



QK1949050

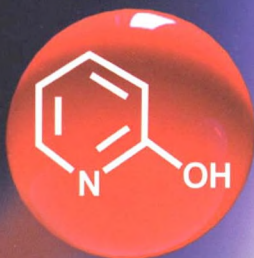
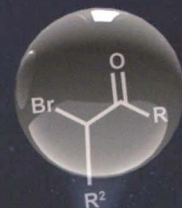
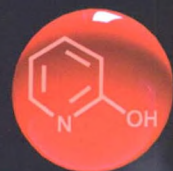
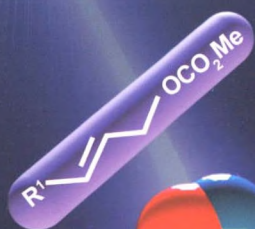
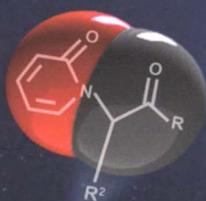
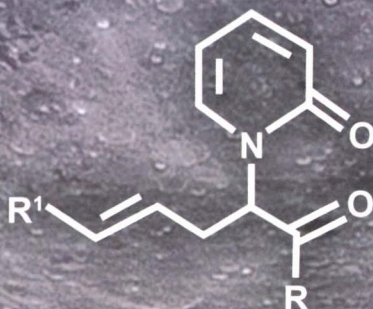
http://sioc-journal.cn



化学学报

ACTA CHIMICA SINICA

2019 第77卷 第10期 Vol. 77 No. 10



ISSN 0567-7351



万方数据



中国化学会
中国科学院上海有机化学研究所

主办

化学学报

Acta Chimica Sinica

(Huaxue Xuebao)

第 77 卷 第 10 期 2019 年 10 月 15 日

目次

综述

- 基于纳米间隔电极对的 DNA 分子结电运输的研究进展 杨威宇, 雷志超, 洪文晶*, 黄飞舟*, 化学学报, 2019, 77(10), 951-963
- 反式钙钛矿太阳能电池研究进展 杨英, 朱从潭, 林飞宇, 陈甜, 潘德群, 郭学益*, 化学学报, 2019, 77(10), 964-976
- 表面增强拉曼光谱检测二噁英类化合物研究进展 程劼, 王培龙*, 苏晓鸥*, 化学学报, 2019, 77(10), 977-983

研究通讯

- Aerolysin 纳米孔核酸检测灵敏区域的协同相互作用探索研究 李孟寅, 应佚伦, 龙亿涛*, 化学学报, 2019, 77(10), 984-988
- 基于 Aerolysin 纳米孔道对单个 c-di-AMP 分子的检测研究 牛红艳, 胡正利, 应佚伦*, 龙亿涛, 化学学报, 2019, 77(10), 989-992
- 钼催化三组分烯丙基串联反应: 化学专一性合成 *N*-酰亚甲基-2-吡啶酮 姚坤, 刘浩, 袁乾家, 刘燕刚, 刘德龙*, 张万斌*, 化学学报, 2019, 77(10), 993-998

