

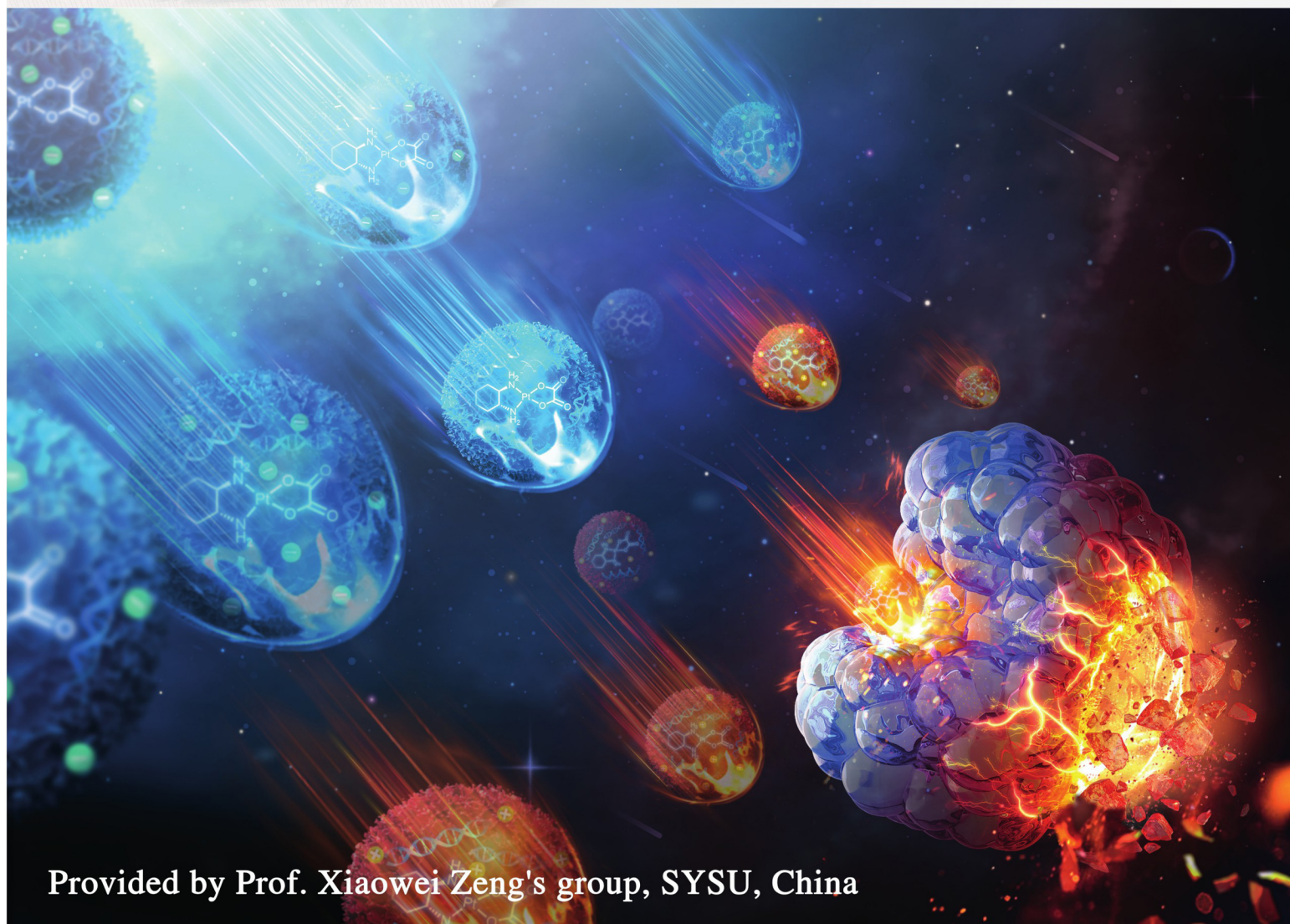
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REVIEW

Mengyuan Fang, Boyang Wang, Xiaoli Qu,
Siyu Lu, Nan Zhou, et al.
State-of-the-art of biomass-derived carbon dots:
Preparation, properties, and applications

COMMUNICATION

Leiduo Lai, Yang Shi, Bo Lai, et al.
Activation of peroxymonosulfate by FeVO_{3-x}
for the degradation of carbamazepine: Vanadium
mediated electron shuttle and oxygen vacancy
modulated interface chemistry

Chinese Chemical Society

Institute of Materia Medica, Chinese Academy of Medical Sciences

万方数据



Graphical Abstracts/Chin Chem Lett 35 (2024) 109313

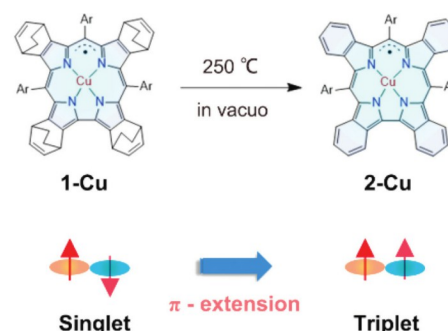
Editorial

Spin switching in corrole radical complex

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The ground-state singlet to triplet conversion of copper corrole radical was achieved.

Chinese Chemical Letters 35 (2024) 108883



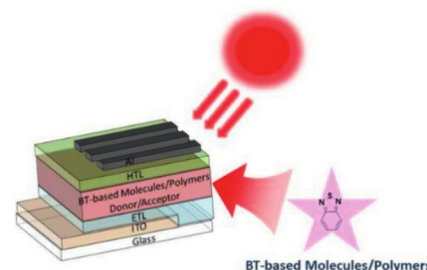
Reviews

Benzothiadiazole-based materials for organic solar cells

Qiang Bei^{a,b}, Bei Zhang^{a,b}, Kaifeng Wang^{a,b}, Shiming Zhang^{a,b}, Guichuan Xing^c, Clément Cabanetos^{d,e}^a Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing Tech University, Nanjing 211816, China^b Jiangsu Seenbon Flexible Electronics Institute Co., Ltd., Nanjing 210043, China^c Institute of Applied Physics and Materials Engineering, University of Macau, Macau SAR 999078, China^d CNRS UMR 6200, MOLTECH-Anjou, University of Angers, Angers 49045, France^e Building Blocks for Future Electronics Laboratory (2BFUEL), IRL2002, CNRS -Yonsei University, Seoul 03722, Republic of Korea

The photoactive materials, including both donor and acceptor materials, are one of the main factors for high-performance organic solar cells. In this perspective, we systematically summarized the active materials with benzothiadiazole (BT) building block. It showed that BT unit is among the list of key building blocks to construct great active materials with high organic solar cells' performance in both small materials and polymers.

Chinese Chemical Letters 35 (2024) 108438



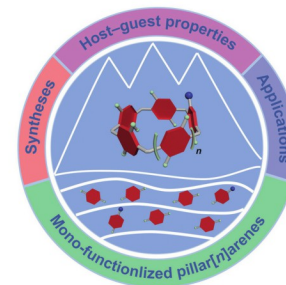
Mono-functionalized pillar[n]arenes: Syntheses, host-guest properties and applications

Wenzhi Yang, Wenjie Zhang, Jingyu Chen, Jiong Zhou

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This review summarizes the syntheses, host-guest properties and applications of mono-functionalized pillar[n]arenes.

Chinese Chemical Letters 35 (2024) 108740



Recent advances in two-step energy transfer light-harvesting systems driven by non-covalent self-assembly

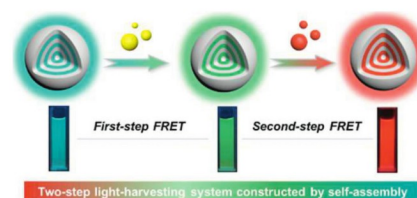
Zhiying Wu^a, Hongwei Qian^a, Xiuxiu Li^a, Tangxin Xiao^a, Leyong Wang^b

^aJiangsu Key Laboratory of Advanced Catalytic Materials and Technology, School of Petrochemical Engineering, Changzhou University, Changzhou 213164, China

^bKey Laboratory of Mesoscopic Chemistry of MOE, School of Chemistry and Chemical Engineering, Nanjing University, Nanjing 210023, China

Recent progress on sequential two-step light-harvesting systems fabricated by supramolecular self-assembly was summarized.

Chinese Chemical Letters 35 (2024) 108829



From oxygenated monomers to well-defined low-carbon polymers

Yanni Xia^a, Chengjian Zhang^a, Yong Wang^b, Shunjie Liu^c, Xinghong Zhang^{a,d}

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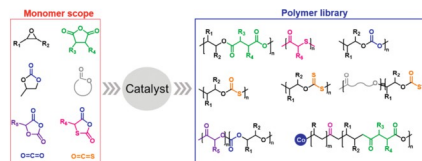
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This minireview introduces the synthesis of a variety of degradable polymers with easy-to-break in-chain carbon-oxygen bonds from the (co)polymerizations of several typical oxygenated monomers such as epoxides, cyclic carbonates, cyclic esters, CO₂, COS, and cyclic anhydrides.

Chinese Chemical Letters 35 (2024) 108860



Doping-induced charge transfer in conductive polymers

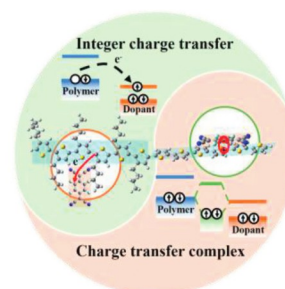
Siyi Luo^{a,b}, Zhen Xu^{a,b}, Fei Zhong^{a,b}, Hui Li^a, Lidong Chen^{a,b}

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^bCenter of Materials Science and Optoelectronics Engineering, University of Chinese Academy of Sciences, Beijing 100049, China

Two types of charge transfer processes are widely accepted in molecular doping: integer charge transfer (ICT) and charge transfer complex (CTC). The factors determining the degree of charge transfer and the strategies improving the electrical properties by effective molecular doping are discussed.

Chinese Chemical Letters 35 (2024) 109014



Quinoline-based anti-MRSA agents: Current development, structure-activity relationships, and mechanisms

Hong Yao^a, Liping Cui^b, Hang Liu^b, Xueyu Li^b, Lin Shen^b, Ruige Yang^b, Shangshang Qin^b, Yong Guo^{b,c}

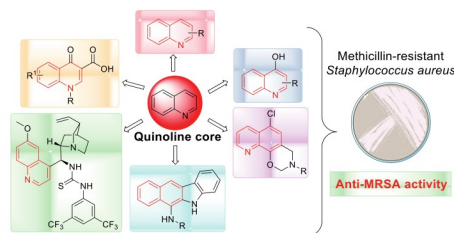
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^cHunan Province Cooperative Innovation Center for Molecular Target New Drug Study, School of Pharmaceutical Science, Hengyang Medical School, University of South China, Hengyang 421001, China

This review presented the current development of antibacterial activities of quinoline analogues, mainly against methicillin-resistant *Staphylococcus aureus* (MRSA), and discussed their structure-activity relationships (SARs) and mechanisms from the perspective of using quinoline nucleus to search for novel potential anti-MRSA candidates.

Chinese Chemical Letters 35 (2024) 108511



State-of-the-art of biomass-derived carbon dots: Preparation, properties, and applications

Mengyuan Fang^a, Boyang Wang^b, Xiaoli Qu^c, Senrui Li^a, Jinsheng Huang^a, Jiangnan Li^a, Siyu Lu^b, Nan Zhou^a

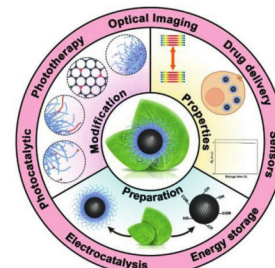
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^bGreen Catalysis Center, and College of Chemistry, Zhengzhou University, Zhengzhou 450001, China

^cErythrocyte Biology Laboratory, School of Life Sciences, Zhengzhou University, Zhengzhou 450001, China

Biomass-derived carbon dots (CDs) have recently attracted a mounting interest as readily available, non-toxic, and tailorable carbon-based nanomaterials. However, how to tune the optoelectronic properties and broaden the application is still controversial. In this review, CDs from biomass and their detailed properties and applications are summarized. Eventually, the current problems and the expected development foregrounds of biomass-derived CDs are proposed.

Chinese Chemical Letters 35 (2024) 108423



Recent progress on fluorescent probes for viruses

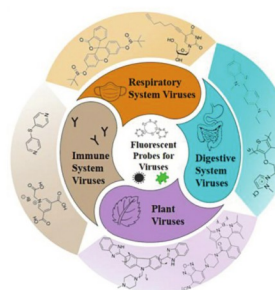
Siyang Shen^a, Weilin Xu^a, Jianxiang Lu^a, Shuhui Wang^a, Yurou Huang^a, Xiaoyan Zeng^a, Weimin Xiao^b, Jun Yin^a

^aKey Laboratory of Pesticide and Chemical Biology, Ministry of Education, Hubei International Scientific and Technological Cooperation Base of Pesticide and Green Synthesis, International Joint Research Center for Intelligent Biosensing Technology and Health, College of Chemistry, Central China Normal University, Wuhan 430079, China

^bShenzhen Academy of Metrology and Quality Inspection, Shenzhen 518109, China

This paper reviewed various fluorescent probes for viruses and categorized the probes based on their specificity for human and plant viruses.

