, metastable and unstable salts of Imatinib with improved solubility

Zheng-Yu Fang<sup>a</sup>, Bao-Xi Zhang<sup>a</sup>, Wen-Hui Xing<sup>a</sup>, Hong-Li Jia<sup>b</sup>, Xue Wang<sup>a</sup>, Ning-Bo Gong<sup>a</sup>, Yang Lu<sup>a</sup>, Guan-Hua Du<sup>c</sup>

<sup>a</sup>Beijing Key Laboratory of Polymorphic Drugs, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100050, China

<sup>b</sup>State Key Laboratory of Natural and Biomimetic Drugs, School of Pharmaceutical Sciences, Peking University, Beijing 100191, China

<sup>c</sup>Beijing City Key Laboratory of Drug Target Identification and Drug Screening, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100050, China

Two stable salts imatinib-malonic acid (**S1**) and imatinib-citric acid (**S5**), one metastable imatinib-fumaric acid methanol hydrate (**S2**), two unstable salts imatinib-citric acid methanol hydrate (**S3**) and imatinib-citric acid methylate (**S4**) were obtained for the first time. The solubility of salts (**S1**, **S2**, **S5**) were improved significantly as compared to the pure drug.

Chinese Chemical Letters 33 (2022) 2159



## Interwoven nickel(II)-dimethylglyoxime nanowires in 3D nickel foam for dendrite-free lithium deposition

Tianyi Zhou<sup>a,c</sup>, Yanlu Mu<sup>a,c</sup>, Jianyang Wu<sup>b</sup>, Bing Zhong<sup>c</sup>, Chengkai Yang<sup>e</sup>, Qian Wang<sup>f</sup>, Wen Liu<sup>d</sup>, Henghui Zhou<sup>b</sup>, Peng Jiang<sup>a,c</sup>

<sup>a</sup>CAS Key Laboratory of Standardization and Measurement for Nanotechnology, CAS Center for Excellence in Nanoscience, National Center for Nanoscience and Technology, Beijing 100190, China

<sup>b</sup>College of Chemistry and Molecular Engineering, Peking University, Beijing 100871, China

<sup>c</sup>University of Chinese Academy of Sciences, Beijing 100049, China

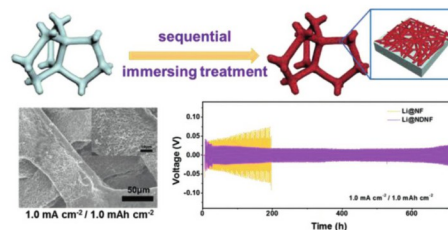
<sup>d</sup>State Key Laboratory of Chemical Resource Engineering, College of Chemistry, Beijing Advanced Innovation Center for Soft Matter Science and Engineering, Beijing University of Chemical Technology, Beijing 100029, China

<sup>e</sup>College of Materials Science and Engineering, Fuzhou University, Fuzhou 350108, China

<sup>f</sup>Institute of Energy Innovation, College of Materials Science and Engineering, Taiyuan University of Technology, Taiyuan 030024, China

An composited skeleton based on Ni foam was fabricated by a facile sequential immersing treatment, in which homogenous covered interwoven nickel(II)dimethylglyoxime nanowires help realizing uniform lithium deposition, leading to a promoting cycling performance of lithium metal anode.

Chinese Chemical Letters 33 (2022) 2165



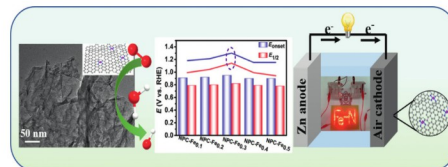
## Self-sacrificial template synthesis of Fe, N co-doped porous carbon as efficient oxygen reduction electrocatalysts towards Zn-air battery application

Tianfang Yang, Ye Chen, Yang Liu, Xupo Liu, Shuyan Gao

School of Materials Science and Engineering, Henan Normal University, Xinxiang 453007, China

The Fe, N co-doped porous carbon catalysts are constructed through adopting the g-C<sub>3</sub>N<sub>4</sub> as self-sacrificial templates and N sources, which deliver superior half-wave potential for ORR process and excellent performances in Zn-air batteries.