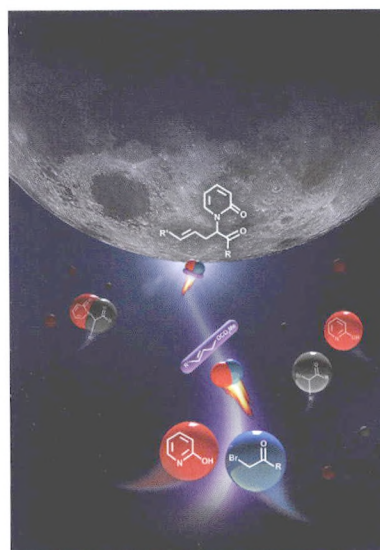
研究论文

- 灯盏花甲素、乙素等天然黄酮-7-*O*-糖苷的合成 邵文博, 安泉林, 曹鑫*, 俞飏*, 化学学报, 2019, 77(10), 999-1007
- 敌敌畏及其代谢产物对青海弧菌和秀丽线虫的联合毒性 郑乔峰, 居珍, 刘树深*, 化学学报, 2019, 77(10), 1008-1016
- 非均相芬顿体系协同去除复合双污染物: 化学转化, pH 影响和机理分析 杨波, 张永丽*, 化学学报, 2019, 77(10), 1017-1023
- g*-C₃N₄/Ag 纳米复合材料表面增强拉曼基底对婴幼儿糖果中的罗丹明 B 的痕量检测 马超, 武佳炜, 朱琳, 韩晓霞, 阮伟东, 宋薇*, 王旭*, 赵冰, 化学学报, 2019, 77(10), 1024-1030
- 基于混合自组装单分子层的可控分子整流 王紫嫣, Khalid, Hira, 李柏力, 李瑶, 于曦*, 胡文平, 化学学报, 2019, 77(10), 1031-1035
- 基于 AIE 效应的多重刺激响应性聚合物纳米微球的制备及其细胞示踪应用 关晓琳*, 王林, 李志飞, 刘美娜, 王凯龙, 林斌, 杨学琴, 来守军, 雷自强, 化学学报, 2019, 77(10), 1036-1044

* 通信联系人.

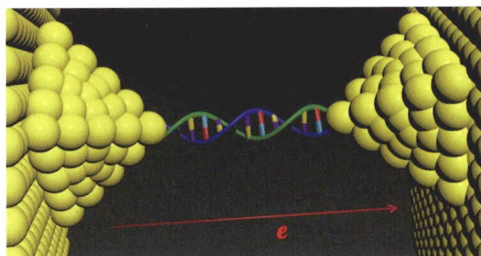
- 电场作用下水表面电势的分子动力学研究
..... 杨鹏里, 王振兴, 梁尊, 梁洪涛, 杨洋*, 化学学报, **2019**, 77(10), 1045-1053
- 短孔道 Pt/W-s-SBA-15 催化剂的合成及甘油催化氢解制 1,3-丙二醇性能的研究
..... 成诗婕, 曾杨, 裴燕, 范康年, 乔明华*, 宗保宁*, 化学学报, **2019**, 77(10), 1054-1062

On the cover: A Pd-catalyzed three-component chemospecific allylic substitution cascade has been developed for the synthesis of *N*-carbonylmethylene-2-pyridone derivatives in up to 98% yield. No *O*-alkylated by-product was observed. [Zhang, Wanbin *et al.* on page 993-998.]



Review

Advances in Charge Transport through DNA Molecular Junction by Employing Electrodes Pair with Nanometer-sized Separation

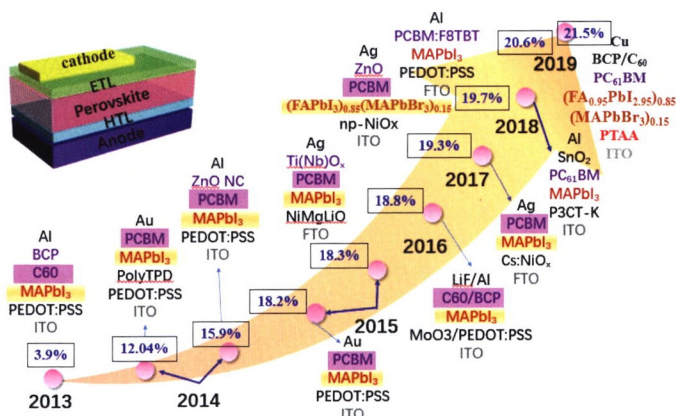


Yang, Wei-Yu; Lei, Zhi-Chao; Hong, Wen-jing*; Huang, Fei-Zhou*

Acta Chim. Sinica **2019**, 77(10), 951-963

Recent progress in charge transport through DNA molecular junction is presented in this review. Several methods for fabricating electrodes pair with nanometer-sized separation are introduced and compared. And, a prospect on the future studies on this field is given.