Chinese Chemical Letters 35 (2024) 108360



Recent advances in long-persistent luminescence materials based on host-guest architecture

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^bDepartment of Chemistry and Biochemistry and the Materials Technology Center, Southern Illinois University, Carbondale, IL 62901, United States

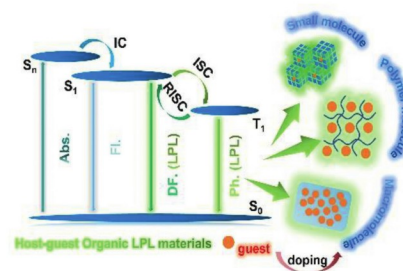
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^dHaihe Laboratory of Sustainable Chemical Transformations, Tianjin 300192, China

^eJoint School of National University of Singapore and Tianjin University, International Campus of Tianjin University, Binhai New City, Fuzhou 350207, China

Researchers have recently made several efforts via host-guest interaction to achieve long persistent luminescence. Currently, host molecules are mainly divided into three categories: small molecules, polymer molecules, and macromolecules.

Chinese Chemical Letters 35 (2024) 108385



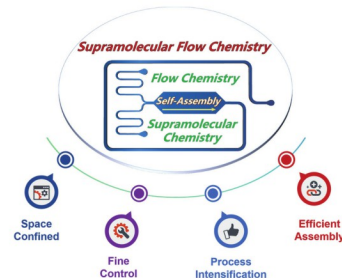
Supramolecular flow chemistry: Construction of multiscale supramolecular assemblies by micro/nanofluidic techniques

Leyong Zhou, Changyin Yang, Weitao Dou, Tongxia Jin, Haibo Yang, Lin Xu

Shanghai Key Laboratory of Green Chemistry and Chemical Processes, Shanghai Frontiers Science Center of Molecule Intelligent Syntheses, School of Chemistry and Molecular Engineering, East China Normal University, Shanghai 200062, China

This review summarizes the construction of multiscale supramolecular assemblies by micro/nano-fluidics techniques in supramolecular flow chemistry.

Chinese Chemical Letters 35 (2024) 108669



Research progress of severe acute respiratory syndrome coronavirus 2 on aerosol collection and detection

Xinyu Zhang^a, Yuting Chen^a, Yueying Pan^a, Xinye Ma^a, Gui Hu^a, Song Li^a, Yan Deng^a, Zhu Chen^a, Hui Chen^a, Yanqi Wu^{b,c}, Zhihong Jiang^b, Zhiyang Li^d

^aHunan Key Laboratory of Biomedical Nanomaterials and Devices, Hunan University of Technology, Zhuzhou 412007, China

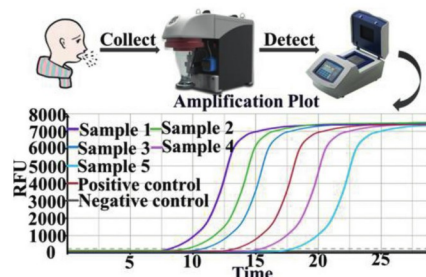
^bState Key Laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology, Macau 999078, China

^cShenzhen Lemniscare Med Technol Co. Ltd., Shenzhen 518000, China

^dDepartment of Clinical Laboratory, the Affiliated Drum Tower Hospital of Nanjing University Medical School, Nanjing 210008, China

In this review, research progress of severe acute respiratory syndrome coronavirus 2 on aerosol collection and detection are summarized, and the process of collecting and detecting is shown.

Chinese Chemical Letters 35 (2024) 108378



Imaging-guided precision oncotherapy mediated by nanoprobes: From seeing to curing

Jie Zheng^a, Shi-Hui Chen^a, Biao Huang^a, Mingxi Zhang^b, Quan Yuan^a, Ran Cui^{a,c}

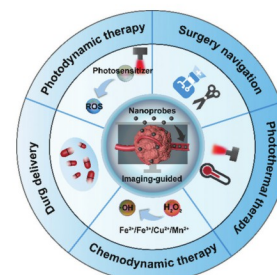
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^cHubei Jiangxia Laboratory, Wuhan 430200, China

In this review, we introduce the application of nanoprobes in non-invasive tumor precise imaging and highlight the recent advances of image-guided oncotherapy mediated by nanoprobes in anti-tumor drug delivery, tumor precise surgical navigation, chemodynamic therapy, and phototherapy.

Chinese Chemical Letters 35 (2024) 108460



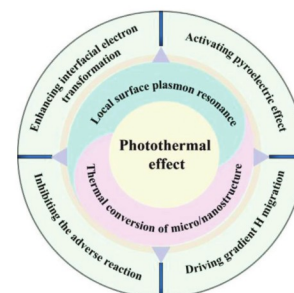
Recent advances in photothermal effects for hydrogen evolution

Pengcheng Fan, Yuhao He, Junan Pan, Ning Sun, Qiyu Zhang, Chen Gu, Kang Chen, Weinan Yin, Longlu Wang

College of Electronic and Optical Engineering & College of Flexible Electronics (Future Technology), Nanjing University of Posts & Telecommunications (NUPT), Nanjing 210023, China

This review aims to introduce the recent advances of photothermal effects for hydrogen evolution, including the pathways of photothermal conversion and functions of photothermal effect.

Chinese Chemical Letters 35 (2024) 108513



Review of advanced oxidation processes for treating hospital sewage to achieve decontamination and disinfection

Si-Ying Yu^{a,b}, Zhi-Hui Xie^{a,b}, Xiaoyu Wu^{a,b}, Yun-Zhe Zheng^{a,b}, Yang Shi^{a,b}, Zhao-Kun Xiong^{a,b}, Peng Zhou^{a,b}, Yang Liu^{a,b}, Chuan-Shu He^{a,b,c}, Zhi-Cheng Pan^{c,d}, Kai-Jun Wang^c, Bo Lai^{a,b}

^aState Key Laboratory of Hydraulics and Mountain River Engineering, College of Architecture and Environment, Sichuan University, Chengdu 610065, China

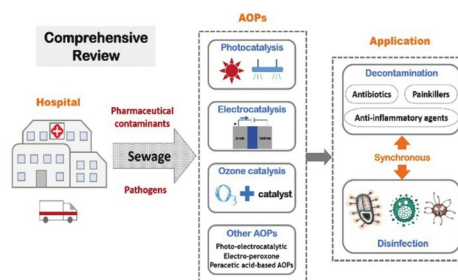
^bSino-German Centre for Water and Health Research, Sichuan University, Chengdu 610065, China

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^dWater Safety and Water Pollution Control Engineering Technology Research Center in Sichuan Province, Haitian Water Group, Chengdu 610041, China

This review comprehensively summarized the capabilities and practical application possibilities of various advanced oxidation processes (AOPs) in the decontamination and disinfection of hospital sewage and provides constructive suggestions for the practical application of AOPs in hospital wastewater treatment.

Chinese Chemical Letters 35 (2024) 108714



Chinese Chemical Letters 35 (2024) 108418

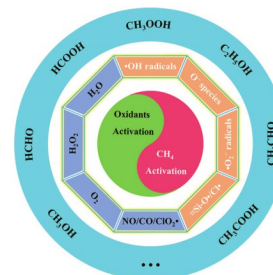
Zhongshan Yang^{a,c}, Qiqi Zhang^a, Hui Song^b, Xin Chen^a, Jiwei Cui^a, Yanhui Sun^a,
Lequan Liu^a, Jinhua Ye^{a,b}

^aTJU-NIMS International Collaboration Laboratory, School of Materials Science and Engineering, Tianjin University, Tianjin 300072, China

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^cZhejiang LAMP Co., Ltd., Wenzhou 325206, China

Progress in partial oxidation of methane to liquid oxygenates with various oxidants (H_2O , H_2O_2 or O_2) by photocatalysis is systematically summarized. The activation of selected oxidant is highlighted. Methane activated mainly by $\cdot\text{OH}$ radicals, O^- species or photogenerated hole (h^+) is also highly emphasized.



Chinese Chemical Letters 35 (2024) 108432

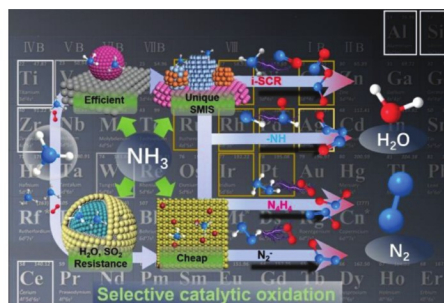
Zhao Li^a, Chunxue Wang^a, Junjun Qiu^a, Yixing Ma^{a,b}, Chi Wang^c, Xin Sun^{a,b}, Kai Li^{a,b},
Ping Ning^{a,b}, Fei Wang^{a,b}

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NH₃ in ambient air directly leads to an increase in the aerosol content in the air and controlling NH₃ emissions caused by ammonia escaping from mobile and industrial sources can effectively reduce the NH₃ content in ambient air. This review discussed the effects of the valence state of the active center, oxygen species on the catalyst surface, dispersion of the active center and acidic sites on the catalyst performance are discussed comprehensively in ammonia selective catalytic oxidation (NH₃-SCO) field.



Chinese Chemical Letters 35 (2024) 108900

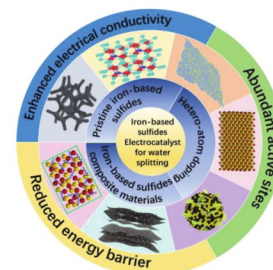
Jing Mei ^{a,b}, Yuqing Deng ^{a,b}, Xiaohong Cheng ^c, Xing Wang ^a, Qi Wu ^{a,b}

^a State Key Laboratory of New Textile Materials and Advanced Processing Technologies, Wuhan Textile University, Wuhan 430200, China

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^cHubei Key Laboratory of Low Dimensional Optoelectronic Materials and Devices, Hubei University of Arts and Science, Xiangyang 441053, China

This review summarizes the recent advances and future perspectives of iron-based sulfides and their composites as electrocatalysts for oxygen evolution reactions and hydrogen evolution reactions. In addition, the relationship between composition, structure and performance is detailed, and strategies to improve their electrocatalytic performance, such as morphology modulation, heteroatom doping and compositing with other materials, are summarized and discussed.



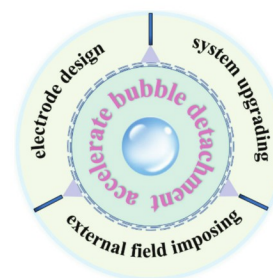
Chinese Chemical Letters 35 (2024) 108351

Weinan Yin^a, Lexing Yuan^a, Hao Huang^a, Yuntao Cai^a, Junan Pan^a, Ning Sun^a,
Qiyu Zhang^a, Qianhe Shu^a, Chen Gu^a, Zechao Zhuang^b, Longlu Wang^a

^a College of Electronic and Optical Engineering & College of Flexible Electronics (Future Technology), Nanjing University of Posts & Telecommunications (NJUPT), Nanjing 210023, China

^b Department of Chemistry, Tsinghua University, Beijing 100084, China

In this review, various strategies for bubble detachment are systematically summarized, including electrode design, external field imposing and system upgrading.



Two-dimensional transition metal MXene-based gas sensors: A review

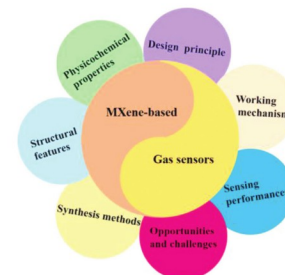
Junfeng Li^a, Xiaojie Chen^a, Xiaojie Zhu^a, Yingchang Jiang^b, Xueting Chang^b, Shibin Sun^a

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This paper systematically represents the structure, synthesis methods and properties of MXenes, and summarizes their applications, future opportunities and challenges in gas sensors.

Chinese Chemical Letters 35 (2024) 108286



Communications

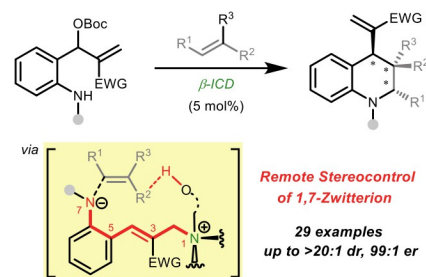
Remote stereocontrol in the (4 + 2) cycloadditions of 1,7-zwitterions: Asymmetric synthesis of multifunctionalized tetrahydroquinoline derivatives

Chen Chen, Jin Zhou, Jing Jiang, Yang Li, Ting Mao, Cheng Peng, Gu Zhan, Wei Huang

State Key Laboratory of Southwestern Chinese Medicine Resources, School of Pharmacy, Chengdu University of Traditional Chinese Medicine, Chengdu 611137, China

Remote stereocontrol, which can surpass the limits of stereorecognition of remote prochiral centers, has long been a challenging object of great interest in asymmetric catalysis. The current work realized the remote stereocontrol of 1,7-zwitterion intermediates formed from Huang's *o*-amino aryl MBH carbonates, allowing the synthesis of chiral multifunctionalized tetrahydroquinoline derivatives via (4 + 2) cycloadditions.

