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APPLIED CHEMISTRY

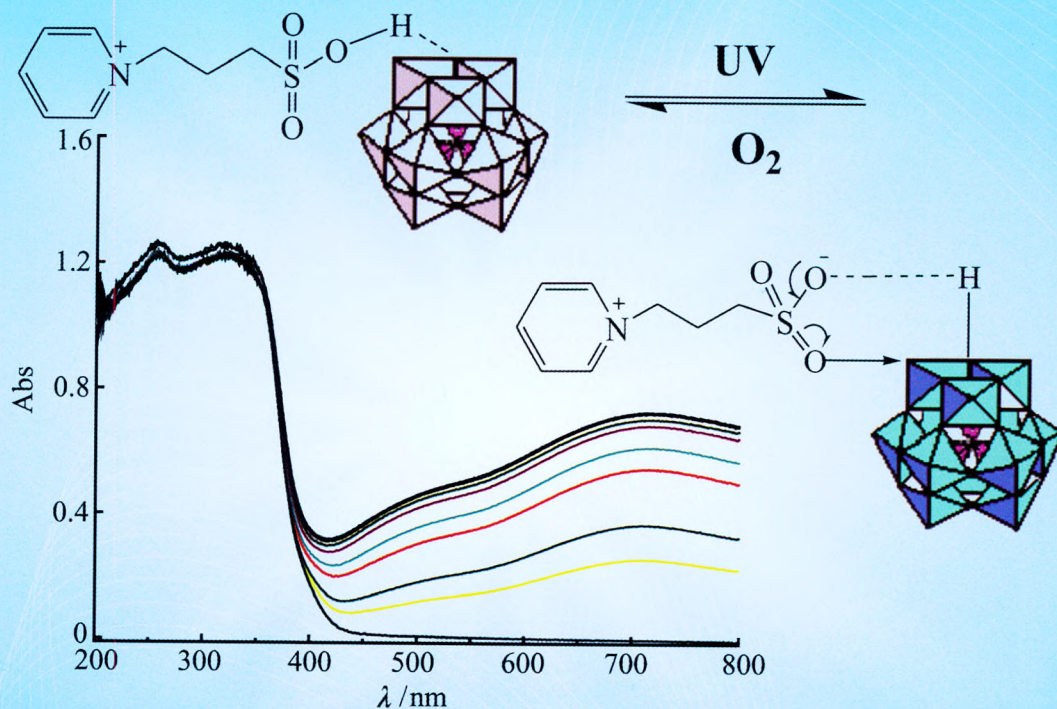
应用化学

Yingyong Huaxue

2015

Volume 32 Issue 7

第 32 卷 第 7 期



Ionic liquid-like polyoxometalates functional by sulfonic group possess reversible photochromic properties under UV irradiation.

中国化学会 主办
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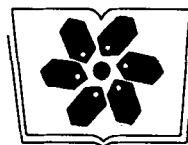
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应用化学

(Yingyong Huaxue)

第 32 卷 第 7 期 2015 年 7 月



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发现磺酸功能化离子液体型多金属氧酸盐具有可逆光色性质。在紫外光激发下,有机阳离子中的 $-\text{SO}_3\text{H}$ 基团可作为电子供体与多金属氧酸盐阴离子发生电子相互作用。

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* 通讯联系人.

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Photochromism of Ionic Liquid-like Polyoxometalates Functionalized by Sulfonic Acid

LI Yuanyuan, YANG Chun*

It was found that ionic liquid-like polyoxometalates functionalized by sulfonic group possess reversible photochromic properties. Under UV irradiation, the $-\text{SO}_3\text{H}$ group in organic cations can act as an electron donor to interact with the polyoxometalate anions.

