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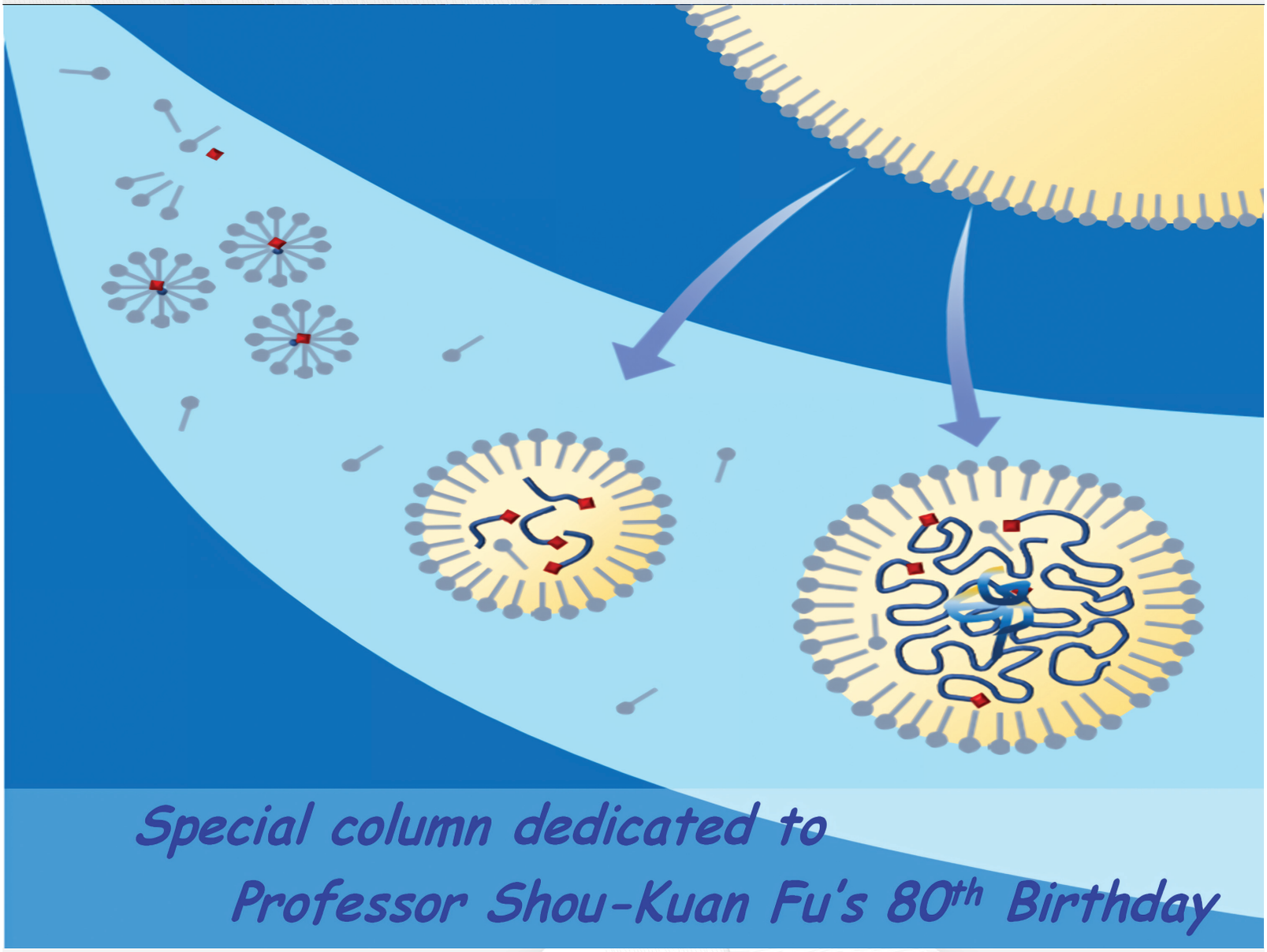

Special column dedicated to Professor Shou-Kuan Fu's 80th Birthday

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Special Column: Shou-Kuan Fu's 80th Birthday

Editorial

A Roadway of Exploring Polymer Science, a Lifetime of Nurturing Polymer Scientists

Chinese Chemical Letters 30 (2019) 1995

Changchun Wang[a], Yonghui Deng[b]

[a] *Department of Macromolecular Science, Fudan University, State Key Laboratory of Molecular Engineering of Polymers, Fudan University, Shanghai 200433, China*
[b] *Department of Chemistry, Fudan University, State Key Laboratory of Molecular Engineering of Polymers, Fudan University, Shanghai 200433, China*

Review

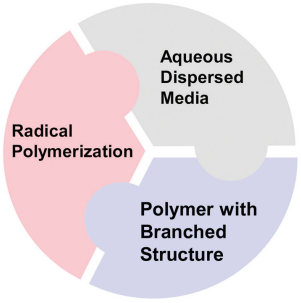
A personal journey on using polymerization in aqueous dispersed media to synthesize polymers with branched structures

Chinese Chemical Letters 30 (2019) 1996

Haifeng Gao

Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame 46556, United States

Several projects were discussed to demonstrate the intriguing power of radical polymerization in aqueous dispersed media to regulate the branched structures in functional polymeric nanomaterials.



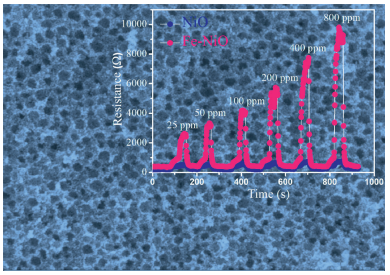
Communications

Amphiphilic block copolymers directed synthesis of mesoporous nickel-based oxides with bimodal mesopores and nanocrystal-assembled walls

Chinese Chemical Letters 30 (2019) 2003

Yuan Ren[a], Xuanyu Yang[a], Xinran Zhou[a], Wei Luo[b], Yi Zhang[c], Xiaowei Cheng[a], Yonghui Deng[a]

[a] *Department of Chemistry, State Key Laboratory of Molecular Engineering of Polymers, Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, iChEM, Fudan University, Shanghai 200433, China*
[b] *State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, College of Materials Science and Engineering, Donghua University, Shanghai 201620, China*
[c] *School of Materials Science and Energy Engineering, Foshan University, Foshan 528000, China*



Ordered mesoporous Fe-doped NiO with dual mesopores, high surface area and well-interconnected crystalline porous frameworks have been synthesized *via* solvent evaporation-induced co-assembly (EICA) method, by using PS-*b*-P4VP as structure-directing agent, $Ni(acac)_2$ and $Fe(acac)_3$ as binary inorganic precursor, and showed superior ethanol sensing performances with good sensitivity, high selectivity and fast response-recovery dynamics.

doi:10.1016/S1001-8417(19)30695-3

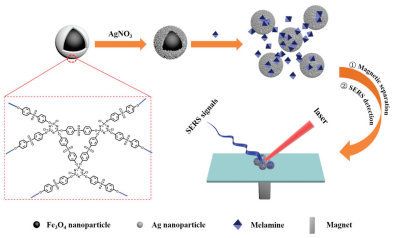
Chinese Chemical Letters 30 (2019) 2009

Synthesis of magnetic polyphosphazene-Ag composite particles as surface enhanced Raman spectroscopy substrates for the detection of melamine

Ci Huang[1], Feifei Lu[1], Ke Xu, Guanjun Ding, Lijun You, Jiabin Wang, Qiqing Zhang

Institute of Biomedical and Pharmaceutical Technology, College of Chemistry, Fuzhou University, Fuzhou 350002, China

Preparation process of the MPZS-Ag composite particles based on polyphosphazene and application for the detection of melamine as a novel SERS substrate.



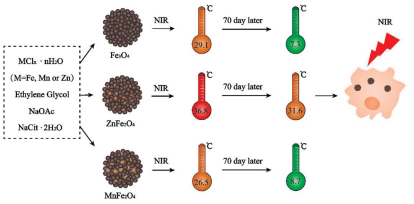
Chinese Chemical Letters 30 (2019) 2013

Photothermal performance of MFe_2O_4 nanoparticles

Kuang Wang, Peng Yang, Ranran Guo, Xianxian Yao, Wuli Yang

State Key Laboratory of Molecular Engineering of Polymer and Department of Macromolecular Science, Fudan University, Shanghai 200433, China

In this paper, we synthesized three kinds of ferrites and investigated their photothermal property. The result indicated that the photothermal effect of Fe_3O_4 and $MnFe_2O_4$ nanoparticles declined while that of $ZnFe_2O_4$ nanoparticles maintained relatively stable after preservation for 70 days, and then $ZnFe_2O_4$ nanoparticles could effectively kill cancer cells under NIR laser.



Chinese Chemical Letters 30 (2019) 2017

Enhanced electrochemical performance and mechanism study of $AgLi_{1/3}Sn_{2/3}O_2$ for lithium storage

Fan Lu[a,b], Jie Yang[a], Ling Zhou[a], Xinyue Wang[a], Yin Yang[b], Jumei Li[a]

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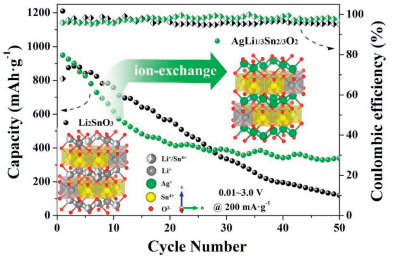
$AgLi_{1/3}Sn_{2/3}O_2$ with delafossite structure is prepared by treating Li_2SnO_3 with molten $AgNO_3$ and it exhibits improved electrochemical performance compared to Li_2SnO_3.