Chinese Chemical Letters 35 (2024) 108295



Iron/B₂pin₂ catalytic system enables the generation of alkyl radicals from inert alkyl C-O bonds for amine synthesis

Yanqing Zhu^a, Shuai Chen^a, Zhen Zhou^a, Yun He^a, Zhengli Liu^{a,c}, Yang Liu^b, Zhang Feng^{a,c}

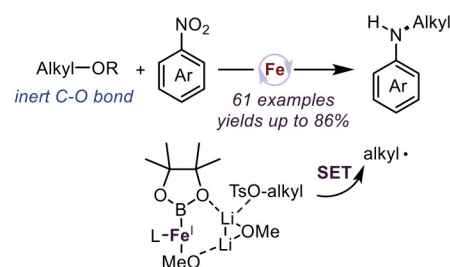
^a Chongqing Key Laboratory of Natural Product Synthesis and Drug Research, School of Pharmaceutical Sciences, Chongqing University, Chongqing 401331, China

^b Department of Medicinal Chemistry, School of Pharmacy, Fujian Medical University (FMU), Fuzhou 350005, China

^c Affiliated Hospital of North Sichuan Medical College and Medical Imaging Key Laboratory of Sichuan Province, Nanchong 637503, China

A method for the generation of alkyl radicals from inert alkyl C-O bonds has been developed via an iron/borane reagent/alkoxide catalytic system, which can be employed for the synthesis of amines from nitroarenes with excellent efficiency. Preliminary mechanistic studies reveal that the amine synthesis may be involving a single electron transfer pathway to form alkyl radicals, and the low-valent iron species may be the active intermediates.

Chinese Chemical Letters 35 (2024) 108303



A H₄SiW₁₂O₄₀-catalyzed three-component tandem reaction for the synthesis of 3,3-disubstituted isoindolinones

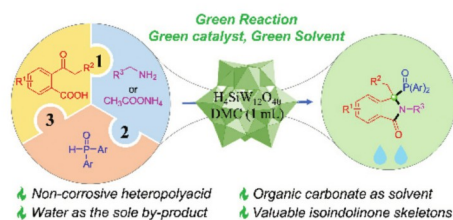
Yufeng Liu^a, Guodong Zeng^a, Yutao Cheng^a, Lei Chen^a, Yunhai Liu^a, Yongge Wei^b, Guoping Yang^{a,b}

^a School of Chemistry, Biology and Material Science, Jiangxi Province Key Laboratory of Synthetic Chemistry, Jiangxi Key Laboratory for Mass Spectrometry and Instrumentation, East China University of Technology, Nanchang 330013, China

^b Key Lab of Organic Optoelectronics & Molecular Engineering of Ministry of Education, Department of Chemistry, Tsinghua University, Beijing 100084, China

A three-component tandem synthesis of C3-phosphinoyl-functionalized 3,3-disubstituted isoindolinones was developed using H₄SiW₁₂O₄₀ as green catalyst and organic carbonate as green solvent.

Chinese Chemical Letters 35 (2024) 108480



Direct synthesis of unnatural amino acids and modifications of peptides via LADA strategy

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^aShanghai Frontiers Science Center for Drug Target Identification and Drug Delivery, School of Pharmaceutical Sciences, Shanghai Jiao Tong University, Shanghai 200240, China

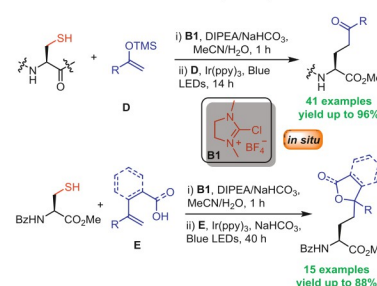
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Herein we proposed the labeling-activation-desulfurization-addition (LADA) strategy for direct synthesis of unnatural amino acids and modifications of peptides. This one-pot strategy includes the selective labeling and activation of cysteine residues, the photocatalytic desulfurization to generate radical intermediates and the subsequent radical addition to alkenes. The high efficiency of this strategy was demonstrated with more than 50 examples.

Chinese Chemical Letters 35 (2024) 108553



Radical cascade cyclization for the green and simple synthesis of silylated indolo[2,1-*a*]isoquinoline derivatives via visible light-mediated Si-H bonds activation

Zhenkai Lei^{a,c}, Fei Xue^a, Bin Wang^a, Shijie Wang^a, Yu Xia^a, Yonghong Zhang^a, Weiwei Jin^a, Chenjiang Liu^{a,b}

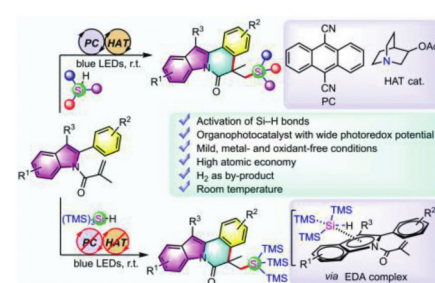
^aState Key Laboratory of Chemistry and Utilization of Carbon Based Energy Resources, Key Laboratory of Oil and Gas Fine Chemicals, Ministry of Education & Xinjiang Uygur Autonomous Region, Urumqi Key Laboratory of Green Catalysis and Synthesis Technology, College of Chemistry, Xinjiang University, Urumqi 830017, China

^bCollege of Future Technology, Institute of Materia Medica, Xinjiang University, Urumqi 830017, China

^cXinjiang Uygur Autonomous Region Product Quality Supervision and Inspection Institute, Urumqi 830011, China

Photocatalytic and photoinduced silyl radicals cascade cyclization procedures for the green and simple preparation of fused tetracyclic skeleton silylated indolo[2,1-*a*]isoquinoline-6(5*H*)-ones from 2-aryl-*N*-acryloyl indoles with hydrosilanes are developed. The photocatalytic reaction is carried out with 9,10-dicyanoanthracene (DCA) as an organophotocatalyst and 3-acetoxyquinuclidine as hydrogen atom transfer (HAT) catalyst at room temperature under metal- and oxidant-free conditions. Particularly, the simple photoinduced cascade cyclization using (TMS)₃SiH with 2-aryl-*N*-acryloyl indoles was exploited via an electron-donor-acceptor (EDA) complex under visible light irradiation.

Chinese Chemical Letters 35 (2024) 108633



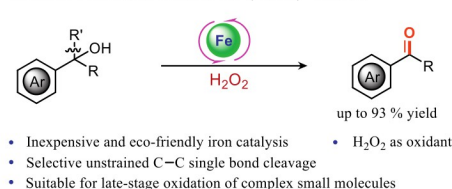
Eco-friendly iron-catalyzed oxidation of unstrained tertiary aromatic alcohols to ketones

Shanmei Zhu, Penghui Hu, Mengying Guo, Linlin Zhao, Linlin Yang, Wei-jin Gu, Wei Han

Jiangsu Collaborative Innovation Center of Biomedical Functional Materials, Jiangsu Key Laboratory of Biofunctional Materials, Key Laboratory of Applied Photochemistry, School of Chemistry and Materials Science, Nanjing Normal University, Nanjing 210023, China

Eco-friendly iron-catalyzed selective oxidation unstrained C(sp³)-C(sp³) bond cleavage of tertiary aromatic alcohols to ketones even with H₂O₂ as the oxidant is suitable for late-stage oxidation of complex small molecules.

Chinese Chemical Letters 35 (2024) 108835



Chemodivergent annulations of allenyl imides and β,γ -enones switched by nucleophilic phosphine and amine catalysts

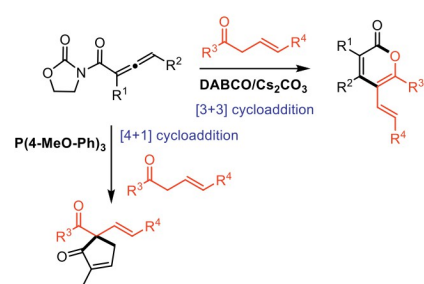
Bingsen Xiang^a, Yuhao Wang^a, Chuqing Xiao^b, Fengkai He^a, Yiyong Huang^a

^aDepartment of Chemistry, School of Chemistry, Chemical Engineering and Life Science, Wuhan University of Technology, Wuhan 430070, China

^bWuhan Britain China School, Wuhan 430022, China

The novel nucleophilic phosphine and amine-switched chemodivergent [4 + 1] and [3 + 3] annulations of allenyl imides and β,γ -enones have been achieved under mild conditions, which resulted in the formation of various cyclopentenones bearing a quaternary carbon center and tetra-substituted 2-pyranones in moderate to excellent yields, respectively.

Chinese Chemical Letters 35 (2024) 108777



Polysaccharide based supramolecular injectable hydrogels for *in situ* treatment of bladder cancer

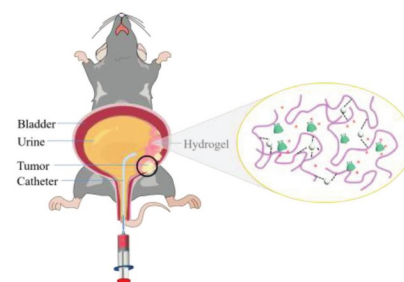
Chang Zhang^a, Jie Niu^a, Jianqiu Li^a, Hui Zhang^a, Qilin Yu^b, Yong Chen^a, Yu Liu^a

^a College of Chemistry, State Key Laboratory of Elemento-Organic Chemistry, Nankai University, Tianjin 300071, China

^b College of Life Sciences, Key Laboratory of Molecular Microbiology and Technology, Nankai University, Tianjin 300071, China

An injectable supramolecular gel can be rapidly constructed by simply mixing cationic chitosan, anionic sulfolbutylether β -cyclodextrin, and a trace amount of silver ions, showing the good inhibitory effect on bladder tumor.

Chinese Chemical Letters 35 (2024) 108556



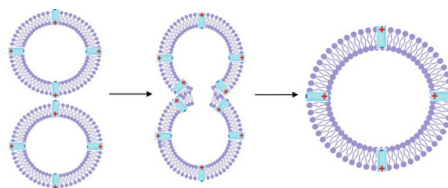
Vesicle fusion induced by zwitterionic amphiphilic channels

Qingyu Huan, Tao Lin, Yong-Hong Fu, Jun-Li Hou

Department of Chemistry, Fudan University, Shanghai 200433, China

A new strategy to induce vesicle fusion has been developed by employing zwitterionic amphiphilic channels.

Chinese Chemical Letters 35 (2024) 108566



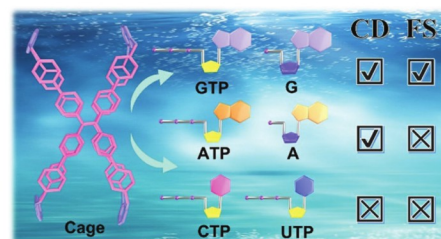
Recognition and chirality sensing of guanosine-containing nucleotides by an achiral tetraphenylethene-based octacationic cage in water

Honghong Duan, Ting Yang, Qingfang Li, Fan Cao, Pingxia Wang, Liping Cao

College of Chemistry and Materials Science, Northwest University, Xi'an 710069, China

A tetraphenylethene-based octacationic cage (**1**) is synthesized. **1** exhibits dual responses of turn-off fluorescence and turn-on circular dichroism signals to G/GTP in water.

Chinese Chemical Letters 35 (2024) 108878



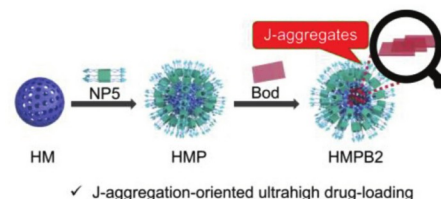
J-aggregation of photosensitizers leads to an ultrahigh drug-loading system for targeted delivery

Yun Qu, Wenjuan Jin, Yichen Wan, Zhichao Pei, Yuxin Pei

College of Chemistry & Pharmacy, Northwest A&F University, Yangling 712100, China

We reported an ultrahigh loading system (denoted as HMPB2) via J-aggregation of aza-boron dipyrromethene derivative (Bod) by using hollow MnO₂ modified with glucosamine pillar[5]arene as a carrier for highly efficient targeted drug delivery and phototherapy.