Chinese Chemical Letters 33 (2022) 2171



## Dynamic swelling performance of hydrophobic hydrogels

Hui Guo<sup>a</sup>, Junxian Chen<sup>a</sup>, Ziang Wang<sup>a</sup>, Hong Lei Guo<sup>a</sup>, Wei Hong<sup>b</sup>, Xiaolin Wang<sup>c</sup>

<sup>a</sup>School of Chemical Engineering and Technology, Sun Yat-sen University, Zhuhai 519082, China

<sup>b</sup>Department of Mechanics and Aerospace Engineering, Southern University of Science and Technology, Shenzhen 518055, China

<sup>c</sup>School of Pharmacy and State Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology, Macao, China

Unlike conventional gels, hydrophobic hydrogels demonstrate dynamic swelling performance without equilibrium states. Herein, systematical investigations on hydrophobic hydrogels' swelling kinetics have been performed. Owing to this feature, hydrophobic hydrogel-based soft devices have been envisaged with time-programmable shape-shifting performance.

Chinese Chemical Letters 33 (2022) 2178



## Efficient electrochemical reduction of CO to C<sub>2</sub> products on the transition metal and boron co-doped black phosphorene

Lingyi Kong<sup>a</sup>, Zhe Chen<sup>b</sup>, Qinghai Cai<sup>a,c</sup>, Lichang Yin<sup>d,e</sup>, Jingxiang Zhao<sup>a</sup>

<sup>a</sup>College of Chemistry and Chemical Engineering, and Key Laboratory of Photonic and Electronic Bandgap Materials, Ministry of Education, Harbin Normal University, Harbin 150025, China

<sup>b</sup>Center of Artificial Photosynthesis for Solar Fuels, School of Science, Westlake University, Hangzhou 310024, China

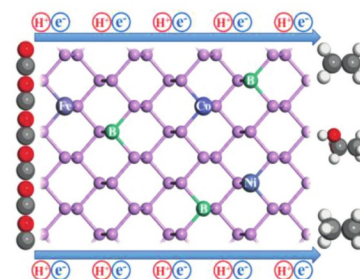
<sup>c</sup>Heilongjiang Province Collaborative Innovation Center of Cold Region Ecological Safety, Harbin 150025, China

<sup>d</sup>Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, Shenyang 110016, China

<sup>e</sup>Department of Physics and Electronic Information, Huaibei Normal University, Huaibei 235000, China

As-designed three synergistic coupling electrocatalysts based on 2D black phosphorene for reducing CO to high value-added multi-carbon products.

Chinese Chemical Letters 33 (2022) 2183



## Defect engineering for high-selection-performance of N<sub>2</sub> activation over CeO<sub>2</sub>(111) surface

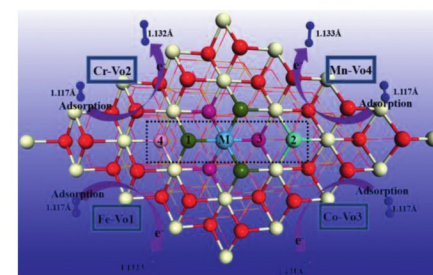
Fang Yuan<sup>a</sup>, Risheng Sun<sup>b</sup>, Ling Fu<sup>b</sup>, Guozheng Zhao<sup>a</sup>

<sup>a</sup>Key Laboratory of Magnetic Molecules and Magnetic Information Materials Ministry of Education, The School of Chemistry and Material Science, Shanxi Normal University, Linfen 041004, China

<sup>b</sup>Institute of Environment and Energy Catalysis, Shaanxi Key Laboratory of Optoelectronic Functional Materials and Devices, School of Materials Science and Chemical Engineering, Xi'an Technological University, Xi'an 710021, China

Cr-doped, Mn-doped, Fe-doped, and Co-doped CeO<sub>2</sub>(111) adsorb N<sub>2</sub> strongly than the stoichiometric surface and other M-doped (M = Ca, Ti, V, Ni, Cu, and Zn) CeO<sub>2</sub> surfaces with adsorption energies of −0.82, −1.02, −0.83 and −1.05 eV.