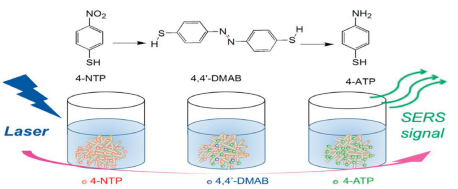
Chinese Chemical Letters 30 (2019) 2021

Silver nanoparticles embedded temperature-sensitive nanofibrous membrane as a smart free-standing SERS substrate

Xiaoyun Liu[a], Liying Wang[b], Siyuan Chen[b], Liusheng Zha[b]

[a] *Research Center for Analysis and Measurement, Donghua University, Shanghai 201620, China*
[b] *State Key Laboratory for Modification of Chemical Fibers and Polymer Materials & College of Materials Science and Engineering, Donghua University, Shanghai 201620, China*

Silver nanoparticles (AgNPs) embedded temperature-sensitive nanofibrous membrane as SERS substrate is capable of real-time monitoring the reduction of 4-nitrothiophenol into 4-aminothiophenol catalyzed by its embedded AgNPs, and the detected intermediate indicates that the reaction proceeds *via* a condensation route.



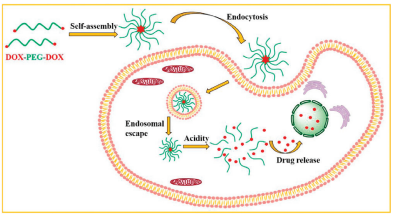
Facile preparation of pH-responsive PEGylated prodrugs for activated intracellular drug delivery

Chinese Chemical Letters 30 (2019) 2027

Yue Song, Dian Li, Jinlin He, Mingzu Zhang, Peihong Ni

College of Chemistry, Chemical Engineering and Materials Science, State and Local Joint Engineering Laboratory for Novel Functional Polymeric Materials, Jiangsu Key Laboratory of Advanced Functional Polymer Design and Application, Suzhou Key Laboratory of Macromolecular Design and Precision Synthesis, Soochow University, Suzhou 215123, China

The acid-cleavable amphiphilic prodrug DOX-PEG-DOX self-assemble to form nanoparticles and enter the cell by endocytosis for the pH-triggered intracellular delivery of DOX.



Facile synthesis of mesoporous WO_3@graphene aerogel nanocomposites for low-temperature acetone sensing

Chinese Chemical Letters 30 (2019) 2032

Tao Zhao[a], Yuan Ren[b], Guangyou Jia[a], Yuye Zhao[a], Yuchi Fan[c], Jianping Yang[a], Xin Zhang[a], Wan Jiang[a,c,d], Lianjun Wang[a], Wei Luo[a,c]

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[b] *Department of Chemistry, State Key Laboratory of Molecular Engineering of Polymers, iChEM, Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, Fudan University, Shanghai 200433, China*
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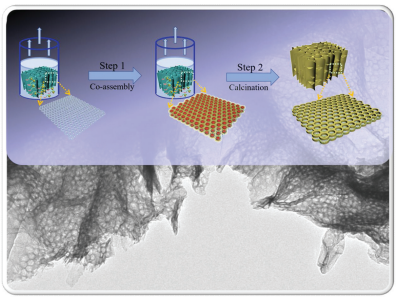
[d] *School of Materials Science and Engineering, Jingdezhen Ceramic Institute, Jingdezhen 333001, China*

Ordered mesoporous tungsten oxide@graphene aerogel (mWO3@GA) nanocomposites were synthesized via an interface-induced co-assembly process, which show a high selectivity and great response to acetone at low temperature.



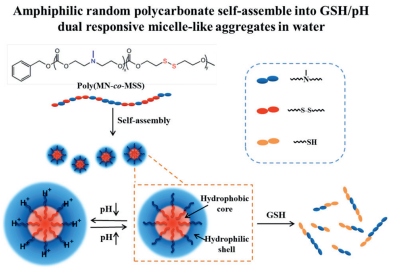
Amphiphilic random polycarbonate self-assemble into GSH/pH dual responsive micelle-like aggregates in water

Chinese Chemical Letters 30 (2019) 2039

Jieni Hu[a], Yue Xu[a], Yan Zhang[a,b]

[a] *Shanghai Key Laboratory of Advanced Polymeric Materials, Key Laboratory for Ultrafine Materials of Ministry of Education, School of Materials Science and Engineering, East China University of Science and Technology, Shanghai 200237, China*
[b] *Key Laboratory of Smart Drug Delivery (Fudan University), Ministry of Education, Shanghai 201203, China*

We synthesized the GSH/pH responsive amphiphilic random polycarbonate poly(MN-*co*-MSS) with the disulfide and tertiary amine groups situated on the backbone. The poly(MN-*co*-MSS) was therefore a promising candidate for GSH/pH-sensitive drug carriers.



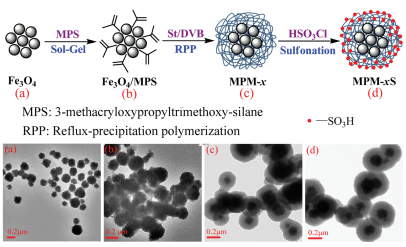
Highly stable, active and recyclable solid acid catalyst based on polymer-coated magnetic composite particles

Chinese Chemical Letters 30 (2019) 2043

Jianxin Luo[a,b], Xucheng Zhang[b], Chunyan Zhang[a], Tao Wang[c], Xue Chen[d], Hongyu Chen[c], Steve King[d], Changchun Wang[b]

[a] *Department of Materials and Chemical Engineering, Hunan Institute of Technology, Hengyang 421002, China*
[b] *State Key Laboratory of Molecular Engineering of Polymers, and Department of Macromolecular Science, Fudan University, Shanghai 200433, China*
[c] *Dow Chemical China Holding Company, Shanghai 201203, China*
[d] *Dow Chemical Company, Lake Jackson 77566, United States*

Sulfonic acid-functionalized polymer-coated magnetic composite particles were prepared and applied as highly stable, active and recyclable magnetic solid acid catalyst for biodiesel preparation and biomass transformation.



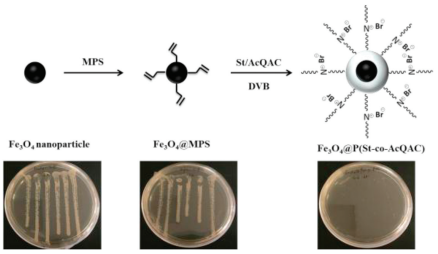
Recyclable, non-leaching antimicrobial magnetic nanoparticles

Chinese Chemical Letters 30 (2019) 2047

Wei Ye[a,b], Lingren Wang[a,b], Jie Zhao[a,c], Quentin Q. Fang[d], Weihua Ming[a]

[a] Department of Chemistry and Biochemistry, Georgia Southern University, Statesboro, GA 30460, United States
[b] Department of Mechanical and Materials Engineering, Huaiyin Institute of Technology, Huaian 223001, China
[c] Key Laboratory of Bionic Engineering, Ministry of Education, Jilin University, Changchun 130022, China
[d] Department of Biology, Georgia Southern University, Statesboro, GA 30460, United States

Recyclable antimicrobial magnetic nanoparticles, Fe_3O_4@P(St-*co*-AcQAC), were prepared through surfactant-free seeded emulsion polymerization involving a polymerizable, hydrophobic quaternary ammonium compound (QAC). These antimicrobial magnetic nanoparticles demonstrated excellent antimicrobial activities against both Grampositive and Gram-negative bacteria, and can be reused for multiple times.



Highlight

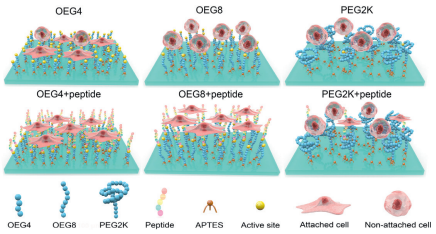
Deciphering the impact of PEG antifouling layer on surface attached functional peptides in regulating cell behaviors

Chinese Chemical Letters 30 (2019) 2051

Fu-Jian Xu

Key Lab of Biomedical Materials of Natural Macromolecules, Beijing University of Chemical Technology, Ministry of Education. State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing Laboratory of Biomedical Materials, Beijing Advanced Innovation Center for Soft Matter Science and Engineering, Beijing University of Chemical Technology, Beijing 100029, China

In the 'noise' environment of culture medium, a medium length PEG antifouling layer (the OEG8 layer) can effectively resist the non-specific cell adhesion and present the optimal and genuine function of peptides in controlling cell behaviors.