Research Progress of Inverted Perovskite Solar Cells

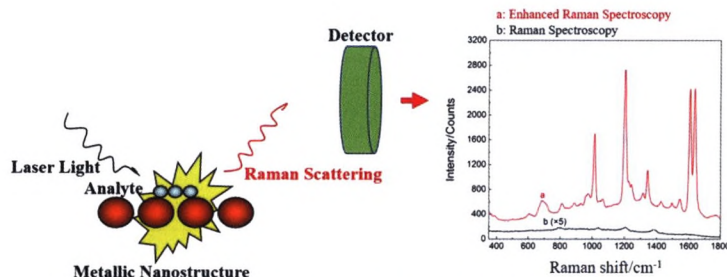


Yang, Ying; Zhu, Congtan; Lin, Feiyu; Chen, Tian; Pan, Dequn; Guo, Xueyi*

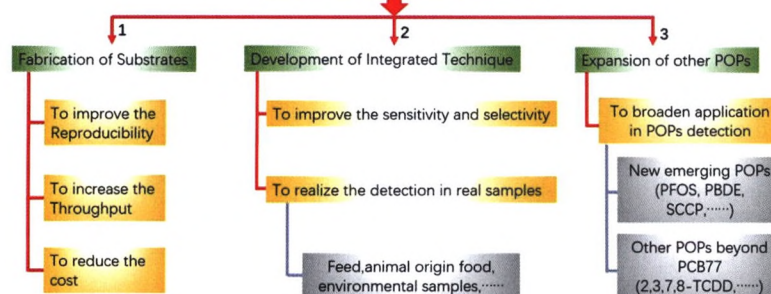
Acta Chim. Sinica **2019**, 77(10), 964-976

The development of inverted perovskite solar cells, the selection of carrier transport materials, interface optimization, and the development of flexible devices are systematically reviewed in this paper. It provides a way to obtain a high efficiency inverted perovskite solar cells by structure and material optimization. And it also give insights into the general rules for preparing large area and flexible devices.

Recent Progress on the Detection of Dioxins Based on Surface-enhanced Raman Spectroscopy



Trends of SERS for POPs Detection



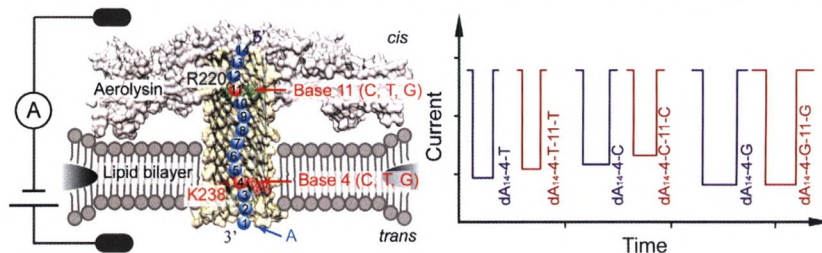
As a new type of rapid detection technology, surface-enhanced Raman Spectrum (SERS) has the characteristics of high sensitivity analysis. The research progress of the analysis of POPs based on SERS in recent years are summarized in this review, including the different types of enhanced substrates, several key technical points of SERS, and the development trends of SERS for POPs detection in the future.

Cheng, Jie; Wang, Peilong*; Su, Xiaoou*

Acta Chim. Sinica 2019, 77(10), 977-983

Communication

Unveiling the Synergistic Effect from Key Sensing Regions in Aerolysin-Based Single Oligonucleotide Detection

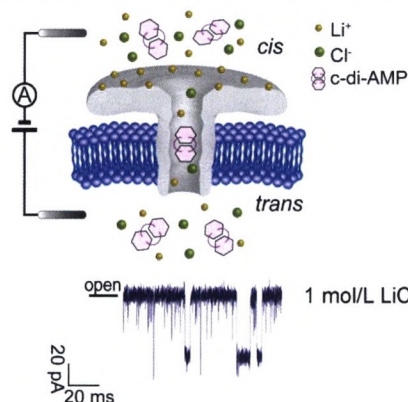


Li, Mengyin; Ying, Yilun; Long, Yi-Tao*

Acta Chim. Sinica 2019, 77(10), 984-988

The R1 region of Aerolysin nanopore (near R220) owns high sensing ability to discriminate single base variation of oligonucleotide in this region no matter R2 region (near K238) is placed by base A, T or C.