Chinese Chemical Letters 35 (2024) 108493



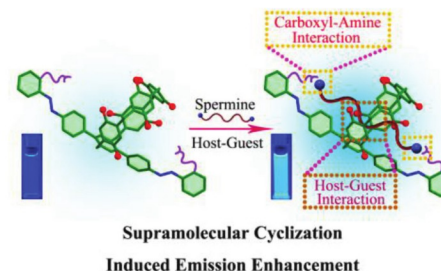
Supramolecular cyclization induced emission enhancement in a pillar[5]arene probe for discrimination of spermine

Yibin Zhou, Hao Tang, Hanlun Wu, Xiaomei Jiang, Lingyun Wang, Derong Cao

State Key Laboratory of Luminescent Materials and Devices, School of Chemistry and Chemical Engineering, South China University of Technology, Guangzhou 510641, China

By utilizing the mechanism of supramolecular cyclization induced emission enhancement, a pillar[5]arene probe functionalized with multiple binding sites demonstrates high selectivity and sensitivity in detecting spermine.

Chinese Chemical Letters 35 (2024) 108626



Talaroclauxins A and B: Duclauxin-ergosterol and duclauxin-polyketide hybrid metabolites with complicated skeletons from *Talaromyces stipitatus*

Qin Li^a, Mi Zhang^{a,b}, Xiaotian Zhang^a, Lanqin Li^a, Meijia Zheng^a, Jinbing Kang^a, Fei Liu^a, Qun Zhou^a, Xiaonian Li^c, Weiguang Sun^a, Junjun Liu^a, Chunmei Chen^a, Hucheng Zhu^a, Yonghui Zhang^a

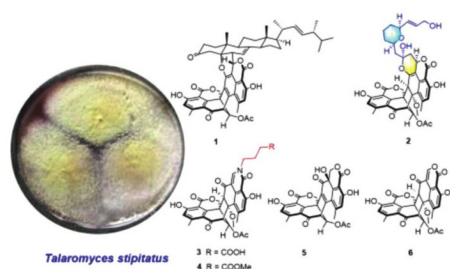
^aHubei Key Laboratory of Natural Medicinal Chemistry and Resource Evaluation, School of Pharmacy, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

^bDepartment of In Vitro Diagnostic Reagent, National Institutes for Food and Drug Control, Beijing 100050, China

^cState Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, China

Two novel duclauxin hybrids, talaroclauxins A and B (**1** and **2**), were obtained from *Talaromyces stipitatus*, along with three new (**3–5**) and one known analogues (**6**). Compound **1** is the first example of duclauxin-ergosterol hybrid featuring an unprecedented dodecacyclic ring system. Compound **2** is a new member of the rare duclauxin-polyketide hybrid. Compound **5** displayed moderate neuroprotective effects in SH-SY5Y cells.

Chinese Chemical Letters 35 (2024) 108193



IR780/Gemcitabine-conjugated metal-phenolic network enhanced photodynamic cancer therapy

Songtao Zhou^{a,b,c}, Hao Tian^{a,b}, Jie Yan^{a,b}, Zhan Zhang^{a,b}, Guohao Wang^{a,b}, Xinying Yu^{a,b}, Wei Sang^{a,b}, Bei Li^{a,b}, Greta S.P. Mok^d, Jie Song^c, Yunlu Dai^{a,b}

^aCancer Center and Institute of Translational Medicine, Faculty of Health Sciences, University of Macau, Macau 999078, China

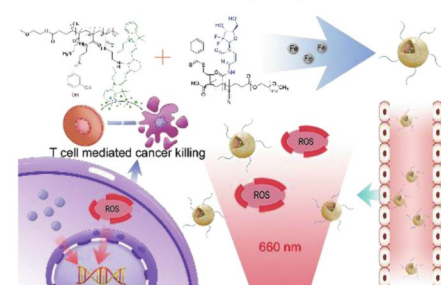
^bMoE Frontiers Science Center for Precision Oncology, University of Macau, Macau 999078, China

^cInstitute of Basic Medicine and Cancer (IBMC), Chinese Academy of Sciences, The Cancer Hospital of the University of Chinese Academy of Sciences, Hangzhou 310022, China

^dBiomedical Imaging Laboratory (BIG), Department of Electrical and Computer Engineering, Faculty of Science and Technology, University of Macau, Macau 999078, China

Both IR780 and gemcitabine were PEGylated to form metal phenolic network (MPN) to overcome their inherent defects. And the synergistic therapy enhanced photodynamic therapy by promoting cell apoptosis and facilitating T-cell mediated anti-tumor immune response.

Chinese Chemical Letters 35 (2024) 108312



Low-temperature selective synthesis of metastable α -MoC with electrochemical properties: Electrochemical co-reduction of CO_2 and MoO_3 in molten salts

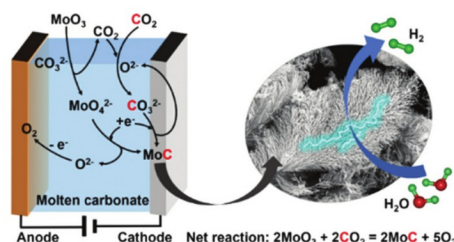
Longtao Zhu^a, Yinan Zhao^a, Wenhao Yang^a, Hsien-Yi Hsu^b, Ping Peng^a, Fang-Fang Li^a

^aSchool of Materials Science and Engineering, Huazhong University of Science and Technology, Wuhan 430074, China

^bSchool of Energy and Environment & Department of Materials Science and Engineering, City University of Hong Kong, Hong Kong 999077, China

α -MoC with reed flower-like morphology was prepared by co-reduction of CO_2 and MoO_3 in molten salt at low temperature for electrocatalytic hydrogen evolution, and the growth process and formation mechanism of α -MoC were revealed.

Chinese Chemical Letters 35 (2024) 108583



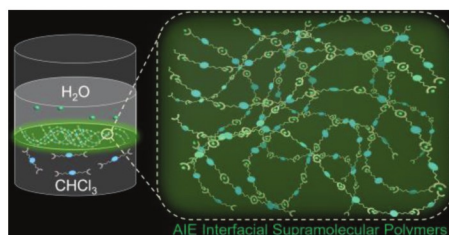
AIE interfacial supramolecular polymers

Qingyun Li, Ziqing Hu, Xiaofan Ji

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, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, China

For some sections of supramolecular monomers, the distinction regarding monomer solubility brings about the tackles for the generation of AIE supramolecular polymers, for which interfacial polymerization as a facile approach conquers this shortcoming. Herein, this work employed interfacial polymerization approach to produce AIE interfacial supramolecular polymers based on metal-coordination interactions.

Chinese Chemical Letters 35 (2024) 108741



Highly crystalline, highly stable n-type ultrathin crystalline films enabled by solution blending strategy toward organic single-crystal electronics

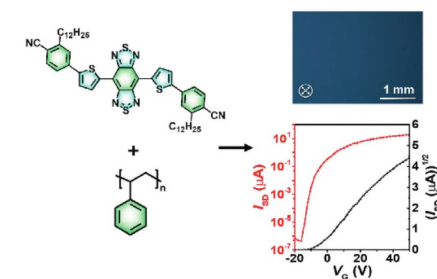
Yang Liu^a, Shuyu Li^a, Yihan Zhang^a, Xiaoting Zhu^a, Fangxu Yang^a, Fei Jiao^a, Wenping Hu^{a,b}

^aTianjin Key Laboratory of Molecular Optoelectronic Sciences, Department of Chemistry, School of Science, Tianjin University, Tianjin 300072, China

^bHaihe Laboratory of Sustainable Chemical Transformations, Tianjin 300192, China

By blending with the polymers, n-type ultrathin crystalline thin film was successfully prepared by the method of meniscus-guided coating. Remarkably, the n-type crystalline films exhibit ultrathin thickness as low as 5 nm and excellent electron mobility of $1.58 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$.

Chinese Chemical Letters 35 (2024) 108764



Modulation of polymerization rate of N-carboxyanhydrides in a biphasic system

Guonan Ji^a, Xuetao Zheng^c, Xiangdie Hou^d, Xiao Sun^a, Shijie Wang^a, Xiaohong Li^d, Jianjun Cheng^{b,c}, Ziyuan Song^a

^aInstitute of Functional Nano & Soft Materials (FUNSOM), Jiangsu Key Laboratory for Carbon-Based Functional Materials and Devices, Soochow University, Suzhou 215123, China

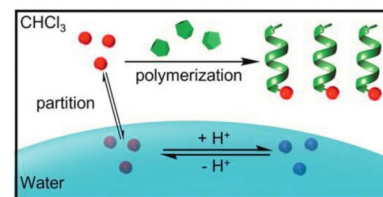
^bResearch Center for Industries of the Future, Westlake University, Hangzhou 310030, China

^cSchool of Engineering, Westlake University, Hangzhou 310030, China

^dThe Key Lab of Health Chemistry and Molecular Diagnosis of Suzhou, College of Chemistry, Chemical Engineering and Materials Science, Soochow University, Suzhou 215123, China

The polymerization kinetics of N-carboxyanhydrides in a water/oil biphasic system was modulated through the tuning of aqueous pH, the initial location of initiators, and the pK_a of initiating amines, which enabled the minimization of water-induced monomer degradations and facilitated the efficient preparation of branched polypeptide materials.

Chinese Chemical Letters 35 (2024) 108872



Carbon dots-incorporated CuSeO₃ rationally regulates activity and selectivity of the hydrogen species via light-converted electrons

Yuqi Ren^a, Hongxu Zhang^a, Caihong Hao^a, Qing Chang^a, Ning Li^a, Jinlong Yang^{a,b}, Shengliang Hu^a

^aResearch Group of New Energy Materials and Devices, North University of China, Taiyuan 030051, China

^bState Key Laboratory of New Ceramics and Fine Processing, Tsinghua University, Beijing 100084, China

A novel photocatalyst combining amino-functionalized carbon dots with copper selenite nanoparticles is developed for simultaneously improving selectivity and activity. This photocatalyst can catalyze ammonia borane for selective hydrogenation of functional aryl nitro to anilines in aqueous solvent at room temperature, achieving 100% selectivity and 100% conversion rate within a few short minutes of reaction time under visible light irradiation.

Chinese Chemical Letters 35 (2024) 108225

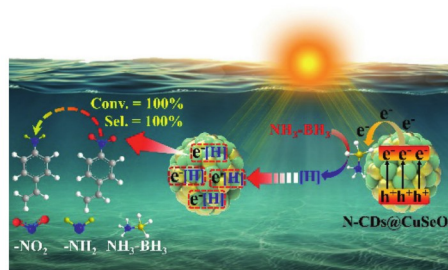


Photo-induced Ag modulating carbon dots: Greatly improved fluorescent properties and derived sensing application

Yuwei Wang^a, Ye Li^a, Guixiang Yang^a, Xiaofeng Yang^b, Chenglu Yan^c, Huaqiao Peng^c, Huiyong Wang^d, Juan Du^a, Baozhan Zheng^a, Yong Guo^a

^aDepartment of Chemistry, Sichuan University, Chengdu 610064, China

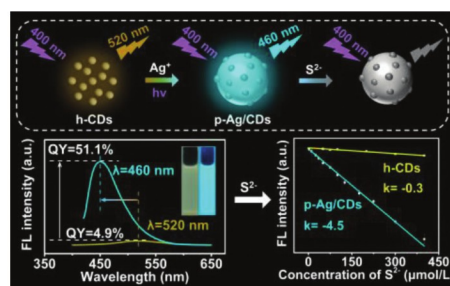
^bInstitute of Quality Standard and Testing Technology for Agro-products, Sichuan Academy of Agricultural Sciences, Chengdu 610066, China

^cKey Laboratory of Aviation Fuel & Chemical Airworthiness and Green Development, The Second Research Institute of Civil Aviation Administration of China, Chengdu 610041, China

^dSchool of Chemistry and Chemical Engineering, Henan Normal University, Xinxiang 453007, China

A novel photo-induced Ag modulating strategy was developed for improving the fluorescence quantum yield of carbon dots (CDs) to 51.1% from 4.9% with an obvious blue-shift, the obtained photo-induced Ag/CDs (p-Ag/CDs) possess a derived sensing application in S^{2-} detection with a significantly enhanced sensitivity than original hydrophobic CDs (h-CDs).

Chinese Chemical Letters 35 (2024) 108277



Preparation of multicolor carbon dots with thermally turn-on fluorescence for multidimensional information encryption

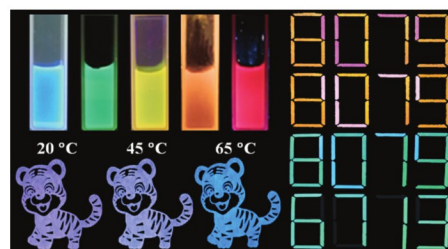
Chan Wang^a, Jianfeng Huang^b, Yimin He^a, Guoxia Ran^a, Qijun Song^a

^aKey Laboratory of Synthetic and Biological Colloids, Ministry of Education, International Joint Research Center for Photoresponsive Molecules and Materials, School of Chemical & Material Engineering, Jiangnan University, Wuxi 214122, China

^bDepartment of Radiation Oncology, Affiliated Hospital of Jiangnan University, Wuxi 214122, China

Multicolor carbon dots (CDs) with turn-on thermochromic characteristics are developed by scrutinizing selection of precursors, and the resulting CDs exhibit much more enhanced security and promising application in data storage and encryption.