Pespectives

2020 roadmap on two-dimensional materials for energy storage and conversion

Chinese Chemical Letters 30 (2019) 2053

Baolin Xu[a], Shihan Qi[a], Mengmeng Jin[b], Xiaoyi Cai[c], Linfei Lai[b,c], Zhouting Sun[d], Xiaogang Han[d], Zifeng Lin[e], Hui Shao[f,g], Peng Peng[h], Zhonghua Xiang[h], Johan E. ten Elshof[i], Rou Tan[j], Chen Liu[j], Zhaoxi Zhang[j], Xiaochuan Duan[j], Jianmin Ma[a,k]

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[g] Réseau sur le Stockage Electrochimique de l'Energie (RS2E), CNRS 3459, Amiens, France
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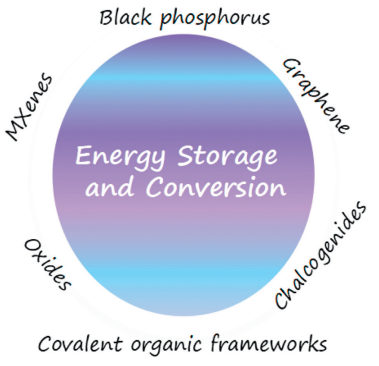
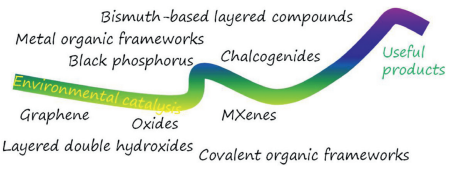
In this roadmap, two-dimensional materials including graphene, black phosporus, MXenes, covalent organic frameworks, oxides, chalcogenides, and others, are highlighted in energy storage and conversion.



2020 Roadmap on two-dimensional nanomaterials for environmental catalysis

Chinese Chemical Letters 30 (2019) 2065



Yulu Yang[a], Mingguang Wua, Xingwang Zhu[b], Hui Xu[b], Si Ma[c], Yongfeng Zhi[c], Hong Xia[d], Xiaoming Liu[c], Jun Pan[e], Jie-Yinn Tang[f], Siang-Piao Chai[f], Leonardo Palmisano[g], Francesco Parrino[h], Junli Liu[i], Jianzhong Ma[j], Ze-Lin Wang[k], Ling Tan[k], Yu-Fei Zhao[k], Yu-Fei Song[k], Pardeep Singh[l,m], Pankaj Raizada[l,m], Deli Jiang[n], Di Li[o], R.A. Geioushy[p], Jizhen Ma[q], Jintao Zhang[q], Song Hu[r], Rongjuan Feng[s], Gang Liu[t], Minghua Liu[r,s], Zhenhua Li[k], Mingfei Shao[k], Neng Li[u], Jiahe Peng[u], Wee-Jun Ong[v,w], Nikolay Kornienko[x], Zhenyu Xing[y], Xiujun Fan[z], Jianmin Ma[a,aa]

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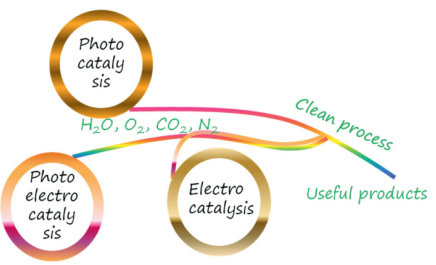
This roadmap demonstrates a series of two-dimensional nanomaterials, such as graphene, black phosphorus, oxides, layered double hydroxides, chalcogenides, bismuth-based layered compounds, MXenes, metal organic frameworks, covalent organic frameworks, and others, for environmental catalysis.

2020 Roadmap on gas-involved photo- and electro- catalysis

Chinese Chemical Letters 30 (2019) 2089



Yulu Yang[a], Yang Tang[b], Haomin Jiang[b], Yongmei Chen[b], Pingyu Wan[b], Maohong Fan[c,d], Rongrong Zhang[e,f], Sana Ullah[e,f], Lun Pan[e,f], Ji-Jun Zou[e,f], Mengmeng Lao[g], Wenping Sun[g], Chao Yang[h], Gengfeng Zheng[h], Qiling Peng[i], Ting Wang[i,j], Yonglan Luo[j], Xuping Sun[i], Alexander S. Konev[k], Oleg V. Levin[k], Panagiotis Lianos[l], Zhuofeng Hu[m], Zhurui Shen[n], Qinglan Zhao[o], Ying Wang[o], Nadia Todorova[p], Christos Trapalis[p], Matthew V. Sheridan[q], Haipeng Wang[r,s], Ling Zhang[r,s], Songmei Sun[r,s], Wenzhong Wang[r,s], Jianmin Ma[a,t]

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In this roadmap, we address the development and perspectives of hydrogen evolution reaction, oxygen reduction reaction, oxygen evolution reaction, carbon dioxide reduction reaction and nitrogen reduction.

2020 roadmap on pore materials for energy and environmental applications

Chinese Chemical Letters 30 (2019) 2110

Zengxi Wei[a,1], Bing Ding[b,1], Hui Dou[b], Jorge Gascon[c], Xiang-Jian Kong[d], Yujie Xiong[e], Bin Cai[f], Ruiyang Zhang[g,h], Ying Zhou[g,h], Mingce Long[i], Jie Miao[i], Yuhai Dou[j], Ding Yuan[j], Jianmin Ma[a,k]

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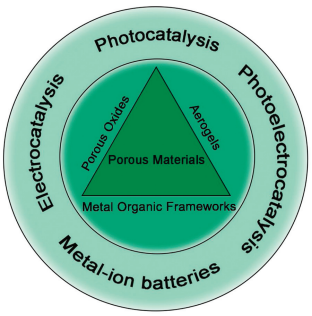
[i] School of Environmental Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, China
[j] Centre for Clean Environment and Energy, Gold Coast Campus, Griffith University, Gold Coast 4222, Australia
[k] Key Laboratory of Materials Processing and Mold (Zhengzhou University), Ministry of Education, Zhengzhou University, Zhengzhou 450002, China



Porous materials have attracted great attention in energy and environment applications. In this roadmap, several porous materials are discussed for energy storage and conversion. It will help the researchers to obtain them guidance from it in future.

Reviews

The adsorption of acidic gaseous pollutants on metal and nonmetallic surface studied by first-principles calculation: A review

Chinese Chemical Letters 30 (2019) 2123

Xue Ye[a], Shenggui Ma[a,b], Xia Jiang[a,b], Zhishan Yang[a,b], Wenju Jiang[a,b], Hualin Wang[b]

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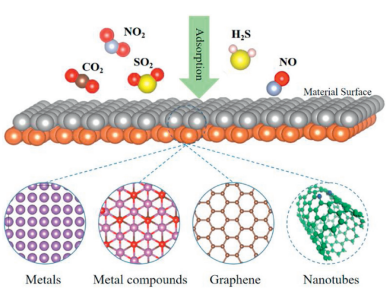
Recent advances of SO_2, NO_x, H_2S and CO_2 adsorption on metal and nonmetallic surfaces by first-principles calculation are reviewed, and the common adsorption properties and calculation methods are summarized.



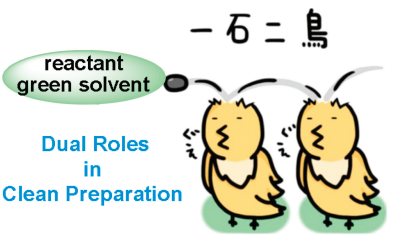
The concept of dual roles design in clean organic preparation

Chinese Chemical Letters 30 (2019) 2132

Zhong Cao[a], Qin Zhu[a,c], Ying-Wu Lin[b], Wei-Min He[a]

[a] Hunan Provincial Key Laboratory of Materials Protection for Electric Power and Transportation, Changsha University of Science and Technology, Changsha 410114, China
[b] School of Chemistry and Chemical Engineering, University of South China, Hengyang 421001, China
[c] Department of Chemistry, Hunan University of Science and Technology, Xiangtan 411201, China

Herein we summarized some clean preparation examples to emphasize the concept of dual roles design (or named as "two birds one stone strategy") in green and sustainable chemistry. In these procedures, the chemical waste and production costs were reduced, and the energy efficiencies were improved.



Communications

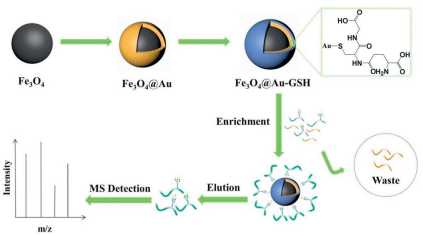
Facile preparation of hydrophilic glutathione modified magnetic nanomaterials for specific enrichment of glycopeptides

Chinese Chemical Letters 30 (2019) 2181

He Qi[a], Zheng Li[a], Haijiao Zheng[a], Li Fu[b], Qiong Jia[a,c]

[a] College of Chemistry, Jilin University, Changchun 130012, China
[b] The Second Hospital of Jilin University, Changchun 130041, China
[c] Key Laboratory for Molecular Enzymology and Engineering of Ministry of Education, School of Life Sciences, Jilin University, Changchun 130012, China

Glutathione modified magnetic nanoparticles (Fe_3O_4@Au-GSH) were synthesized through a simple process and exploited to enrich glycopeptides from complex samples.



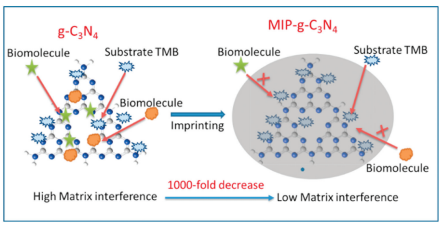
Surface molecular imprinting on g-C_3N_4 photooxidative nanozyme for improved colorimetric biosensing

Chinese Chemical Letters 30 (2019) 2186

Yuanheng Wu[a], Qiang Chen[b], Shuang Liu[a], Hua Xiao[a], Menglin Zhang[a], Xinfeng Zhang[a,b]

[a] College of Materials and Chemistry & Chemical Engineering, Chengdu University of Technology, Chengdu 610059, China
[b] College of Environment and Ecology, Chengdu University of Technology, Chengdu 610059, China

Molecular imprinting on g-C_3N_4 leads to an over 1000-fold alleviation in matrix-interference from serum samples.