For details see pp808-815

Review

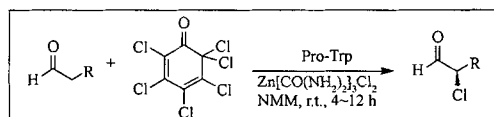
Research Progress of Task-specific Ionic Liquids Used in Metal Ions Extraction

WANG Wei*, CHEN Ji, LIU Hongzhao, YANG Hualing, CAO Yaohua, GAO Zhaoguo, ZHANG Bo

2015,32(7):733-742

Full Papers

Dipeptide-Catalyzed Direct Asymmetric Chlorination of Aldehydes in $\text{Zn}[\text{CO}(\text{NH}_2)_2]_3\text{Cl}_2$ Ionic Liquid

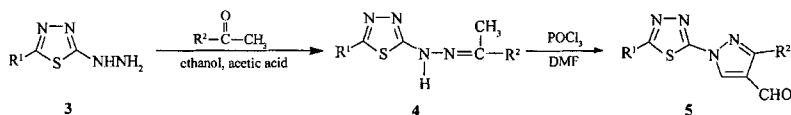


Catalyzed by Pro-Trp in ionic liquid $\text{Zn}[\text{CO}(\text{NH}_2)_2]_3\text{Cl}_2$, α -chlorinated aldehydes were obtained in up to 92% ee and 95% yield.

ZHANG Baohua, SHI Lanxiang*, LIU Shengbao

2015,32(7):743-747

Synthesis, Crystal Structure and Biological Activities of 3-Substituted-1-(5-aryl-1,3,4-thiadiazol-2-yl)-1H-pyrazole-4-formaldehyde

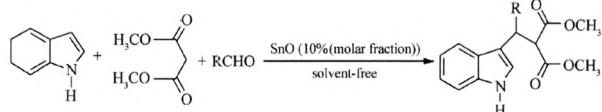


XU Chang, AN Yue*, ZHU Haotian,
LIN Yue, WANG Rinan

Thirty-two 1,3,4-thiadiazole derivatives were synthesized from 2-amino-5-substituted 1,3,4-thiadiazoles. Several newly synthesized compounds showed the antibacterial activity to *Staphylococcus aureus*.

2015,32(7):748-758

SnO Catalyzed Solvent-Free Synthesis of Dimethyl 2-[(Indol-3-yl)-methyl]malonate Derivatives

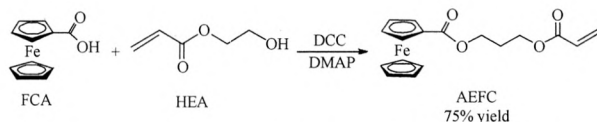


XU Zhaohui

2015, **32**(7):759-764

Ten dimethyl 2-[(indol-3-yl)-methyl]malonate derivatives were synthesized by three-component one-pot reaction of indole with aldehydes and dimethyl malonate under solvent-free condition in the presence of SnO as the catalyst. The advantages of the present procedure were milder conditions, shorter reaction time and higher yields. All the compounds synthesized were confirmed by ¹H NMR, ¹³C NMR and IR analysis.

2-Acryloyloxyethyl Ferrocene Carboxylate: Synthesis and Optimization

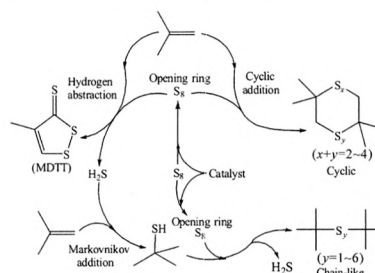


LI Ke, ZHANG Jiaoqiang*, KANG Shuanyan, SHI Huimin, ZHOU Hongyu, DOU Rongrong

2-Acryloyloxyethyl ferrocenecarboxylate(AEFC) used for inhibiting migration and volatilization of burning rate catalyst was synthesized from FCA and HEA with DCC as dehydrator and DMAP as catalyst.