Detection of Single c-di-AMP by an Aerolysin Nanopore

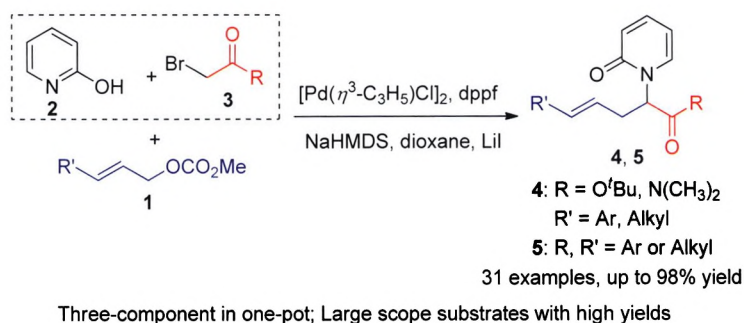


Niu, Hongyan; Hu, Zhengli; Ying, Yilun*; Long, Yi-Tao

Acta Chim. Sinica 2019, 77(10), 989-992

An ultrasensitive aerolysin-based single molecule sensor was developed for the detection of single c-di-AMP which is a ubiquitous second messenger in prokaryotic cells. 1.0 mol/L LiCl was used as electrolyte solution to facilitate the aerolysin capturing of single c-di-AMP molecule. The results showed that the number of translocation events in per minute in LiCl is 30 times larger than in KCl at 90 mV. Therefore, our study provides a label-free and low-cost method to rapid detection of single c-di-AMP molecule.

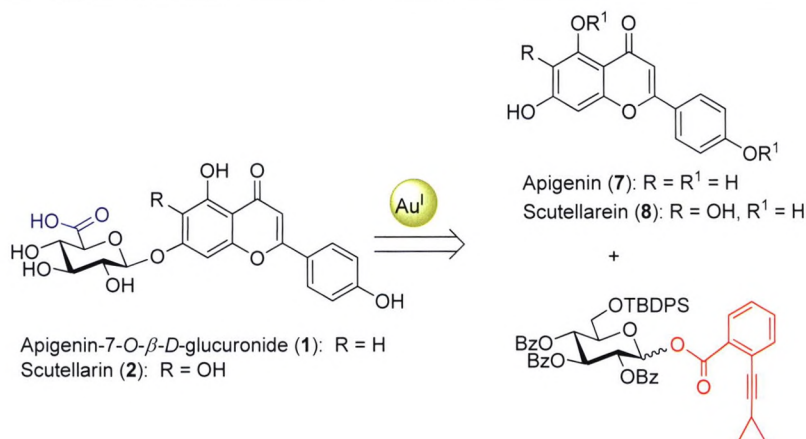
Pd-Catalyzed Three-Component Chemospecific Allylic Substitution Cascade for the Synthesis of *N*-Carbonylmethylene-2-Pyridones



Yao, Kun; Liu Hao; Yuan, Qianjia; Liu, Yangang; Liu, Delong*; Zhang, Wanbin*
Acta Chim. Sinica **2019**, 77(10), 993-998

Article

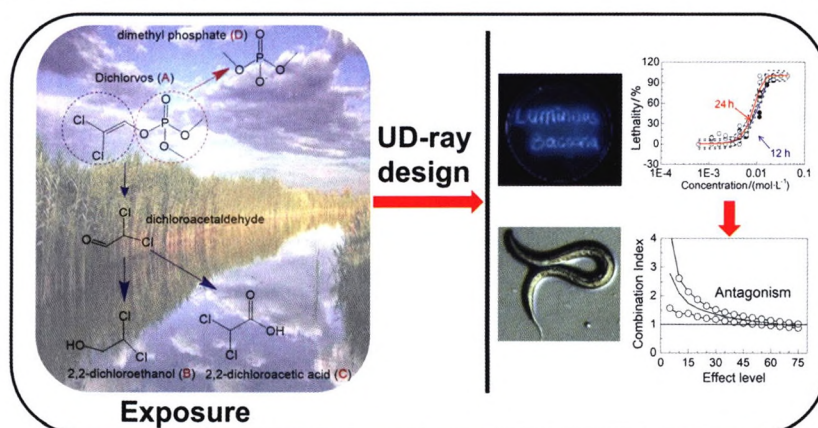
Efficient Synthesis of Representative Flavone-7-*O*-Glycosides



Shao, Wenbo; An, Quanlin; Cao, Xin*; Yu, Biao*
Acta Chim. Sinica **2019**, 77(10), 999-1007

Efficient synthesis of flavone-7-*O*-glucuronides was achieved via Au(I)-catalyzed glycosylation with glucopyranosyl *ortho*-alkynylbenzoates followed by a late-stage oxidation.