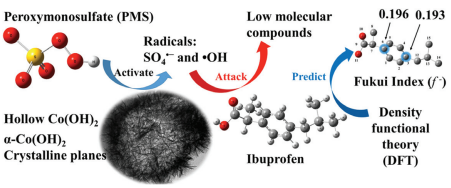
Efficient activation of peroxymonosulfate by hollow cobalt hydroxide for degradation of ibuprofen and theoretical study

Chinese Chemical Letters 30 (2019) 2191

Mingfeng Ma[a,b], Long Chen[c], Jingzhu Zhao[a,b], Wen Liu[c,d,e], Haodong Ji[c,d]

[a] State Key Laboratory of Urban and Regional Ecology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China
[b] University of Chinese Academy of Sciences, Beijing 100049, China
[c] The Key Laboratory of Water and Sediment Science, Ministry of Education, College of Environmental Sciences and Engineering, Peking University, Beijing 100871, China
[d] The Beijing Innovation Center for Engineering Science and Advanced Technology (BIC-ESAT), Peking University, Beijing 100871, China
[e] Beijing Engineering Research Center for Advanced Wastewater Treatment, Peking University, Beijing 100871, China

Hollow structure cobalt hydroxide (h-$Co(OH)_2$) was synthesized *via* a solvothermal-hydrothermal method and presented high activation activity for peroxymonosulfate to degrade ibuprofen.



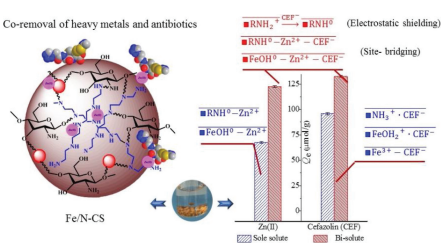
Synergistic co-removal of zinc(II) and cefazolin by a Fe/amine-modified chitosan composite

Chinese Chemical Letters 30 (2019) 2196

Chen Ling[a], Yixuan Zhao[a], Zixi Ren[a], Jiangang Han[a], Changqing Zhu[b], Fu-Qiang Liu[b]

[a] College of Biology and the Environment, Nanjing Forestry University, Nanjing 210037, China
[b] State Key Laboratory of Pollution Control and Resource Reuse, School of the Environment, Nanjing University, Nanjing 210023, China

A novel Fe/amine modified chitosan composite (Fe/N-CS) was facilely synthesized and showed great potential in the efficient co-removal of heavy metal ions and antibiotics from wastewater.

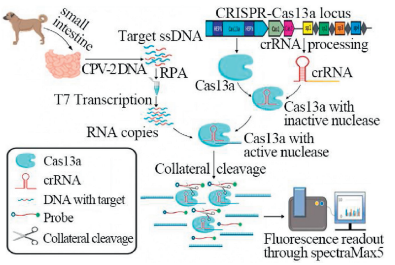


CRISPR-Cas13a mediated nanosystem for attomolar detection of canine parvovirus type 2

Chinese Chemical Letters 30 (2019) 2201

Haroon Khan[a,1], Adeel Khan[a,1], Yufeng Liu[b,c], Su Wang[b,c], Sumaira Bibi[d], Hongpan Xu[b], Yuan Liu[a], Samran Durrani[e], Lian Jin[f], Nongyue He[a,f,g], Tao Xiong[c]

[a] *State Key Laboratory of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, China*
[b] *Department of Clinical Laboratory, The Affiliated Drum Tower Hospital of Nanjing University Medical School, Nanjing 210008, China*
[c] *College of Life Science, Yangtze University, Jingzhou 434025, China*
[d] *Bio Resources Conservation Institute, National Agriculture Research Centre, Islamabad 350000, Pakistan*
[e] *Laboratory of Biointerface & Biomaterials, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, China*
[f] *Hunan Key Laboratory of Biomedical Nanomaterials and Devices, Hunan University of Technology, Zhuzhou 412007, China*
[g] *National Center for International Bio-targeting Theranostics, Guangxi Key Laboratory of Bio-targeting Theranostics, Collaborative Innovation Center for Targeting Tumor Theranostics, Guangxi Medical University, Nanning 530021, China*



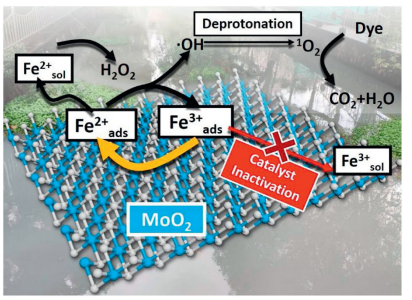
The CPV-2 DNA extracted from dog's intestine was amplified using RPA and transcribed into an RNA copy. The RNA copy was incubated with Cas13a and crRNA, upon activation collateral cleavage activity of Cas13a cleaves all the target RNA and nonspecific RNA in the vicinity producing fluorescent signals within 30 min.

Efficient Fe(III)/Fe(II) cycling triggered by MoO_2 in Fenton reaction for the degradation of dye molecules and the reduction of Cr(VI)

Chinese Chemical Letters 30 (2019) 2205

Bin Shen[1], Chencheng Dong[1], Jiahui Ji, Mingyang Xing, Jinlong Zhang

Key Laboratory for Advanced Materials and Joint International Research Laboratory of Precision Chemistry and Molecular Engineering, Feringa Nobel Prize Scientist Joint Research Center, School of Chemistry and Molecular Engineering, East China University of Science and Technology, Shanghai 200237, China



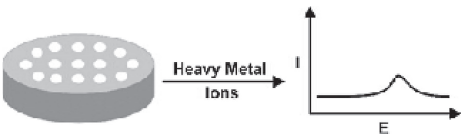
In this work, we develop an inorganic cocatalyst of commercial MoO_2 application in Fenton reaction, which can significantly enhance the Fe(III)/Fe(II) cycling efficiency to improve the oxidation activity for the remediation of Lissamine rhodamine B (L-RhB).

Electrochemical sensor for Cd^{2+} and Pb^{2+} detection based on nano-porous *pseudo* carbon paste electrode

Chinese Chemical Letters 30 (2019) 2211

Yuan Liu[a,b], Taotao Li[c], Chuxuan Ling[d], Zhu Chen[a,b], Yan Deng[a,b], Nongyue He[a,b]

[a] *State Key Laboratory of Bioelectronics, Southeast University, Nanjing 210096, China*
[b] *Hunan Key Laboratory of Biomedical Nanomaterials and Devices, Hunan University of Technology, Zhuzhou 412007, China*
[c] *Hunan Provincial Key Lab of Dark Tea and Jin-Hua, School of Materials and Chemical Engineering, Hunan City University, Yiyang 413000, China*
[d] *School of Chemistry and Chemical Engineering, Southeast University, Nanjing 211189, China*



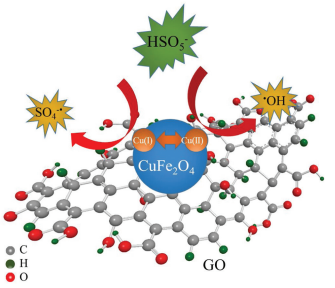
An electrochemical sensor based on self-made nano-porous *pseudo* carbon paste electrode (nano-PPCPE) has been successfully developed, and used to detect Cd^{2+} and Pb^{2+}. The results showed that the electrodes can quantitatively detect trace Cd^{2+} and Pb^{2+}, and with satisfied limit of detection, which has great significance in electrochemical analysis and detection.

$CuFe_2O_4$@GO nanocomposite as an effective and recoverable catalyst of peroxymonosulfate activation for degradation of aqueous dye pollutants

Chinese Chemical Letters 30 (2019) 2216

Xiaoman Lei[a], Menghan You[a], Fei Pan[a], Min Liu[a], Peng Yang[a], Dongsheng Xia[a], Qiang Li[a], Yanting Wang[b], Jie Fu[a,b]

[a] *School of Environmental Engineering, Wuhan Textile University, Engineering Research Centre for Clean Production of Textile Dyeing and Printing, Ministry of Education, Wuhan 430073, China*
[b] *Department of Environmental Science & Engineering, Fudan University, Shanghai 200438, China*



An effective and recoverable $CuFe_2O_4$@GO catalyst for PMS activation was synthesized and the underlying catalytic mechanism was revealed in this study.