Chinese Chemical Letters 33 (2022) 2188



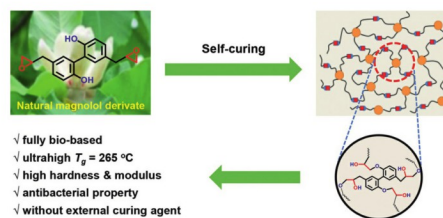
## Achieving higher performances without an external curing agent in natural magnolol-based epoxy resin

Qi Cao, Zhihuan Weng, Yu Qi, Jiahui Li, Wentao Liu, Chengde Liu, Shouhai Zhang, Zhiyong Wei, Yousi Chen, Xigao Jian

State Key Laboratory of Fine Chemicals, Liaoning High Performance Resin Engineering Research Center, Department of Polymer Science & Engineering, Dalian University of Technology, Dalian 116024, China

The fully bio-based epoxy thermoset (MGOL-EP-SC) was obtained by self-curing without adding any other hardener. MGOL-EP-SC revealed an extremely high glass-transition temperature ( $T_g$ ) of 265 °C and char yield of 53.2% (in N<sub>2</sub>), which were at the highest level among the fully bio-based epoxy thermosets reported so far.

Chinese Chemical Letters 33 (2022) 2195





## Bismuth chloride@mesocellular carbon foam nanocomposite cathode materials for rechargeable chloride ion batteries

Chang Zhang<sup>a</sup>, Shijiao Sun<sup>a</sup>, Meifen Wu<sup>b</sup>, Xiangyu Zhao<sup>a,c</sup>

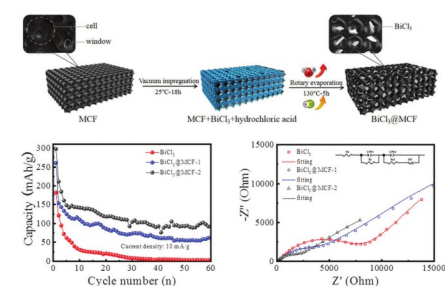
<sup>a</sup> College of Materials Science and Engineering, Nanjing Tech University, Nanjing 211816, China

<sup>b</sup> CAS Key Laboratory of Materials for Energy Conversion, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai 200050, China

<sup>c</sup> Jiangsu Collaborative Innovation Center for Advanced Inorganic Functional Composites, Nanjing Tech University, Nanjing 211816, China

The bismuth chloride nanocrystal is confined in mesocellular carbon foam matrix by a new vacuum impregnation approach for chloride ion batteries. A reversible capacity of 91 mAh/g after 60 cycles was achieved for the bismuth chloride@mesocellular carbon foam cathode.

Chinese Chemical Letters 33 (2022) 2200



## A green MXene-based organohydrogel with tunable mechanics and freezing tolerance for wearable strain sensors

Shuo Liu<sup>a</sup>, Xinyu Tian<sup>a</sup>, Xiansheng Zhang<sup>a,b,c</sup>, Chongzhi Xu<sup>a</sup>, Lili Wang<sup>a</sup>, Yanzhi Xia<sup>a</sup>

<sup>a</sup> State Key Laboratory of Bio-Fibers and Eco-Textiles, College of Textiles and Clothing, Collaborative Innovation Center for Marine Biomass Fibers, Materials and Textiles of Shandong Province, Institute of Marine Biobased Materials, Qingdao University, Qingdao 266071, China

<sup>b</sup> Key Laboratory of Clean Dyeing and Finishing Technology of Zhejiang Province, Shaoxing University, Shaoxing 312000, China

<sup>c</sup> Research Center for Intelligent and Wearable Technology, Intelligent Wearable Engineering Research Center of Qingdao, Qingdao University, Qingdao 266071, China

A green polyethylene glycol (PEG) is *in situ* incorporated into flexible hydrogel, which effectively regulates the aggregation of the polymer chains in hydrogels and simultaneously generates the hydrogen bonding interaction with water molecules, achieving the tunability of mechanical properties and anti-freezing properties.

Chinese Chemical Letters 33 (2022) 2205



## Corrigendum

### Corrigendum to “One-pot tandem route to fused indolizidines and quinolizidines: Application in the synthesis of alkaloids and bioactive compounds” [Chinese Chemical Letters 32 (2021) 1713–1716]

Qiao Song<sup>a</sup>, Yan Liu<sup>b</sup>, Linlin Cai<sup>b</sup>, Xinyu Cao<sup>b</sup>, Shan Qian<sup>a</sup>, Zhouyu Wang<sup>b</sup>

<sup>a</sup> Department of Pharmaceutics Engineering, Xihua University, Chengdu 610039, China

<sup>b</sup> Department of Chemistry, Xihua University, Chengdu 610039, China

Chinese Chemical Letters 33 (2022) 2212

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