Chinese Chemical Letters 35 (2024) 108420



Dimesitylboryl-ended oligothiophene with tetrazine as core: Synthesis, structure and Diels–Alder reactivity

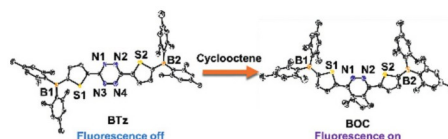
Shimin Zhou^{a,b}, Yang Liu^{a,b}, Yuyin Hao^{a,b}, Zhiqiang Liu^{a,b}, Xiaoqiang Yu^a

^aState Key Laboratory of Crystal Materials, Shandong University, Ji'nan 250100, China

^bShenzhen Research Institute of Shandong University, Shenzhen 518057, China

The first crystal structure of dehydrogenated tetraazine-cyclooctene product was determined.

Chinese Chemical Letters 35 (2024) 108325



Probing mitochondrial damage using a fluorescent probe with mitochondria-to-nucleolus translocation

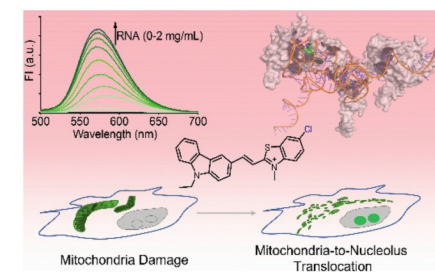
Chi Li^a, Chong Zong^a, Yang Liu^{a,b}, Zhiqiang Liu^{a,b}, Kang-Nan Wang^{a,b}, Xiaoqiang Yu^a

^aState Key Laboratory of Crystal Materials, Shandong University, Ji'nan 250100, China

^bShenzhen Research Institute of Shandong University, Shenzhen 518057, China

A fluorescent probe with a high affinity for nucleic acids, as well as good targeting of mitochondria in living cells was developed. When mitochondria are damaged, the probe can migrate into the nucleolus and irradiate it as a signal to feedback on the extent of mitochondria damage.

Chinese Chemical Letters 35 (2024) 108323



Photoluminescent nickel(II) carbene complexes with ligand-to-ligand charge-transfer excited states

Chun-Liang Hou^{a,b}, Jia-Xi Song^{a,b}, Xiaoyong Chang^c, Yong Chen^{a,b}

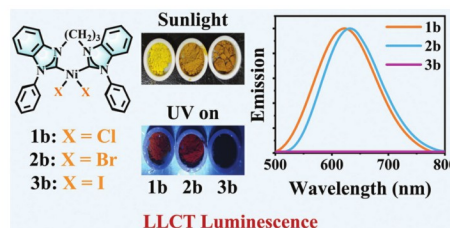
^aKey Laboratory of Photochemical Conversion and Optoelectronic Materials & CAS-HKU Joint Laboratory on New Materials, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China

^bUniversity of Chinese Academy of Sciences, Beijing 100049, China

^cDepartment of Chemistry, Southern University of Science and Technology, Shenzhen 518055, China

The strong σ -donating properties of benzimidazole-based *N*-heterocyclic carbene ligands are able to elevate the nonradiative metal-centered state, thereby generating emissive nickel(II) complexes in solid state. The orange-red emissions originate from singlet excited states with ligand (halogen)-to-ligand (carbene) charge-transfer character.

Chinese Chemical Letters 35 (2024) 108333



White light generation by regulating hydrogen bond-sensitive ESPT of naphthalimide dyes

Jin Li^{a,b,c}, Qinglong Qiao^b, Ning Xu^b, Wei Zhou^b, Jingli Yuan^a, Zhaochao Xu^{b,c}

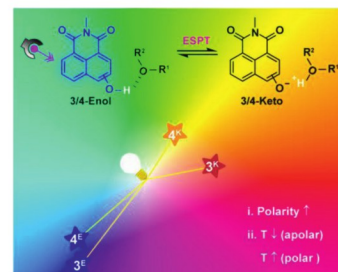
^aState Key Laboratory of Fine Chemicals, School of Chemistry, Dalian University of Technology, Dalian 116024, China

^bCAS Key Laboratory of Separation Science for Analytical Chemistry, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China

^cUniversity of Chinese Academy of Sciences, Beijing 100049, China

The 4- or 3-hydroxyl-substituted naphthalimide derivative forms intermolecular hydrogen bonds with adjacent molecules in the environment, and undergoes excited-state intermolecular proton transfer under irradiation, accompanied by blue-yellow or blue-red double fluorescence emission, respectively. By adjusting the mixing ratio of the two dyes and the solvent polarity and temperature, the full spectrum from blue to red light and white light emission can be obtained.

Chinese Chemical Letters 35 (2024) 108348



Keto-form directed hierarchical chiral self-assembly of Schiff base derivatives with amplified circularly polarized luminescence

Yimeng Sun^a, Yuqian Jiang^b, Jian Jiang^b, Tiesheng Li^a, Minghua Liu^{a,c,d}

^a Green Catalysis Center, and College of Chemistry, Zhengzhou University, Zhengzhou 450001, China

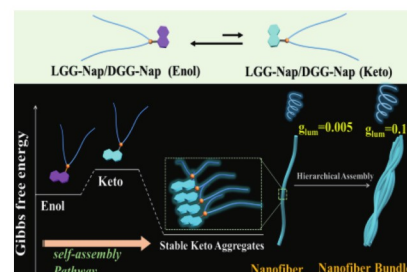
^b Key Laboratory of Nanosystem and Hierarchical Fabrication, CAS Center for Excellence in Nanoscience, National Center for Nanoscience and Technology, Beijing 100190, China

^c National Laboratory for Molecular Science (BNLMS), CAS Laboratory of Colloid, Interface and Chemical Thermodynamics, Institute of Chemistry, Chinese Academy of Science, Beijing 100190, China

^d University of Chinese Academy of Sciences, Beijing 100190, China

The energy-unfavored keto-form can direct the chiral self-assembly and significantly amplify the dissymmetry factor (g_{lum}) of circularly polarized luminescence (CPL). In particular, g_{lum} was significantly amplified from zero in solution through the 0.005 in individual nanofiber to 0.1 in nanofiber bundles.

Chinese Chemical Letters 35 (2024) 108409



Self-adaptive hydrogel for breast cancer therapy via accurate tumor elimination and on-demand adipose tissue regeneration

Ran Tian^a, Xinyu Qiu^b, Wenyun Mu^a, Bolei Cai^c, Zhongning Liu^d, Shiyu Liu^e, Xin Chen^a

^a School of Chemical Engineering and Technology, Department of Chemical Engineering, Shaanxi Key Laboratory of Energy Chemical Process Intensification, Xi'an Jiao Tong University, Xi'an 710049, China

^b School of Stomatology, State Key Laboratory of Military Stomatology & National Clinical Research Center for Oral Diseases & Shaanxi Clinical Research Center for Oral Diseases, Department of Preventive Dentistry, The Fourth Military Medical University, Xi'an 710032, China

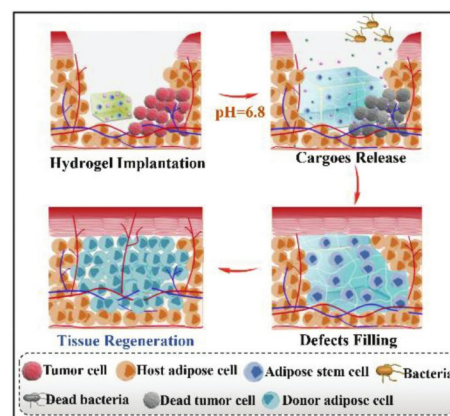
^c School of Stomatology, State Key Laboratory of Military Stomatology, Department of Oral and Maxillofacial Surgery, The Fourth Military Medical University, Xi'an 710032, China

^d Department of Prosthodontics, Peking University School and Hospital of Stomatology, National Clinical Research Center for Oral Diseases, National Engineering Laboratory for Digital and Material Technology of Stomatology, Beijing Key Laboratory of Digital Stomatology, Beijing 100081, China

^e School of Stomatology, State Key Laboratory of Military Stomatology, National Clinical Research Center for Oral Diseases, Shaanxi International Joint Research Center for Oral Diseases, Center for Tissue Engineering, The Fourth Military Medical University, Xi'an 710032, China

A self-adaptable size and dual responsive hydrogel consisting hyaluronic acid (HA), adipose-derived stem cells (ADSCs), doxorubicin (DOX) loaded mesoporous silica nanocarriers (MSNs) and antibacterial peptides (AP) were fabricated via click chemistry and coordinate chemistry to treat breast cancer. The hydrogel exhibits a highly selective drug delivery for effective tumor therapy, triggers the AP avoiding microbial infections to promote tissue regeneration and completes filling the defects after chemotherapy by pre-seeded adipose stem cells regenerate new adipose tissue.

Chinese Chemical Letters 35 (2024) 108343



Multifunctional biodegradable nanoplatform based on oxaliplatin prodrug cross-linked mesoporous polydopamine for enhancing cancer synergetic therapy

Ping Sun^a, Zimu Li^a, Dan Zhang^a, Wenfeng Zeng^a, Yi Zheng^b, Lin Mei^{a,c}, Hongzhong Chen^a, Nansha Gao^a, Xiaowei Zeng^a

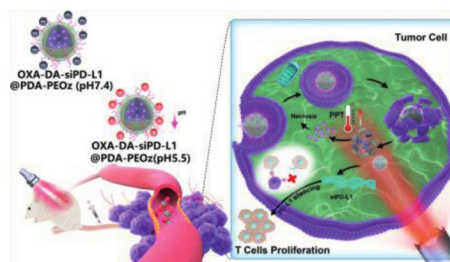
^a School of Pharmaceutical Sciences (Shenzhen), Sun Yat-sen University, Shenzhen 518107, China

^b Central Laboratory, University of Chinese Academy of Sciences-Shenzhen Hospital, Shenzhen 518106, China

^c Tianjin Key Laboratory of Biomedical Materials, Key Laboratory of Biomaterials and Nanotechnology for Cancer Immunotherapy, Institute of Biomedical Engineering, Chinese Academy of Medical Sciences and Peking Union Medical College, Tianjin 300192, China

The multifunctional nanoplatform was modified with poly(2-ethyl-2-oxazoline) (PEOz), which showed charge reversal in the tumor microenvironment, and exerted the lysosomal escape effect in tumor cells to improve antitumor effect.

Chinese Chemical Letters 35 (2024) 108346



Size-dependent macrophage-targeting of mannose-modified rosiglitazone liposomes to alleviate inflammatory bowel disease

Erjin Wang^a, Run Han^a, Mingyue Wu^a, Yuan He^b, Yaxin Cheng^a, Jiahong Lu^{a,c,d}, Ying Zheng^{a,c}

^aState Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences (ICMS), University of Macau, Macau 999078, China

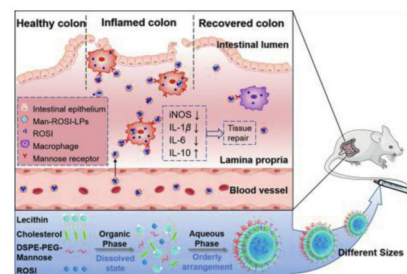
^bDepartment of Pharmacy, Xuzhou Medical University, Xuzhou 221004, China

^cFaculty of Health Sciences, University of Macau, Macau 999078, China

^dGuangdong-Hong Kong-Macau Joint Lab on Chinese Medicine and Immune Disease Research, University of Macau, Macau 999078, China

This study designed the size-dependent mannose-modified liposomes for macrophage targeting and the large particles (300 nm) achieved the best targeting and anti-inflammatory effect, which was a promising strategy with high efficiency for inflammatory bowel disease (IBD) treatment.

Chinese Chemical Letters 35 (2024) 108361



H₂S-releasing adhesive hydrogel as oral radioprotectant for gastrointestinal tract radioprotection

Peng Shan^{a,b}, Jing Liao^{a,b}, Jiayi Li^a, Chengyan Wang^{b,c}, Jie Zhou^b, Linqiang Mei^b, Yunlu Dai^d, Qiang Wang^a, Wenyan Yin^b

^aLaboratory for Micro-sized Functional Materials, Department of Chemistry and College of Elementary Education, Capital Normal University, Beijing 100048, China

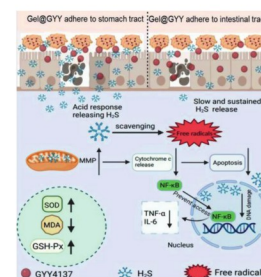
^bCAS Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety, Institute of High Energy Physics, Chinese Academy of Sciences, Beijing 100049, China

^cDepartment of Pharmacy, Southwest Hospital, The Third Military Medical University, Chongqing 400038, China

^dCancer Centre and Institute of Translational Medicine, Faculty of Health Sciences, University of Macau, Macau SAR 999078, China

An adhesive oral radioprotectant Gel@GYY that integrates a porous gelatin-based hydrogel and a H₂S gas donor GYY4137 was reported. Gel@GYY can responsively and sustainably release low-dose H₂S in the gastrointestinal tract especially in colon because of their high free radicals scavenging ability and reduced inflammatory cytokines levels aiming at effective gastrointestinal (GI) tract radioprotection.