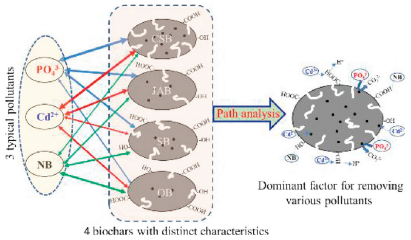
Elucidating dominant factors of PO4 $^{3-}$, Cd^{2+} and nitrobenzene removal by biochar: A comparative investigation based on distinguishable biochars

Chinese Chemical Letters 30 (2019) 2221

Zhanglin Liu[a,b], Dong Tian[a], Fei Shen[a], Lulu Long[a,b], Yanzong Zhang[b], Gang Yang[a,b], Yongmei Zeng[a,b], Jing Zhang[a,b], Jinsong He[a,b], Ying Zhu[a,b], Shihuai Deng[a,b]

[a] *Institute of Ecological and Environmental Sciences, Sichuan Agricultural University, Chengdu 611130, China*
[b] *Rural Environment Protection Engineering & Technology Center of Sichuan Province, Sichuan Agricultural University, Chengdu 611130, China*

Four distinct biochars were employed to remove three typical pollutants, meanwhile, path analysis, a multi-statistical regression method, was performed to elucidate the dominant factors of biochar adsorption. This work can provide a new insight to prepare a targeted biochar as adsorbents.



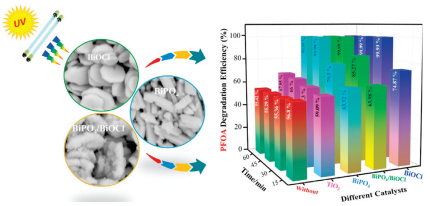
A comparative study of bismuth-based photocatalysts with titanium dioxide for perfluorooctanoic acid degradation

Chinese Chemical Letters 30 (2019) 2225

Aziz-Ur-Rahim Bacha[a,b], Iqra Nabi[a], Zhaoyang Fu[c], Kejian Li[a], Hanyun Cheng[a], Liwu Zhang[a,b]

[a] *Shanghai Key Laboratory of Atmospheric Particle Pollution and Prevention, Department of Environmental Science & Engineering, Fudan University, Shanghai 200433, China*
[b] *Shanghai Institute of Pollution Control and Ecological Security, Shanghai 200092, China*
[c] *Fudan International School (FDIS), Shanghai 200433, China*

The fabricated bismuth-based photocatalysts presented an outstanding performance as compared to commercial TiO_2 (P25) for PFOA degradation under 254 nm UV light irradiation.



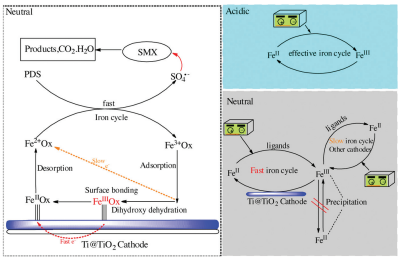
Efficient decomposition of sulfamethoxazole in a novel neutral Fered-Fenton like/oxalate system based on effective heterogeneous-homogeneous iron cycle

Chinese Chemical Letters 30 (2019) 2231

Chen Wang[a,b,1], Yubei Liu[a,1], Tao Zhou[a], Mingjie Huang[a], Juan Mao[a,b], Xiaohui Wu[a,b]

[a] *School of Environmental Science and Engineering, Huazhong University of Science and Technology, Wuhan 430074, China*
[b] *Key Laboratory of Water and Wastewater Treatment (HUST), MOHURD, Wuhan 430074, China*

Based on effective heterogeneous-homogeneous iron cycle, efficient SMX degradation was achieved in a novel neutral Fered-Fenton like system adopting Ti@TiO_2 cathode.



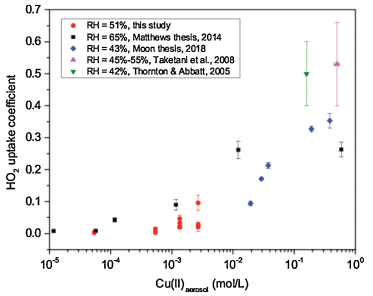
Measurements of HO_2 uptake coefficient on aqueous $(NH_4)_2SO_4$ aerosol using aerosol flow tube with LIF system

Chinese Chemical Letters 30 (2019) 2236

Qi Zou[a], Huan Song[a], Mingjin Tang[b], Keding Lu[a]

[a] *College of Environmental Sciences and Engineering, Peking University, Beijing 100871, China*
[b] *State Key Laboratory of Geochemistry and Guangdong Key Laboratory of Environmental Protection and Resources Utilization, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou 510640, China*

The $\gamma(HO_2)$ was elevated with increase of Cu(II) concentrations in aqueous $(NH_4)_2SO_4$ aerosol. The threshold of Cu(II) concentration was 10^{-3} mol/L for the dramatic increase of $\gamma(HO_2)$ to 0.1, suggesting sensitive $\gamma(HO_2)$ value to concentration of transition metal ions in aerosol.



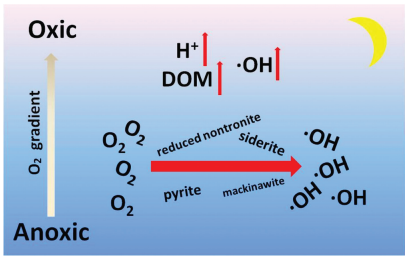
Hydroxyl radical formation upon dark oxidation of reduced iron minerals: Effects of iron species and environmental factors

Chinese Chemical Letters 30 (2019) 2241

Ailing Zhu[a,b], Yingying Guo[b,c], Guangliang Liu[a,d], Maoyong Song[b,c], Yong Liang[a], Yong Cai[b,c,d], Yongguang Yin[a,b,c]

[a] Institute of Environment and Health, Jianghan University, Wuhan 430056, China
[b] State Key Laboratory of Environmental Chemistry and Ecotoxicology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China
[c] Laboratory of Environmental Nanotechnology and Health Effect, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China
[d] Department of Chemistry and Biochemistry, Florida International University, Miami, FL 33199, United States

Dark oxidation of reduced iron minerals can produce hydroxyl radical under ambient conditions.



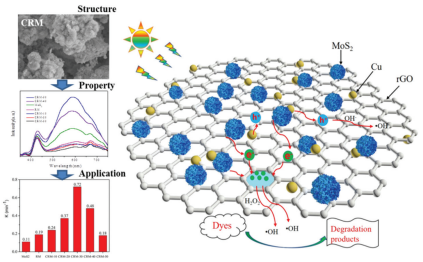
Fabrication of Cu/rGO/MoS_2 nanohybrid with energetic visible-light response for degradation of rhodamine B

Chinese Chemical Letters 30 (2019) 2245

Huanjing Liang[a,b,1], Peng Hua[a,1], Yufei Zhou[b], Zhimin Fu[c], Jiaoning Tang[a], Junfeng Niu[b]

[a] Shenzhen Key of Special Functional Materials, College of Materials Science and Engineering, Shenzhen University, Shenzhen 518060, China
[b] Research Center for Eco-Environmental Engineering, Dongguan University of Technology, Dongguan 523808, China
[c] Ministry of Education Key Laboratory of Ecology and Resource Use of the Mongolian Plateau, School of Ecology and Environment, Inner Mongolia University, Hohhot 010021, China

A novel visible-light-driven Cu/rGO/MoS_2 ternary nanostructure as a photocatalyst with high catalytic activity towards degradation of rhodamine B was successfully synthesized through a facile solvothermal method.



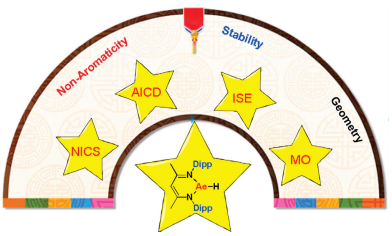
Geometry, stability and aromaticity of β-diketiminate-coordinated alkaline-earth compounds

Chinese Chemical Letters 30 (2019) 2249

Yuanyuan Li[a,b,d], Haohua Chen[c], Lingbo Qu[d], Ruopeng Bai[c], Yu Lan[c,d]

[a] Department of Biological and Chemical Engineering, Chongqing University of Education, Chongqing 400067, China
[b] Cooperative Innovation Center of Lipid Resources and Children's Daily Chemicals, Chongqing University of Education, Chongqing 400067, China
[c] School of Chemistry and Chemical Engineering, Chongqing University, Chongqing 401331, China
[d] College of Chemistry and Molecular Engineering, Zhengzhou University, Zhengzhou 450006, China

The nucleus-independent chemical shifts (NICS), anisotropy of the induced current density (AICD), and molecular orbital (MO) analyses demonstrated the non-aromaticity of the β-diketiminate-coordinated Ae compounds. The DFT calculations revealed relatively high isomerization energies (ISE) for β- diketiminate-coordinated Ae compounds, which contribute to their stability.



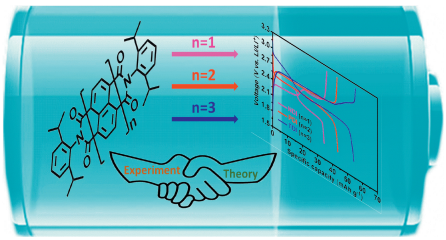
The impact of vertical π-extension on redox mechanisms of aromatic diimide dyes

Chinese Chemical Letters 30 (2019) 2254

Lei Li[a], Juejun Wang[a], Mengting Chen[a], Yong Chen[a], Wangchuan Xiao[c], Dongyang Chen[b], Meijin Lin[a]

[a] College of Chemistry, Fuzhou University, Fuzhou 350116, China
[b] College of Materials Science and Engineering, Fuzhou University, Fuzhou 350116, China
[c] School of Resources and Chemical Engineering, Sanming Institute of Fluorochemical Industry, Sanming University, Sanming 365004, China

The impact of vertical π-extension on redox mechanisms of aromatic diimides in the organic lithium-ion batteries have been carefully studied by a combined experiment and theoretical analyses.