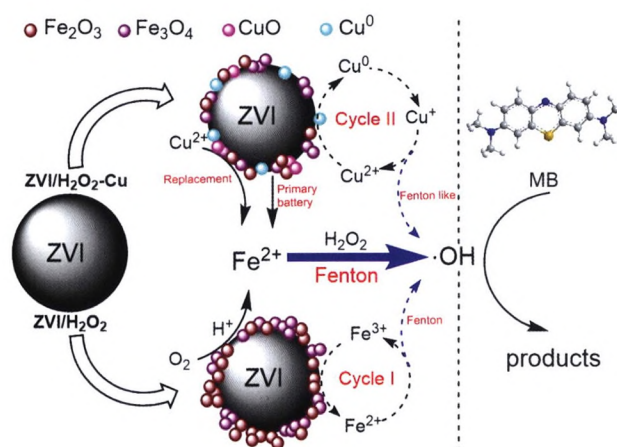
Combined Toxicity of Dichlorvos and Its Metabolites to *Vibrio qinghaiensis* sp.-Q67 and *Caenorhabditis elegans*



Zheng, Qiao-Feng; Ju, Zhen; Liu, Shu-Shen*
Acta Chim. Sinica **2019**, 77(10), 1008-1016

The combined toxicities of dichlorvos and its metabolites to *Vibrio qinghaiensis* sp.-Q67 are concentration additive at low concentration levels and antagonistic at high concentration levels at short and long exposure times. For *Caenorhabditis elegans*, mixtures of dichlorvos and its metabolites exhibit concentration additive in general at two exposure times.

Synergistic Removal of Co-contamination by Heterogeneous Fenton System: Chemical Conversion, pH Effect and Mechanism Analysis

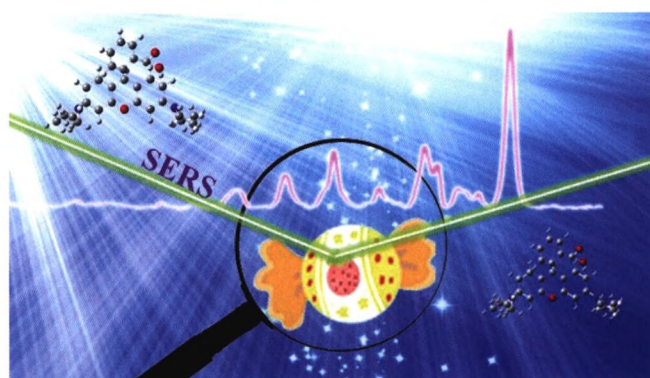


Yang, Bo; Zhang, Yongli*

Acta Chim. Sinica **2019**, 77(10), 1017-1023

The chemical changes of ZVI micro-surface in the process of removing target pollutants were compared between ZVI/H₂O₂ and ZVI/H₂O₂-Cu and the material transformation of ZVI and Cu²⁺ was also analyzed. The mechanism of ZVI/H₂O₂ synergistically removing Cu²⁺ and strengthening MB degradation was systematically explained.

Trace Detection of Rhodamine B in Infant Candy by g-C₃N₄/Ag Nanocomposite as Surface-enhanced Raman Scattering Substrate

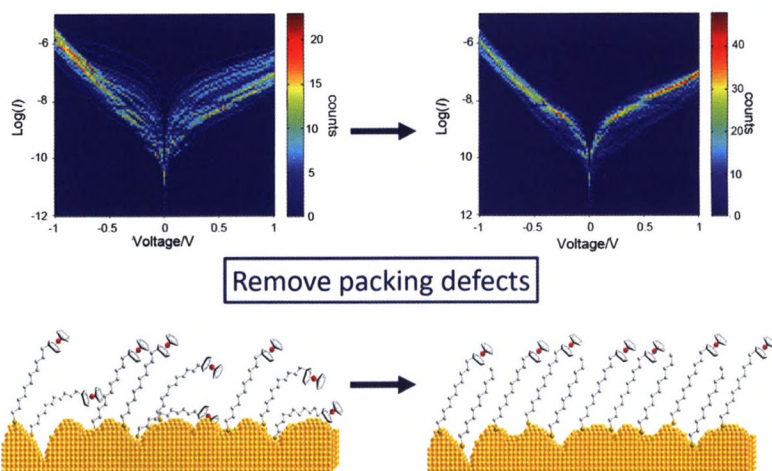


Ma, Chao; Wu, Jiawei; Zhu, Lin; Han, Xiaoxia; Ruan, Weidong; Song, Wei*; Wang, Xu*; Zhao, Bing