Chinese Chemical Letters 35 (2024) 108545



Photoinduced palladium-catalyzed 1,3-diene-selective fluoroalkylation compounds as potential bactericidal agent against *Xanthomonas oryzae* pv. *oryzae*

Yu Shi^{a,b}, Zhao-Sheng Zhang^a, Jiang Shao^a, Chen Fu^a, Lan-Tu Xiong^a, Zhao-Dong Li^c, Zi-Ning Cui^a

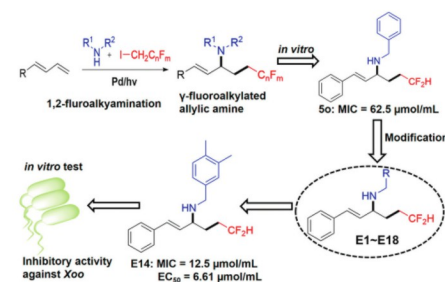
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^bHenry Fok School of Biology and Agriculture, Shaoguan University, Shaoguan 512005, China

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A novel series of photoinduced palladium-catalyzed 1,3-diene-selective fluoroalkylation compounds were synthesized and biologically evaluated. Some of them can be used as potential bactericides against *Xanthomonas oryzae* pv. *oryzae* for further investigation.

Chinese Chemical Letters 35 (2024) 108794



New insight into polystyrene ion exchange resin for efficient cesium sequestration: The synergistic role of confined zirconium phosphate nanocrystalline

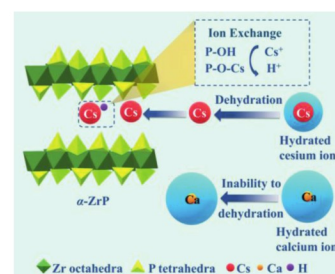
Mengzhou Wang^a, Mingyan Fu^a, Junfeng Li^b, Yihui Niu^a, Qingrui Zhang^a, Qina Sun^a

^aHebei Key Laboratory of Heavy Metal Deep-Remediation in Water and Resource Reuse, School of Environmental and Chemical Engineering, Yanshan University, Qinhuangdao 066004, China

^bLaboratory of Environmental Technology, INET, Tsinghua University, Beijing 100084, China

ZrP-PS demonstrated remarkable cesium sequestration in both batch and continuous experiments, due to synergy of size-screen sorption of confined α -ZrP and sulfonic acid group preconcentration of PS. ZrP-PS holds great promise as purification packages for the emergency treatment of radioactively contaminated water.

Chinese Chemical Letters 35 (2024) 108442



Efficient water disinfection with ball milled Mg-biochar: The key role of trace Cu

Yanchao Jin^{a,d}, Suixiaochen Chen^{a,d}, Peiwen Huang^{a,d}, Xiongjian Chen^{a,d}, Chun-Yan Lin^{b,d}, Li-Ping Li^c, Xiao Chen^{a,d}, Rui Ding^{a,d}, Jianxi Liu^{a,d}, Riyao Chen^{a,d}

^a College of Environmental and Resource Sciences, Fujian Normal University, Fuzhou 350117, China

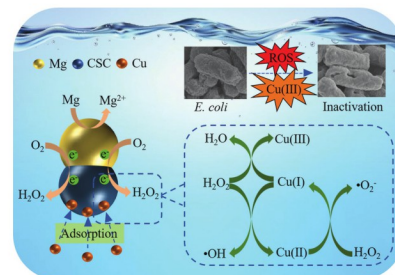
^b School of Materials and Chemical Engineering, Minjiang University, Fuzhou 350108, China

^c Research and Development Center for Watershed Environmental Eco-Engineering, Beijing Normal University, Zhuhai 519087, China

^d Fujian Key Laboratory of Pollution Control & Resource Reuse, Fuzhou 350007, China

Trace Cu(II) in the wastewater can play an important role for disinfection. It can be enriched on the CSC surface and efficiently reacts with H₂O₂ to generate reactive species.

Chinese Chemical Letters 35 (2024) 108444



Plasmonic Ag nanoparticles decorated MIL-101(Fe) for enhanced photocatalytic degradation of bisphenol A with peroxymonosulfate under visible-light irradiation

Yan Gong^a, Yu Ding^a, Qi Tang^a, Fei Lian^a, Chun Bai^a, Ruiyi Xie^a, Haijiao Xie^b, Xu Zhao^c

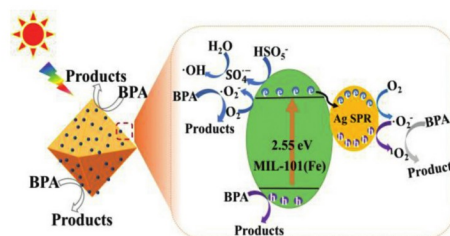
^a School of Energy and Environmental Engineering, Hebei University of Technology, Tianjin 300401, China

^b Hangzhou Yanqu Information Technology Co., Ltd., Hangzhou 310003, China

^c Key Laboratory of Drinking Water Science and Technology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China

Plasmonic Ag modified MIL-101(Fe) exhibited excellent photocatalytic PMS activation for bisphenol A degradation under visible light irradiation.

Chinese Chemical Letters 35 (2024) 108475



Three-dimensional heterogeneous electro-Fenton system with reduced graphene oxide based particle electrode for Acyclovir removal

Nan Cai^a, Ge Bai^{a,b}, Ting Zhang^b, Yongqian Lei^a, Pengran Guo^a, Zhiliang Chen^c, Jingwei Xu^a

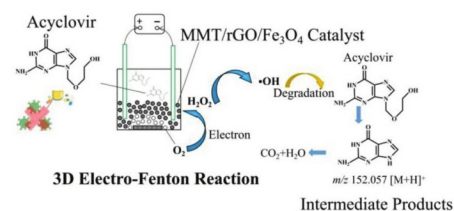
^a Guangdong Provincial Key Laboratory of Chemical Measurement and Emergency Test Technology, Guangdong Provincial Engineering Research Center for Online Monitoring of Water Pollution, Institute of Analysis, Guangdong Academy of Sciences (China National Analytical Center, Guangzhou), Guangzhou 510070, China

^b College of Petrochemical Engineering, Lanzhou University of Technology, Lanzhou 730000, China

^c Guangdong Engineering Technology Research Center of Heavy Metal Pollution Control and Restoration in Farmland Soil, South China Institute of Environmental Sciences, MEE, Guangzhou 510535, China

Novel particle electrodes (MMT/rGO/Fe₃O₄) were synthesized by depositing Fe₃O₄ nanoparticles on reduced graphene oxide modified montmorillonite and acted as catalysts to promote oxidation performance in a three-dimensional electro-Fenton (3D-EF) system. Potential degradation mechanism and intermediate products were proposed.

Chinese Chemical Letters 35 (2024) 108514



Highly sensitive Fe³⁺ luminescence detection via single-ion adsorption

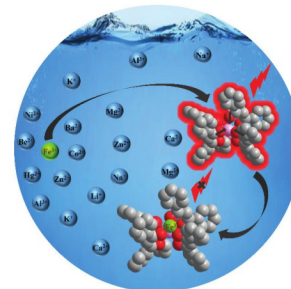
Yujing Li^a, Xiaojun Zhang^a, Zicheng Wang^a, Lina Zhao^{a,b}, Yuxin Li^a

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

^b Department of Food & Environmental Engineering, East University of Heilongjiang, Harbin 150066, China

The ultrasensitive luminescence detection toward Fe³⁺ ion with picomolar-level detection limit has been realized, benefiting from an advanced and distinct single-ion adsorption process.

Chinese Chemical Letters 35 (2024) 108532



Activation of peroxymonosulfate by FeVO_{3-x} for the degradation of carbamazepine: Vanadium mediated electron shuttle and oxygen vacancy modulated interface chemistry

Leiduo Lai^{a,b}, Hongyu Zhou^{a,b}, Yichen Hong^c, Mengfan Luo^{a,b}, Yang Shi^{a,b}, Heng Zhang^{a,b}, Zhaokun Xiong^{a,b}, Gang Yao^{b,d}, Bo Lai^{a,b}

^aState Key Laboratory of Hydraulics and Mountain River Engineering, College of Architecture and Environment, Sichuan University, Chengdu 610065, China

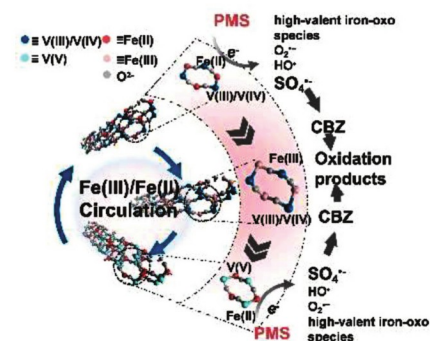
^bSino-German Centre for Water and Health Research, Sichuan University, Chengdu 610065, China

^cChengdu Baixi Environmental Technology Company, Chengdu 610065, China

^dInstitute of Environmental Engineering, RWTH Aachen University, Germany

Low-valent vanadium species could serve as efficient interior electron donors to accelerate surface Fe circulation for rapid reactive species generation.

Chinese Chemical Letters 35 (2024) 108580



Reshaping the imprinting strategy through the thermo-responsive moiety-derived “deep eutectic solvents” effect

Huihuang Xiong^a, Yiqun Wan^{a,b}, Yong Fan^b, Mengjia Xu^b, Aiping Yan^c, Yushan Zhang^d, Qifei Jiang^a, Hao Wan^a

^aState Key Laboratory of Food Science and Technology, Nanchang University, Nanchang 330047, China

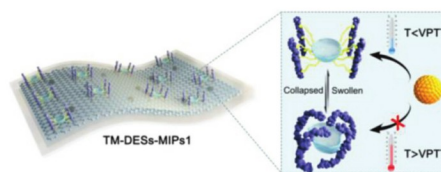
^bSchool of Chemistry and Chemical Engineering, Nanchang University, Nanchang 330031, China

^cJiangxi Province Key Laboratory of Modern Analytical Science, Nanchang University, Nanchang 330031, China

^dDepartment of Computer Science, University of California Irvine, Irvine 92697, United States

TM-DESS-MIP1 with the thermo-responsive moiety-derived “deep eutectic solvents” (DESS) effect achieved enhanced adsorption and thermo-regulated elution, accompanying with a reversible volume transition between swollen and collapsed states.

Chinese Chemical Letters 35 (2024) 108382



Distance-based α -amylase biosensor fabricated with amylopectin-coated mesoporous membrane

Binglu Zhao^{a,b}, Mashooq Khan^{a,b}, Yulin Liu^a, Wenjun Tai^c, Chongyang Mu^c, Wenli Wu^{a,b}, Mei Zhao^{a,b}, Yaohong Ma^d, Li Yu^c, Jin-Ming Lin^e, Qiongzhen Hu^{a,b}

^aQilu University of Technology (Shandong Academy of Sciences), Shandong Analysis and Test Center, Ji'nan 250014, China

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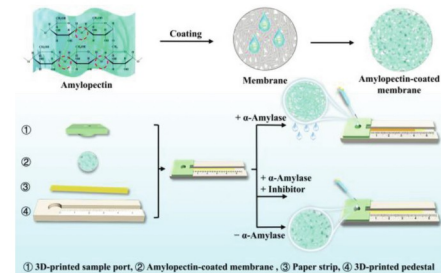
^cKey Laboratory of Colloid and Interface Chemistry, Shandong University, Ministry of Education, Ji'nan 250100, China

^dKey Laboratory for Biosensors of Shandong Province, Biology Institute, Qilu University of Technology (Shandong Academy of Sciences), Ji'nan 250353, China

^eBeijing Key Laboratory of Microanalytical Methods and Instrumentation, MOE Key Laboratory of Bioorganic Phosphorus Chemistry & Chemical Biology, Department of Chemistry, Tsinghua University, Beijing 100084, China

A biosensor that allows single-step rapid detection of α -amylase (AMY) with the distance readout is developed using amylopectin-coated mesoporous membrane. This study is very promising for disease diagnosis and hypoglycemic drug screening.