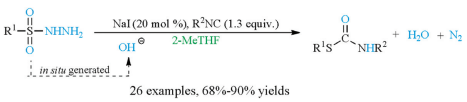


Clean preparation of S-thiocarbamates with *in situ* generated hydroxide in 2-methyltetrahydrofuran

Chinese Chemical Letters 30 (2019) 2259

Wen-Hu Bao[a,1], Zheng Wang[a,1], Xiao Tang[a], Yun-Fu Zhang[a], Jia-Xi Tan[a,c], Qin Zhu[b], Zhong Cao[b], Ying-Wu Lin[d], Wei-Min He[a]

[a] Department of Chemistry, Hunan University of Science and Engineering, Yongzhou 425100, China
[b] Hunan Provincial Key Laboratory of Materials Protection for Electric Power and Transportation, Changsha University of Science and Technology, Changsha 410114, China
[c] School of Chemistry and Chemical Engineering, Hunan University of Science and Technology, Xiangtan 411201, China
[d] School of Chemistry and Chemical Engineering, University of South China, Hengyang 421001, China



A simple and clean protocol for the synthesis of various alkyl and (hetero)aryl S-thiocarbamates was established. The usage of *in situ* generated hydroxide as both an oxygen source and hydrogen source as well as biomass-derived 2-methyltetrahydrofuran as a green reaction medium, the avoidance of phosphorus-containing reductant, and the generation of harmless water and nitrogen as the side-products have given the present method atom-economy and environmental friendliness.

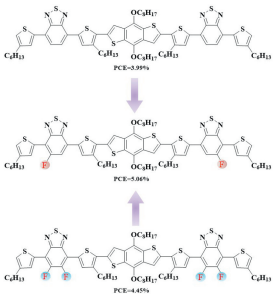
Effective design of A-D-A small molecules for high performance organic solar cells *via* F atom substitution and thiophene bridge

Chinese Chemical Letters 30 (2019) 2263

Anwang He, Yuancheng Qin, Weili Dai, Dan Zhou, Jianping Zou

Key Laboratory of Jiangxi Province for Persistent Pollutants Control and Resources Recycle, Nanchang Hangkong University, Nanchang 330063, China

Novel A-D-A-type small molecule donors employ thiophene bridge and F-substitution to improve the power conversion efficiency in organic solar cell.



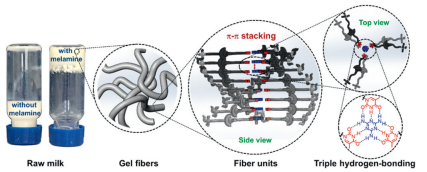
Visual recognition of melamine in milk *via* selective metallo-hydrogel formation

Chinese Chemical Letters 30 (2019) 2266

Xiaoling Bao[a,1], Jianhong Liu[b,1], Qingshu Zheng[b], Wei Pei[a], Yimei Yang[a], Yanyun Dai[a], Tao Tu[b]

[a] *Institute of Quality Inspection of Food and Cosmetics, Shanghai Institute of Quality Inspection and Technical Research, Shanghai 200233, China*
[b] *Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, Department of Chemistry, Fudan University, Shanghai 200438, China*

A novel protocol allowing convenient and highly selective visual recognition of melamine in raw milk *via* selective metallo-hydrogel formation at a concentration as low as 10 ppm without any tedious pretreatment has been developed.



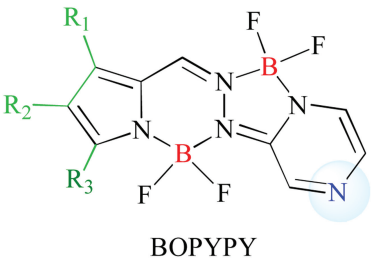
Synthesis, properties and application of novel 5,6,5,6-tetracyclic pyrazine/pyrrole-fused unsymmetric bis(BF_2) fluorescent dyes: BOPYPYs

Chinese Chemical Letters 30 (2019) 2271

Xindong Jiang[a,c], Shuai Yue[a], Kepeng Chen[b], Zhumei Shao[a], Chen Li[a], Yajun Su[a], Jianzhang Zhao[b]

[a] *College of Applied Chemistry, Shenyang University of Chemical Technology, Shenyang 110142, China*
[b] *State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian 116024, China*
[c] *Department of Chemistry, Graduate School of Science, Hiroshima University, Higashi-Hiroshima 739-8526, Japan*

Novel 5,6,5,6-tetracyclic pyrazine/pyrrole-fused unsymmetric bis(BF_2) fluorescent dyes (BOPYPYs) were synthesized by reaction of pyrrole-2-carboxaldehyde with 1-(pyrazin-2-yl) hydrazine in the presence of Et_3N-BF_3·Et_2O for the first time.



BOPYPY

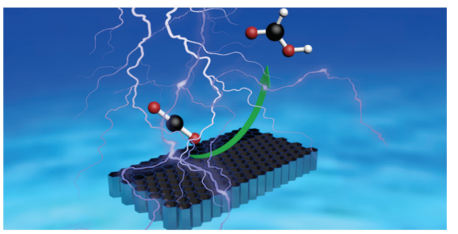
Promoting electrochemical conversion of CO_2 to formate with rich oxygen vacancies in nanoporous tin oxides

Chinese Chemical Letters 30 (2019) 2274

Tengfei Gao[a,1], Anuj Kumar[a,1], Zhicheng Shang[a], Xinxuan Duan[a], Hangchao Wang[a], Shiyuan Wang[a], Shengfu Ji[b], Dongpeng Yan[b,c], Liang Luo[a], Wen Liu[a], Xiaoming Sun[a]

[a] *State Key Laboratory of Chemical Resource Engineering, Beijing Advanced Innovation Center for Soft Matter Science and Engineering, Beijing University of Chemical Technology, Beijing 10002, China*
[b] *State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, China*
[c] *Beijing Key Laboratory of Energy Conversion and Storage Materials, College of Chemistry, Beijing Normal University, Beijing 100875, China*

In CO_2 electrochemical reduction, nanoporous SnO_x-300 with high-level oxygen vacancies exhibited a partial current density of 15 mA/cm^2 with the Faradaic efficiency (FE) of 88.6% for HCOOH production at 0.98 V *versus* RHE.



Friedel-Crafts trifluoromethylthiolation of electron-rich (hetero)arenes with trifluoromethylthio-saccharin in 2,2,2-trifluoroethanol (TFE)

Chinese Chemical Letters 30 (2019) 2279

Shiyao Lu[a], Wenbo Chen[a], Qilong Shen[b]

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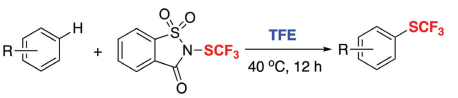
[b] *Key Laboratory of Organofluorine Chemistry, Center for Excellence in Molecular Synthesis, Shanghai Institute of Organic Chemistry, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Shanghai 200032, China*

A promoter-free Friedel-Crafts trifluoromethylthiolation of electron-rich arenes and heteroarenes with *N*-trifluoromethylthiosaccharin **5** using 2,2,2-trifluoroethanol (TFE) as the solvent was described.

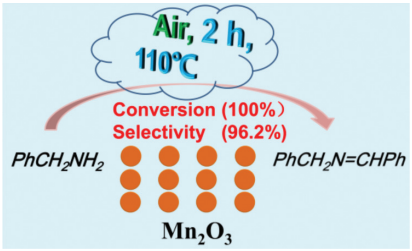


Highly selective oxidation of amines to imines by Mn_2O_3 catalyst under eco-friendly conditions

Chinese Chemical Letters 30 (2019) 2282

Fushan Chen[a,b], Tao Yang[b], Songlin Zhao[a,c], Taotao Jiang[a], Lu Yu[a], Houfeng Xiong[b], Chuankun Guo[b], Yufang Rao[b], Yan Liu[b], Liu Liu[a], Jian Zhou[a], Pengxiang Tu[a], Jun Ni[a], Qunfeng Zhang[a], Xiaonian Li[a]

[a] *Industrial Catalysis Institute of Zhejiang University of Technology, Hangzhou 310014, China*
[b] *Jiangxi Province Engineering Research Center of Ecological Chemical Industry, Jiujiang University, Jiujiang 332005, China*
[c] *School of Pharmaceutical and Chemical Engineering, Taizhou University, Taizhou 318000, China*



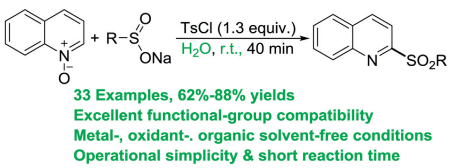
Mn_2O_3 calcined at 450 °C by a simple template-free oxalate route gave 96.2% selectivity of imine at 100% conversion of benzylamine. The high selectivity of the imines clearly depended on the Mn^{3+}/Mn^{4+} ratio. The probable reaction pathway for amines oxidation catalyzed by manganese oxides was proposed for the first time. This catalytic process was carried out under milder conditions, no base additives, and air as the only oxidant.