Acta Chim. Sinica **2019**, 77(10), 1024-1030

Surface-enhanced Raman scattering (SERS) technique is used to rapidly and non-destructively detect the banned RhB that is usually added in food. g-C₃N₄/Ag composites SERS substrate have been successfully prepared via a simple method, which can be used for rapid adsorption and trace detection of RhB. The influence of pH on the surface plasmon resonance (SPR) of the substrate and the pH of the probe molecule were investigated in detail. The detection limit of RhB is as low as 0.39 nmol/L.

Tuning Rectification Properties of Molecular Electronic Devices by Mixed Monolayer



Wang, Ziyang; Khalid, Hira; Li, Baili; Li, Yao; Yu, Xi*; Hu, Wenping

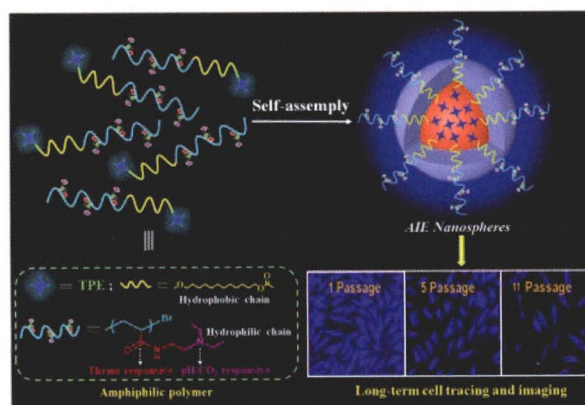
Acta Chim. Sinica **2019**, 77(10), 1031-1035

Organic rectifiers (FcC11-SH) are disordered on a rough substrate and thus exhibit poor device performance. The addition of diluent (C11-SH) can remove the packing defects and improves rectification ratio.

Preparation of Multi-stimulus Responsive Polymer Nanospheres Based on AIE Effect and Its Cell Tracing Application

Guan, Xiaolin*; Wang, Lin; Li, Zhifei; Liu, Meina; Wang, Kailong; Lin, Bin; Yang, Xueqing; Lai, Shoujun; Lei, Ziqiang

Acta Chim. Sinica 2019, 77(10), 1036-1044

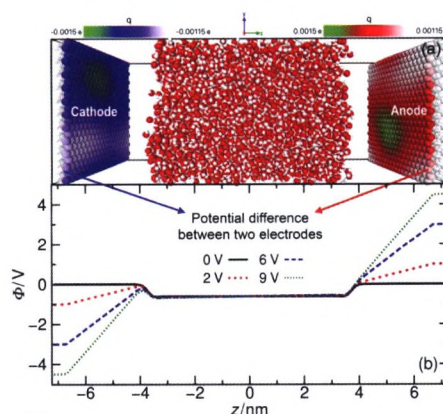


The amphiphilic polymer TPE-g-PDEAEAM has excellent AIE effect, stimulating response to temperature/pH/CO₂, self-assembly forms nano-microspheres of about 200 nm, and can effectively trace HeLa cells to 11 generations or more.

A Molecular Dynamics Simulation Study of the Effect of External Electric Field on the Water Surface Potential

Yang, Pengli; Wang, Zhenxing; Liang, Zun; Liang, Hongtao; Yang, Yang*

Acta Chim. Sinica 2019, 77(10), 1045-1053

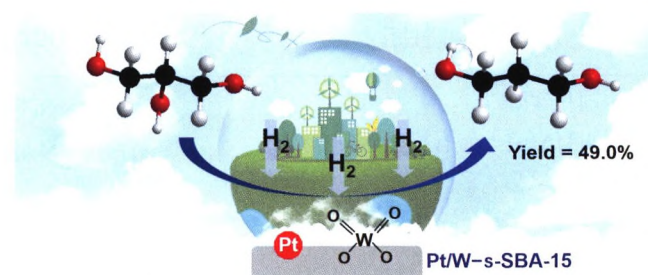


(a) Snapshot of a constant potential method molecular-dynamics simulation, in which a room temperature water slab plus two vapor slab are sandwiched between two platinum electrodes maintained at constant potential difference 2 V. The color code on the electrode atoms indicate instantaneous charges. In the liquid water region, the red spheres represent oxygen and the smaller white spheres represent hydrogen. (b) Electric potential profile from 4 different voltage difference simulations, calculated using the probe and average method.