Chinese Chemical Letters 35 (2024) 108462



Silicon quantum dots-based fluorescent sensor for the detection of cobalt with high sensitivity and selectivity

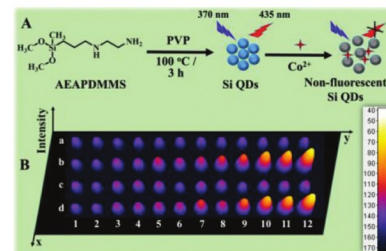
Ebtihaj Mohammed Sullam^{a,b}, Khalid Mohammed Adam^b, Juanjuan Liu^a, Hongli Chen^a, Jianxi Xiao^a

^aState Key Laboratory of Applied Organic Chemistry, College of Chemistry and Chemical Engineering, Lanzhou University, Lanzhou 730000, China

^bDepartment of Chemistry, Faculty of Education, University of Kordofan, El Obeid 51111, Sudan

A facile one-pot hydrothermal approach was developed for fabricating Si QDs to detect Co^{2+} in environmental water samples. Si QDs-based test paper also shows high sensitivity, good selectivity, and excellent anti-interference capability for Co^{2+} detection.

Chinese Chemical Letters 35 (2024) 108476



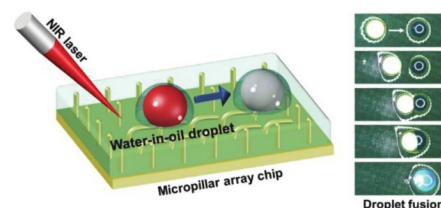
A shape-reconfigurable, light and magnetic dual-responsive shape-memory micropillar array chip for droplet manipulation

Wen-Qi Ye, Wen-Xin Fu, Xiao-Peng Liu, Chun-Guang Yang, Zhang-Run Xu

Research Center for Analytical Sciences, Northeastern University, Shenyang 110819, China

We fabricated a shape-reconfigurable micropillar array chip for manipulating water-in-oil droplets. Reversible micropillar deformation facilitates droplet manipulation, and water-in-oil droplets prevent the evaporation of water droplets during the manipulation.

Chinese Chemical Letters 35 (2024) 108494



Adolescent alcohol exposure changes RNA modifications in adult brain by mass spectrometry-based comprehensive profiling analysis

Ying-Ying Chen^{a,b,c}, Zhu Gui^d, Di Hu^e, Meng-Yuan Chen^a, Jin-Gang He^d, Si-Yu Yu^b, Yu-Qi Feng^a, Jie Wang^{d,f,g}, Bi-Feng Yuan^{a,b,c}

^a College of Chemistry and Molecular Sciences, Research Center of Public Health, Renmin Hospital of Wuhan University, Wuhan University, Wuhan 430072, China

^b Department of Radiation and Medical Oncology, Zhongnan Hospital of Wuhan University, School of Public Health, Wuhan University, Wuhan 430071, China

^c Cancer Precision Diagnosis and Treatment and Translational Medicine Hubei Engineering Research Center, Zhongnan Hospital of Wuhan University, Wuhan Research Center for Infectious Diseases and Cancer, Chinese Academy of Medical Sciences, Wuhan 430071, China

^d Key Laboratory of Magnetic Resonance in Biological Systems, State Key Laboratory of Magnetic Resonance and Atomic and Molecular Physics, National Center for Magnetic Resonance in Wuhan, Wuhan Institute of Physics and Mathematics, Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Sciences-Wuhan National Laboratory for Optoelectronics, Wuhan 430071, China

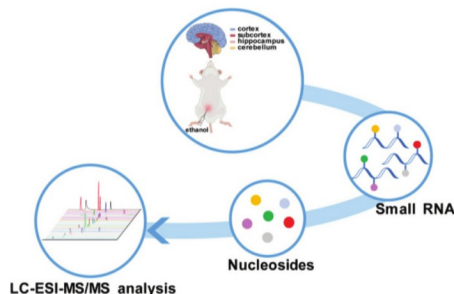
^e Phase I Clinical Trial Laboratory, Zhongnan Hospital of Wuhan University, Wuhan 430071, China

^f Institute of Neuroscience and Brain Diseases, Xiangyang Central Hospital, Affiliated Hospital of Hubei University of Arts and Science, Xiangyang 441000, China

^g University of Chinese Academy of Sciences, Beijing 101408, China

Comprehensive mass spectrometry analysis suggests that alcohol exposure during adolescence may impose a long-lasting impact on brain through changing RNA modifications.

Chinese Chemical Letters 35 (2024) 108522



Triplex-structure based DNA circuits with ultra-low leakage and high signal-to-noise ratio

Huan Liu^a, Zhihao Ming^b, Yuanpeng Zhang^{a,c}, Qidong Xia^b, Hao Hu^a, Ruijie Liu^a, Yuheng Liao^a, Yizhou Liu^a, Xiao Liu^a, Xiaoping Zhang^c, Longjie Li^{a,d}, Shaogang Wang^b, Xianjin Xiao^{a,e}

^a Institute of Reproductive Health, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

^b Department and Institute of Urology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

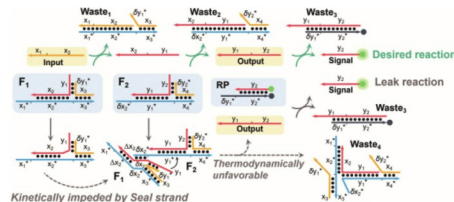
^c Department and Institute of Urology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

^d School of Life Science and Technology, Wuhan Polytechnic University, Wuhan 430030, China

^e Department of Laboratory Medicine, Tongji hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

A system-level triplex-structure based solution for leak reaction in the DNA strand displacement cascades has been developed for the first time. It significantly enhances the signal-noise-ratio of clamp-based DNA circuits, up to 50 times, while it maintains a high reaction rate of desired reaction. High-performance triplex-structure based logic circuits were constructed successfully as well.

Chinese Chemical Letters 35 (2024) 108555



Freezing-directed construction of enzyme/nano interfaces: Reagentless conjugation, superior activity, and better stability

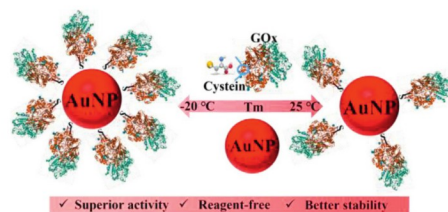
Ke Quan^a, Jiajie Tong^a, Lifang Chen^a, Shuyao Fang^a, Mengjiao Li^a, Linlin Wu^b, Zhihe Qing^a

^aHunan Provincial Key Laboratory of Cytochemistry, School of Food and Bioengineering, School of Chemistry and Chemical Engineering, Changsha University of Science and Technology, Changsha 410114, China

^bDepartment of Oncology, Tengzhou Central People's Hospital Affiliated Xuzhou Medical University, Tengzhou 277500, China

Herein, the freezing-directed conjugation of enzyme and nano interface was developed without extra reagent, which exhibits superior activity and excellent stability.

Chinese Chemical Letters 35 (2024) 108894



Phosphorous and selenium tuning Co-based non-precious catalysts for electrosynthesis of H₂O₂ in acidic media

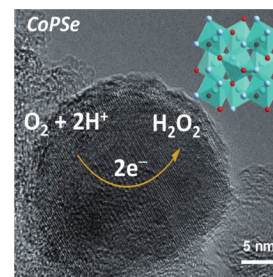
Jingxin Xie^a, Lijie Zhong^a, Xin Yang^a, Dequan He^a, Kanglong Lin^a, Xiaoxia Chen^a, Huan Wang^a, Shiyu Gan^a, Li Niu^{a,b}

^aGuangdong Engineering Technology Research Center for Photoelectric Sensing Materials & Devices, Guangzhou Key Laboratory of Sensing Materials & Devices, Center for Advanced Analytical Science, School of Chemistry and Chemical Engineering, Guangzhou University, Guangzhou 510006, China

^bDepartment of Chemistry and Environment Science, Fujian Provincial Key Laboratory of Modern Analytical Science and Separation Technology, Minnan Normal University, Zhangzhou 363000, China

A highly active and selective CoPSe electrocatalyst was proposed for two-electron oxygen reduction reaction toward H₂O₂ production in acidic media.

Chinese Chemical Letters 35 (2024) 108472



Insertion of pillar[5]arene into Tröger's base-derived porous organic polymer for promoted heterogeneous catalytic performance in Knoevenagel condensation and CO₂ fixation

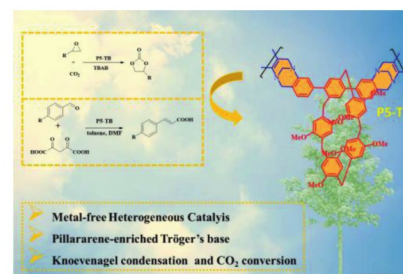
Lu Liu^a, Ziyi Liu^a, Jingnan Cui^a, Guiling Ning^{a,b}, Weitao Gong^{a,b}

^aState Key Laboratory of Fine Chemicals, School of Chemical Engineering, Dalian University of Technology, Dalian 116024, China

^bEngineering Laboratory of Boric and Magnesic Functional Material Preparative and Applied Technology, Dalian 116024, China

Herein, we rationally designed and successfully prepared a new Tröger's base (TB)-derived porous organic polymer by inserting pillar[5]arene macrocycle as a positively auxiliary group. Combining the merits of pillar[5]arene macrocycle and TB moiety, the as-prepared polymer was further explored as an effective metal-free heterogeneous catalyst and exhibited promoted catalytic performance in Knoevenagel condensation and CO₂ conversion. This work provides a new strategy to fabricate metal-free heterogeneous catalysts based on macrocyclic POPs.

Chinese Chemical Letters 35 (2024) 108422



Ultrafast photoexcitation dynamics behavior of hydrogen-bonded polyfluoreneol

Man Xu^a, Chuanxin Wei^a, Yunlong Zhang^a, Hao Li^a, Jingyao Ma^a, Jinyi Lin^b, Shengjie Wang^b, Wei Xue^a, Qi Wei^c, Linghai Xie^a, Wei Huang^{a,b,c}

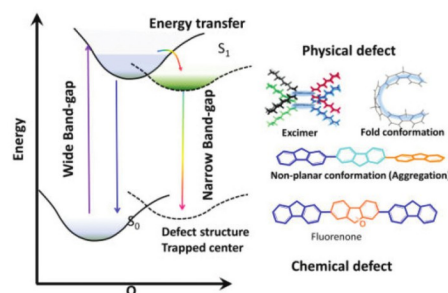
^aState Key Laboratory of Organic Electronics and Information Displays & School of Chemistry and Life Sciences & Institute of Advanced Materials (IAM), Nanjing University of Posts & Telecommunications, Nanjing 210023, China

^bKey Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Nanjing Tech University (NanjingTech), Nanjing 211816, China

^cFrontiers Science Center for Flexible Electronics (FSCFE), Shaanxi Institute of Flexible Electronics (SIFE) & Shaanxi Institute of Biomedical Materials and Engineering (SIBME), Northwestern Polytechnical University, Xi'an 710072, China

Ultrafast exciton migrations are happened from "host" individual chain to "guest" aggregation in the wide band-gap polyfluorene, which is key original factor to cause an instable deep-blue emission toward the optoelectronic devices.

Chinese Chemical Letters 35 (2024) 108279



Defect reduction to enhance the mechanical strength of nanocellulose carbon aerogel

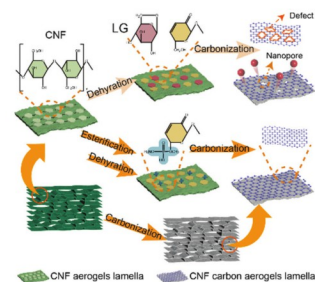
Haihong Lai^a, Zehong Chen^a, Hao Zhuo^a, Yijie Hu^a, Xuan Zhao^a, Jiwang Yi^a, Hongzhi Zheng^a, Ge Shi^a, Yifan Tong^a, Ling Meng^b, Xinwen Peng^a, Linxin Zhong^a

^aState Key Laboratory of Pulp and Paper Engineering, South China University of Technology, Guangzhou 510641, China

^bHuangpu Hydrogen Energy Innovation Center/Guangzhou Key Laboratory for Clean Energy and Materials, School of Chemistry and Chemical Engineering, Guangzhou University, Guangzhou 510006, China

Renewable cellulose nanofiber (CNF) is a suitable precursor to synthesize carbon aerogels, but the formation of structural defect during pyrolysis results in poor mechanical strength of the carbon aerogels. A structural defect-reducing strategy is proposed by altering the pyrolysis route of CNF to significantly improve the compressibility and elasticity of carbon aerogel.

Chinese Chemical Letters 35 (2024) 108331



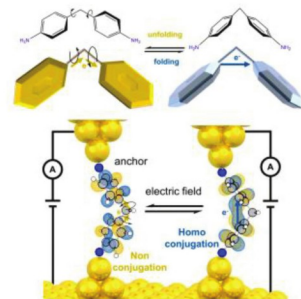
Electric field-driven folding of single molecules

Saisai Yuan, Yu Zhou, Tengyang Gao, Lichuan Chen, Wei Xu, Ping Duan, Juejun Wang, Zhichao Pan, Chun Tang, Yang Yang, Ruiyun Huang, Zongyuan Xiao, Wenjing Hong

State Key Laboratory of Physical Chemistry of Solid Surfaces, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005, China

The electric field control of molecular folding remains unexplored, which is mainly due to the experimental challenges in the investigation of electric-field responsive molecular systems at the molecular level. Nanoscale spacing constructed the scanning tunneling microscope break junction (STM-BJ) technique provide the extremely strong electric field for us to *in-situ* control and detection of molecular folding at the single-molecule level.