TsCl-promoted sulfonylation of quinoline *N*-oxides with sodium sulfinates in water

Chinese Chemical Letters 30 (2019) 2287

Sha Peng[a], Yan-Xi Song[a], Jun-Yi He[b], Shan-Shan Tang[a], Jia-Xi Tan[c], Zhong Cao[b], Ying-Wu Lin[d], Wei-Min He[a]

[a] *Department of Chemistry, Hunan University of Science and Engineering, Yongzhou 425100, China*
[b] *Hunan Provincial Key Laboratory of Materials Protection for Electric Power and Transportation, Changsha University of Science and Technology, Changsha 410114, China*
[c] *School of Chemistry and Chemical Engineering, Hunan University of Science and Technology, Xiangtan 411201, China*
[d] *School of Chemistry and Chemical Engineering, University of South China, Hengyang 421001, China*



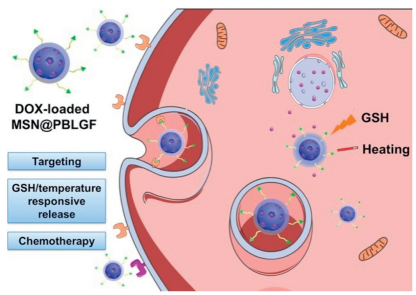
An eco-friendly protocol for the synthesis of various 2-sulfonyl quinolines/pyridines through sulfonylation of heteroaromatic *N*-oxides with sodium sulfinates in water under metal- and oxidant-free conditions has been developed. The high reaction efficiency, operational simplicity, short reaction time, air- and moisture-insensitive conditions and remarkable functional group compatibility make the developed protocol very attractive for the preparation of 2-sulfonyl *N*-heteroaromatic compounds.

Temperature-sensitive polypeptide brushes-coated mesoporous silica nanoparticles for dual-responsive drug release

Chinese Chemical Letters 30 (2019) 2291

Yahan Cui[a], Rong Deng[a], Xiangshuai Li[a], Xinghuo Wang[a], Qiong Jia[a], Emilie Bertrand[b], Kamel Meguellati[a], Ying-Wei Yang[a]

[a] *International Joint Research Laboratory of Nano-Micro Architecture Chemistry (NMAC), College of Chemistry, Jilin University, Changchun 130012, China*
[b] *Key Laboratory of Polymer Ecomaterials, Changchun Institute of Applied Chemistry, Chinese Academy of Science, Changchun 130022, China*



A multifunctional nanohybrid based on mesoporous silica nanoparticle and biocompatible polypeptide was fabricated for targeted and dual-responsive therapy of tumor cells.

Visible-light-promoted sulfonylmethylation of imidazopyridines

Chinese Chemical Letters 30 (2019) 2295

Xia Mi[a], Yuanfang Kong[a], Jingyu Zhang[a], Chao Pi[b], Xiuling Cui[b]

[a] *College of Pharmacy, Henan University of Chinese Medicine, Zhengzhou 450046, China*
[b] *College of Chemistry, Henan Key Laboratory of Chemical Biology and Organic Chemistry, Key Laboratory of Applied Chemistry of Henan Universities, Zhengzhou University, Zhengzhou 450052, China*

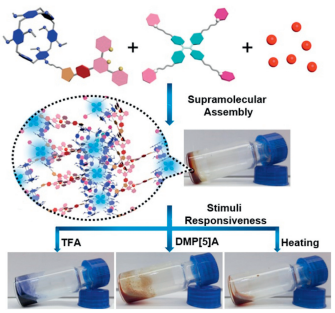
An effective method for the synthesis of sulfonylmethylated imidazopyridines was described with $Ir(ppy)_3$ as photocatalyst under visible light irradiation. This reaction could be performed smoothly under mild conditions and has a wide substrate scope and good functional group tolerance. Meanwhile, desulfonylation of several selected compounds was easily achieved under reducing conditions to unveil the methyl group. The method may be an attractive strategy to install a methyl group on imidazopyridines.

Stimuli-responsive fluorescent supramolecular polymer network based on a monofunctionalized leaning tower[6]arene

Chinese Chemical Letters 30 (2019) 2299

Zengjie Liu[a], Jiarui Wu[a], Chunyu Wang[c], Jie Yang[a], Yan Wang[a], Ying-Wei Yang[a,b,d]

[a] State Key Laboratory of Inorganic Synthesis and Preparative Chemistry, International Joint Research Laboratory of Nano-Micro Architecture Chemistry (NMAC), College of Chemistry, Jilin University, Changchun 130012, China
[b] The State Key Laboratory of Refractories and Metallurgy, School of Chemistry and Chemical Engineering, Wuhan University of Science and Technology, Wuhan 430081, China
[c] State Key Laboratory of Supramolecular Structure and Materials, Institute of Theoretical Chemistry, Jilin University, Changchun 130012, China
[d] California NanoSystems Institute and Department of Chemistry & Biochemistry, University of California, Los Angeles, CA 90095, United States



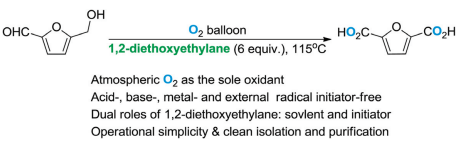
Fluorescent supramolecular polymer network based on a mono-terpyridine-tethered leaning towerarene, a tetratopic tetraphenylethylene-based guest linker, and zinc ions has been designed and synthesized, showing excellent triple-stimuli responsive property.

Solvent-dependent selective oxidation of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid under neat conditions

Chinese Chemical Letters 30 (2019) 2304

Kai-Jian Liu[a], Tang-Yu Zeng[a], Jia-Le Zeng[a], Shao-Feng Gong[a], Jun-Yi He[b], Ying-Wu Lin[d], Jia-Xi Tan[c], Zhong Cao[b], Wei-Min He[a,b]

[a] Department of Chemistry, Hunan University of Science and Engineering, Yongzhou 425100, China
[b] Hunan Provincial Key Laboratory of Materials Protection for Electric Power and Transportation, Changsha University of Science and Technology, Changsha 410114, China
[c] School of Chemistry and Chemical Engineering, Hunan University of Science and Technology, Xiangtan 411201, China
[d] School of Chemistry and Chemical Engineering, University of South China, Hengyang 421001, China



An eco-friendly and economical route for the oxidation 5-hydroxymethylfurfural (HMF) to 2,5-furandicarboxylic acid (FDCA) with atmospheric dioxygen as the sole oxidant under acid-, base-, metal- and external initiator-free conditions in minimal solvent was reported.

A low-temperature synthesis-induced defect formation strategy for stable hierarchical porous metal–organic frameworks

Chinese Chemical Letters 30 (2019) 2309

Ge Huang[a,1], Yue Wang[b,1], Tianfu Liu[a]

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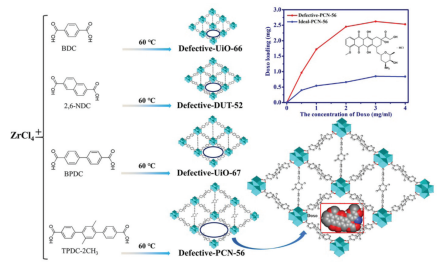
[b] College of Biological and Chemical Engineering, Chongqing University of Education, Chongqing 400067, China



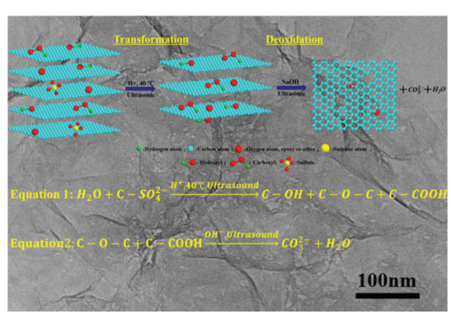
A stable hierarchical porous metal–organic framework PCN-56 with abundant Lewis acid sites was synthesized by the low-temperature synthesis-induced defect formation method. It exhibits good adsorption capacity for dyes and high loading capacity toward macromolecular drugs.

A novel approach to synthesize porous graphene by the transformation and deoxidation of oxygen-containing functional groups

Chinese Chemical Letters 30 (2019) 2313

Da Zhang[a,1], Luming Chen[a,1], Yaochun Yao[a], Feng Liang[a,b], Tao Qu[a,b], Wenhui Ma[a], Bing Yang[a], Yongnian Dai[a], Yong Lei[c]

[a] Faculty of Metallurgical and Energy Engineering, Kunming University of Science and Technology, Kunming 650093, China
[b] State Key Laboratory of Complex Nonferrous Metal Resources Clean Utilization, Kunming University of Science and Technology, Kunming 650093, China
[c] Institute of Physics & IMN Macro Nanos (ZIK), Ilmenau University of Technology, Ilmenau 98693, Germany



The impurity-free porous graphene prepared by acid-alkali etching-assisted sonication approach possessed the size of ~5 μm, layer numbers of 3–8 and an average pore diameter of approximately 3 nm. In an acidic solution, oxygen-containing functional groups were formed due to the hydrolysis of sulfate and continuous transformations, and then under the synergistic effects of alkali and ultrasound treatment, porous graphene was obtained due to the loss of oxygen-containing functional groups.

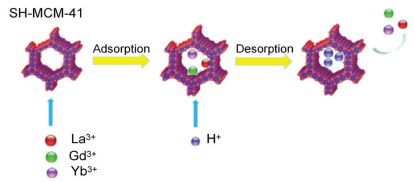
Study on the controllable synthesis of SH-MCM-41 mesoporous materials and their adsorption properties of the La^{3+}, Gd^{3+} and Yb^{3+}

Chinese Chemical Letters 30 (2019) 2318

Xiancai Li, Tianren Lu, Ying Wang, Yifeng Yang

College of Chemistry, Nanchang University, Nanchang 330031, China

SH-MCM-41 was examined in adsorption and desorption experiments to investigate the adsorption capacities of La^{3+}, Gd^{3+} and Yb^{3+} and the reusability.