Synthesis and Catalysis of Pt/W-s-SBA-15 Catalysts with Short Channel for Glycerol Hydrogenolysis to 1,3-Propanediol

Cheng, Shijie; Zeng, Yang; Pei, Yan; Fan, Kangnian; Qiao, Minghua*; Zong, Baoning*

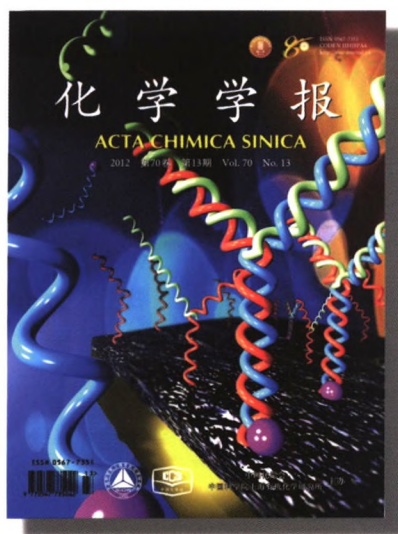
Acta Chim. Sinica 2019, 77(10), 1054-1062



The mesoporous SBA-15 molecular sieves doped *in situ* by W with channels parallel to the short axis (W-s-SBA-15) were synthesized and used as the supports for the preparation of the Pt/W-s-SBA-15 catalysts. The effect of the loadings of Pt and W on the catalytic performance in glycerol hydrogenolysis to 1,3-propanediol (1,3-PDO) was investigated. The highest yield of 1,3-PDO of 49.0% was resulted on the 4Pt/W-s-SBA-15(1/480) catalyst.

Go Now!!

<http://sioc-journal.cn>



化学学报

ACTA CHIMICA SINICA

- 同行评审
- 中国创刊最早的化学期刊(始于1933年)
- 中国第一个被SCI收录的化学期刊
- 中国“百强科技期刊”
- 高水平、高质量、高效率
- 免费投稿、审稿、发表
- 免费阅读、开放获取
- SCI影响因子最高的中文期刊

Tel.: +86-21-54925242

E-mail: hxxb@sioc.ac.cn



CHINESE JOURNAL OF CHEMISTRY

中国化学

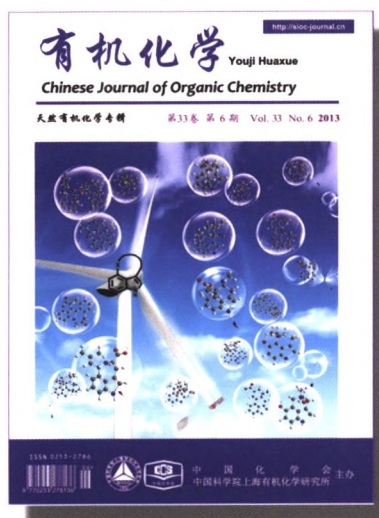
- 同行评审
- 1983年创刊 (原名Acta Chimica Sinica English Edition)
- 与Wiley-VCH合作出版
- 免费审稿、免费发表
- SCI收录

Tel.: +86-21-54925243-27

E-mail: cjc@sioc.ac.cn

有机化学

Chinese Journal of Organic Chemistry



- 同行评审
- 1980年创刊
- 全面覆盖有机化学领域
- 设有研究专题、综述与进展、研究论文、研究简报、亮点介绍等栏目
- 开放获取
- SCI收录

Tel.: +86-21-54925244-28

E-mail: yjhx@sioc.ac.cn



中国化学会
中国科学院上海有机化学研究所

主办

万方数据

国际刊号: ISSN 0567-7351 国内刊号: CN31-1320/O6 国内邮发代号: 4-209 国外发行代号: M56