Chinese Chemical Letters 35 (2024) 108404



A novel method for atomization energy prediction based on natural-parameter network

Chaoqin Chu^a, Qinkun Xiao^{a,b}, Chaozheng He^c, Chen Chen^b, Lu Li^a, Junyan Zhao^b, Jinzhou Zheng^c, Yinhuan Zhang^a

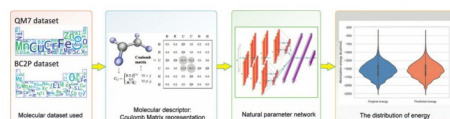
^aSchool of Mechanical and Electrical Engineering, Xi'an Technological University, Xi'an 710021, China

^bSchool of Electrical and Information Engineering, Xi'an Technological University, Xi'an 710021, China

^cSchool of Materials Science and Chemical Engineering, Xi'an Technological University, Xi'an 710021, China

We propose a natural-parameter network (NPN) approach for energy prediction that establishes a clearer statistical interpretation of the relationship between the network's output and the given data. Experimental results show that the mean absolute error we obtained is competitive, and we have accelerated the prediction time of energy by several orders of magnitude.

Chinese Chemical Letters 35 (2024) 109186



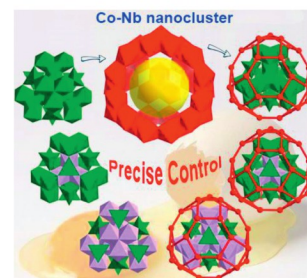
Precisely manipulation of core composition of core-shell-type cobalt polyoxoniobates and proton conduction study

Zheng-Wei Guo, Yi Chen, Zhe-Hong Chen, Xin-Xiong Li, Shou-Tian Zheng

State Key Laboratory of Photocatalysis on Energy and Environment, School of Chemistry, Fuzhou University, Fuzhou 350108, China

Here, we present an interesting example of precisely regulating the core composition of a core-shell-type polyoxoniobate $[\text{Co}_{26}\text{Nb}_{36}\text{O}_{140}]^{32-}$ by a feasible strategy, resulting in a family of isostructural core-shell nanoclusters $\{\text{Co}_{26-n}\text{Nb}_{36+n}\text{O}_{140}\}$ ($n=0-2$) with precise atoms and structures. These novel species exhibit good powder and single-crystal proton conductivities.

Chinese Chemical Letters 35 (2024) 109124



ASb(SO₄)₂ (A = Rb, Cs): Two short-wave UV antimony sulfates exhibiting large birefringence

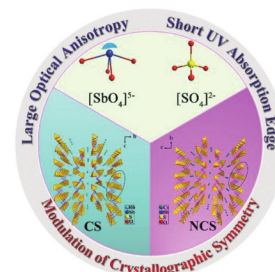
Yang Lan^a, Jinxuan Ren^a, Pu Zhang^a, Xuehua Dong^a, Ling Huang^a, Liling Cao^a, Daojiang Gao^a, Guohong Zou^b

^a College of Chemistry and Materials Science, Sichuan Normal University, Chengdu 610066, China

^b College of Chemistry, Sichuan University, Chengdu 610065, China

Two short-wave UV antimony sulfates named ASb(SO₄)₂ (A = Rb, Cs) have been successfully synthesized, which both endow short UV absorption edges (281 nm and 278 nm) and large birefringence (0.171@546 nm and 0.174@546 nm).

Chinese Chemical Letters 35 (2024) 108652



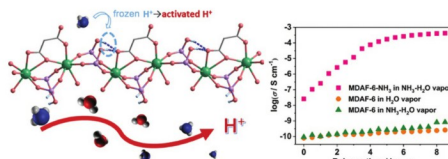
Boosting the proton conduction in a magnetic dysprosium-organic framework by introducing conjugate NH₄⁺-NH₃ pairs

Yi-Ping Qu, Qian Zou, Song-Song Bao, Li-Min Zheng

State Key Laboratory of Coordination Chemistry, School of Chemistry and Chemical Engineering, Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210023, China

A 3D metal-organic framework Dy₂(amp₂H₂O)₂(mal)(H₂O)₂·5H₂O (**MDAF-6**) with pendent P-OH units exhibits high NH₃ adsorption capacity. The resulted **MDAF-6-NH₃** shows enhanced proton conductivity by five orders of magnitude compared to **MDAF-6** in saturated NH₃-H₂O vapor. **MDAF-6** also shows slow magnetization relaxation under zero dc field.

Chinese Chemical Letters 35 (2024) 108320



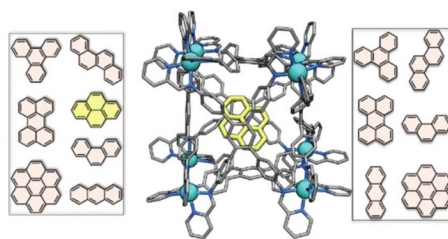
Selective separation of pyrene from mixed polycyclic aromatic hydrocarbons by a hexahedral metal-organic cage

Ya-Liang Lai, Juan Su, Le-Xiong Wu, Dong Luo, Xue-Zhi Wang, Xian-Chao Zhou, Chuang-Wei Zhou, Xiao-Ping Zhou, Dan Li

College of Chemistry and Materials Science, Guangdong Provincial Key Laboratory of Functional Supramolecular Coordination Materials and Applications, Jinan University, Guangzhou 510632, China

A metal-organic cage obtained by subcomponent self-assembly exhibits a low symmetric hexahedral structure with a hydrophobic cavity with a volume of 520 Å³. This cage can selectively encapsulate the pyrene to achieve a highly efficient separation, providing a useful strategy for separation of PAHs molecules.

Chinese Chemical Letters 35 (2024) 108326



How ligand coordination and superatomic-states accommodate the structure and property of a metal cluster: Cu₄(dppy)₄Cl₂ vs. Cu₂₁(dppy)₁₀ with altered photoluminescence

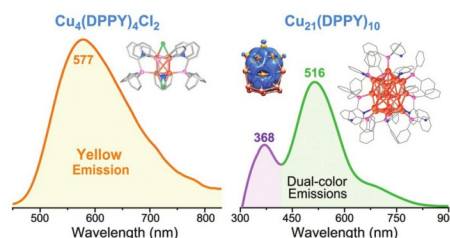
Haiming Wu^a, Gaya N. Andrew^a, Rajini Anumula^a, Zhixun Luo^{a,b}

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Two copper nanoclusters (NCs) protected by diphenylphosphino-2-pyridine (C₁₇H₁₄NP, dppy) formulated as Cu₄(dppy)₄Cl₂ and Cu₂₁(dppy)₁₀, are synthesized via a facile one-pot procedure, showing altered photoluminescence and superatomic stability.

Chinese Chemical Letters 35 (2024) 108340



The compatibly large nonlinear optical effect and high laser-induced damage threshold in a thiophosphate CsInP_2S_7 constructed with $[\text{P}_2\text{S}_7]^{4-}$ and $[\text{InS}_6]^{9-}$

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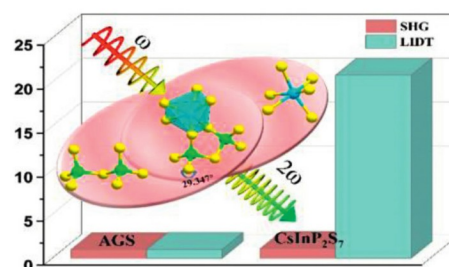
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A novel IR NLO material CsInP_2S_7 was designed by combination the strategies of alkali metals substitution and microscopic NLO units PS_4 introduction based on AgGaS_2 . CsInP_2S_7 exhibits strong phase-matchable second-harmonic generation intensity ($1.1 \times \text{AGS}@2.1 \mu\text{m}$) and high laser-induced damage threshold ($20.8 \times \text{AGS}$), which originated from the synergistic contribution of $[\text{InS}_6]^{9-}$ octahedra and $[\text{P}_2\text{S}_7]^{4-}$ dimers.

Chinese Chemical Letters 35 (2024) 109108



Modulating the p-band center of carbon nanofibers derived from Co spin state as anode for high-power sodium storage

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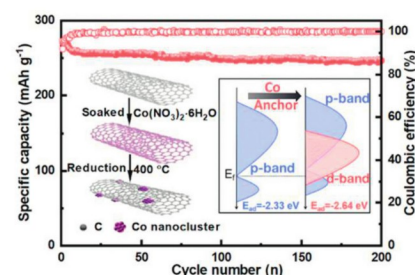
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CNFs-Co was prepared using CVD and thermal reduction methods. The spin state Co downshifts the p-band center of carbon, then promotes the adsorption of Na^+ . The initial Coulombic efficiency is 91%, and the specific discharge capacity is 246 mAh/g at 0.1 A/g after 200 cycles.

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Alkyl-thiophene-alkyl linkers to construct double-cable conjugated polymers for single-component organic solar cells

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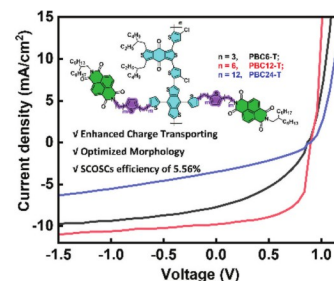
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Three semi-rigid linkers with alkyl-thiophene-alkyl structure are developed with tunable linker lengths from C_6H_{12} to $\text{C}_{24}\text{H}_{48}$ to construct double-cable polymers. The PBC12-T which uses C_6H_{12} -thiophene- C_6H_{12} linkers is found to exhibit the best device efficiency of 5.56%, while PBC6-T and PBC24-T with shorter or longer linkers yield device efficiencies of only 2.65% and 1.09% in SCOSCs.

Chinese Chemical Letters 35 (2024) 108287



Cost-effective natural graphite reengineering technology for lithium ion batteries

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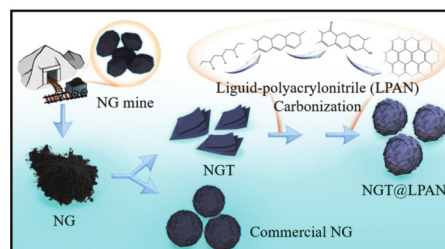
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A unique liquid-polyacrylonitrile (LPAN) was used for secondary granulation of natural graphite tailings (NGT) fragments to enhance the electrochemical performances.

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Graphdiyne scaffold anchored highly dispersed ruthenium nanoparticles as an efficient cathode catalyst for rechargeable Li-CO₂ battery

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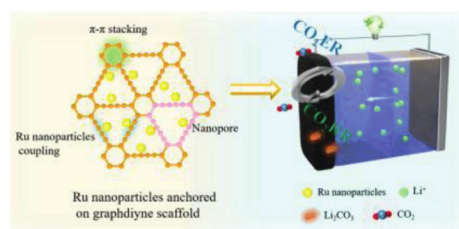
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The elaborately designed cathode of the highly dispersed Ru nanoparticles anchored on graphdiyne scaffold with laminar structure (Ru-GDYS) is reported. The strong coupling between the abundant acetylenic bond of graphdiyne scaffold and Ru nanoparticles can effectively improve the electrochemical activity and reduce the voltage polarization. Benefiting from the structural superiority of Ru-GDYS, the Li-CO₂ battery displays superior electrochemical performance and addresses the key challenges to a certain extent.

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Mitigating the dissolution of V₂O₅ in aqueous ZnSO₄ electrolyte through Ti-doping for zinc storage

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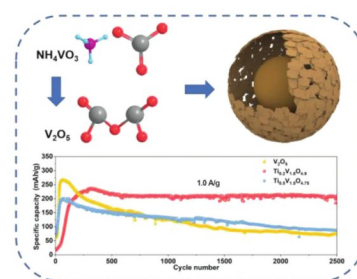
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Ti-doped V₂O₅ yolk-shell microspheres are synthesized by a spray drying method, and the optimized Ti_{0.2}V_{1.8}O_{4.9} delivers a high capacity and improved cyclability in low cost aqueous ZnSO₄ electrolyte. This study provides an effective strategy to mitigate the dissolution issue of cathode material in aqueous electrolytes by transition metal doping.

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Rocking-chair ammonium ion battery with high rate and long-cycle life

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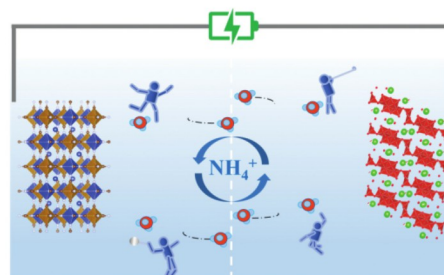
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Open architecture electrode materials assist long-life rocking chair ammonium ion batteries.

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