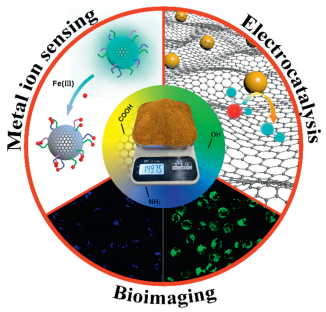
Kilogram-scale synthesis of carbon quantum dots for hydrogen evolution, sensing and bioimaging

Chinese Chemical Letters 30 (2019) 2323

Weidong Li[a], Yuan Liu[b], Boyang Wang[a], Haoqiang Song[a], Zhongyi Liu[a], Siyu Lu[a], Bai Yang[c]

[a] *College of Chemistry, Zhengzhou University, Zhengzhou 450001, China*
[b] *College of Materials Science and Engineering, Zhengzhou University, Zhengzhou 450001, China*
[c] *State Key Laboratory of Supramolecular Structure and Materials, College of Chemistry, Jilin University, Changchun 130012, China*

A facile, low-cost, green, kilogram-scale synthesis of high quality CQDs were synthesized. The throughput of CQDs is 1.4975 kg in one pot and the as-prepared CQDs have a highly crystalline hexagonal structure with remarkable solubility, stability, and biocompatibility. It showed outstanding electrocatalytic activity, Fe^{3+} sensitivity and good biocompatibility.



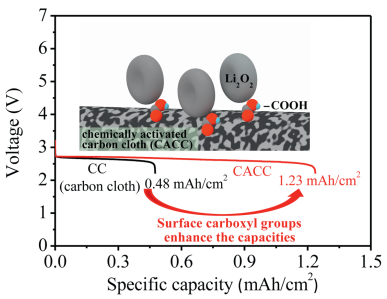
Surface carboxyl groups enhance the capacities of carbonaceous oxygen electrodes for aprotic lithiumoxygen batteries: A direct observation on binder-free electrodes

Chinese Chemical Letters 30 (2019) 2328

Ming Li[a], Liang Xiao[a], Duo Wang[a], Haoyang Dong[a], Bohua Deng[a], Jinping Liu[a,b]

[a] *School of Chemistry, Chemical Engineering and Life Science, Wuhan University of Technology, Wuhan 430070, China*
[b] *State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology, Wuhan 430070, China*

Carbon cloth was proposed as an ideal model to investigate the effect of surface functional groups. The introduction of surface carboxyl groups significantly enhances the capacities of carbonaceous oxygen diffusion electrodes for the lithium–oxygen batteries.



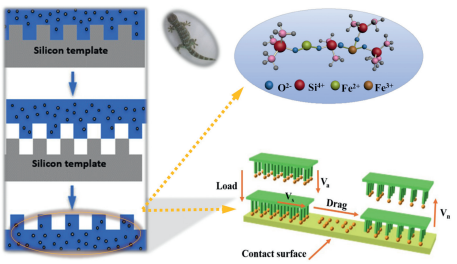
Gecko-inspired composite micro-pillars with both robust adhesion and enhanced dry self-cleaning property

Chinese Chemical Letters 30 (2019) 2333

Xiaoxiao Dong[a], Hong Zhao[a], Zhihang Wang[a], Miray Ouzounian[b], Travis Shihao Hu[b], Yongjian Guo[c], Lipeng Zhang[c], Quan Xu[a]

[a] *College of Mechanical and Transportation Engineering, China University of Petroleum-Beijing, Beijing 102249, China*
[b] *Department of Mechanical Engineering, California State University, Los Angeles, CA 90032, United States*
[c] *Energy College, Beijing University of Chemical Technology, Beijing 100029, China*

Enhanced dry self surfaces were fabricated which could dislodge up to 24.6% of contaminated particles with as few as 4 steps.

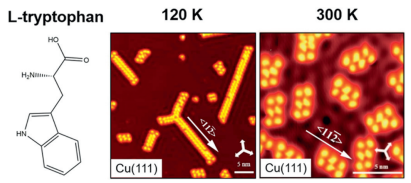


Chinese Chemical Letters 30 (2019) 2355

Self-assembly of L-tryptophan on Cu(111) studied by low-temperature scanning tunneling microscopy

Qiang Xue[a], Yajie Zhang[a], Ruoning Li[a], Chao Li[a], Na Li[a], Chenyang Yuan[a], Shimin Hou[a,b], Yongfeng Wang[a,c]

[a] Key Laboratory for the Physics and Chemistry of Nanodevices, Department of Electronics, Peking University, Beijing 100871, China
[b] Peking University Information Technology Institute (Tianjin Binhai), Tianjin 300450, China
[c] Beijing Academy of Quantum Information Sciences, Beijing 100193, China



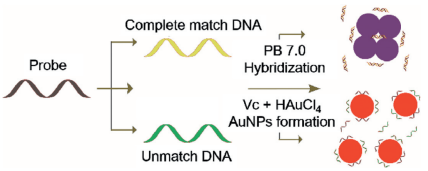
The self-assembly of L-tryptophan on Cu(111) is investigated by an ultrahigh vacuum scanning tunneling microscope (STM) at 4.4 K. A series of novel supramolecular structures have been prepared with different annealing temperatures.

Chinese Chemical Letters 30 (2019) 2359

A simple visual method for DNA detection based on the formation of gold nanoparticles

Yuan Liu[a,1], Taotao Li[b,1], Chuxuan Ling[c], Zunliang Wang[a], Lian Jin[d], Yongxiang Zhao[e], Zhu Chen[a,d], Song Li[d], Yan Deng[a,d], Nongyue He[a,e]

[a] State Key Laboratory of Bioelectronics, Southeast University, Nanjing 210096, China
[b] Hunan Provincial Key Lab of Dark Tea and Jin-Hua, School of Materials and Chemical Engineering, Hunan City University, Yiyang 413000, China
[c] School of Chemistry and Chemical Engineering, Southeast University, Nanjing 211189, China
[d] Hunan Key Laboratory of Biomedical Nanomaterials and Devices, Hunan University of Technology, Zhuzhou 412007, China
[e] National Center for International Bio-targeting Theranostics, Guangxi Key Laboratory of Bio-targeting Theranostics, Collaborative Innovation Center for Targeting Tumor Theranostics, Guangxi Medical University, Nanning 530021, China



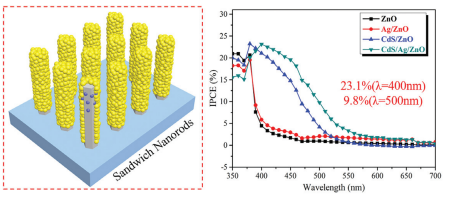
A simple visual method for DNA detection during the formation of gold nanoparticles (AuNPs) was developed based on different electrostatic properties of single strand DNA (ssDNA) and double strand DNA (dsDNA). It could identify target DNA in 10 min.

Chinese Chemical Letters 30 (2019) 2363

CdS nanocrystallites sensitized ZnO nanorods with plasmon enhanced photoelectrochemical performance

Li Cai, Yuanchang Du, Xiangjiu Guan, Shaohua Shen

International Research Center for Renewable Energy, State Key Laboratory of Multiphase Flow in Power Engineering (MFPE), Xi'an Jiaotong University (XJTU), Xi'an 710049, China



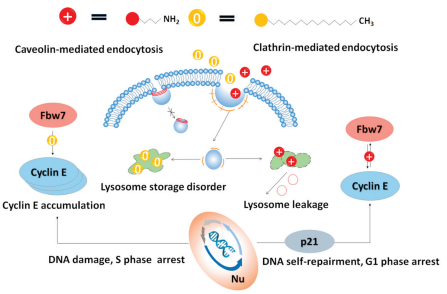
A sandwiched structure of CdS/Ag/ZnO nanorod photoanode exhibits greatly enhanced photoelectrochemical activity for solar hydrogen generation, due to synergistic effect of CdS nanocrystallites and plasmonic Ag nanoparticles for the enhanced optical absorption and the promoted charge carrier separation.

Chinese Chemical Letters 30 (2019) 2368

Post-self-repair process of neuron cells under the influence of neutral and cationic nanoparticles

Ting Wang[a,1], Guanwen Qu[a,1], Yu Deng[a], Jing Shang[b], Zhangqi Feng[c,d,e], Fengyu Yang[c], Nongyue He[a], Jie Zheng[c]

[a] 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
[b] State Key Laboratory of Natural Medicines, Department of Pharmacology, China Pharmaceutical University, Nanjing 210002, China
[c] Department of Chemical and Biomolecular Engineering, The University of Akron, Akron, OH 44325, United States
[d] School of Chemical Engineering, Nanjing University of Science and Technology, Nanjing 210094, China
[e] Nanjing Daniel New Mstar Technology Ltd., Nanjing 211200, China



Alkylated nanoparticles induce malignant lysosome damages and unrepairable genome injuries which cannot be caused by aminated nanoparticles. Therefore, cells exposed to alkylated nanoparticles initiate post-self-repair effect by down regulating Fbw7 and accumulating cyclin E to maintain the replication of injured DNA.