2015, **32**(7):765-770

Product Analysis and Reaction Mechanism of High-Pressure Synthesis of Sulfurized Isobutylene by One-Step Method

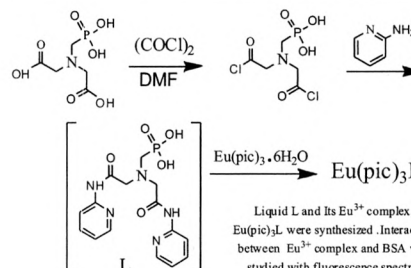


The preparation of sulfurized isobutylene catalyzed by *n*-octylamine was performed through two reaction paths that lead to the formation of chain polysulfides and cyclic polysulfides, respectively

LI Fei, JIANG Heng, ZHAO Shanlin*, LI Ping

2015, **32**(7):771-776

Synthesis and Characterization of a Phosphorus-containing Tripod Ligand and Its Europium Complex

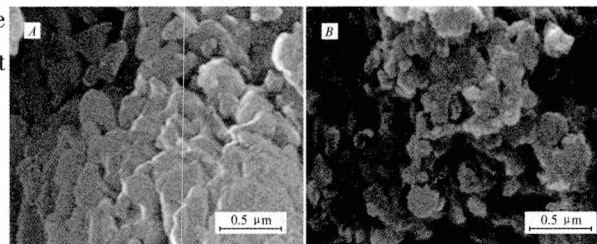


LIU Wei, YANG Shuilan, SONG Pan, YANG Tianlin*

Liquid L and its Eu³⁺ complex, Eu(pic)₃·L were synthesized. Interaction between Eu³⁺ complex and BSA was studied with fluorescence spectra.

2015, **32**(7):777-787

Production of the Novel Biodiesel over Potassium Fluoride and Calcium Oxide Loaded Kaolinite Solid Base Catalyst

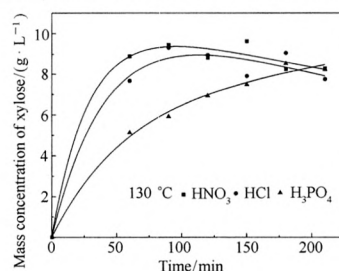


SEM images of kaolin(A) and modified-kaolin with KF and CaO(B)

GUO Xiangfeng, CHEN Juan, LIU Cong, LI Yanhui, JIA Lihua*

2015, **32**(7):788-793

Depolymerization Products and Kinetics of Wheat Straw Using Different Acids



The kinetic was obtained for depolymerization wheat straw hemicelluloses using hydrochloric acid, nitric acid, and phosphoric acid, respectively.

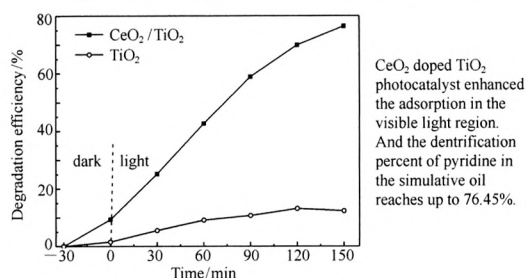
WU Qianqian, CHANG Xuan, MA Yulong*

2015, **32**(7):794-800

Preparation and Visible Light Denitrification
Performance of CeO₂/TiO₂ Photocatalyst

CHEN Feng, ZHENG Liuping, HUANG Yingying,
YAN Guiyang*, WANG Ying

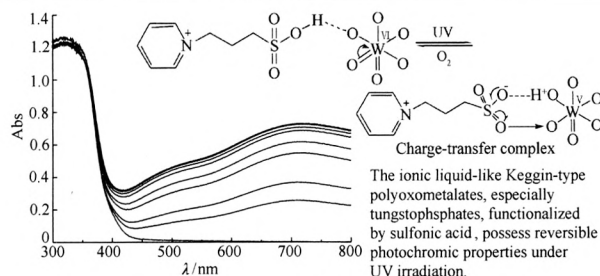
2015, 32(7):801-807



Photochromism of Ionic Liquid-like Polyoxometalates
Functionalized by Sulfonic Acid

LI Yuanyuan, YANG Chun*

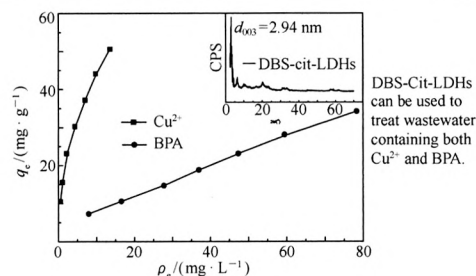
2015, 32(7):808-815



Simultaneous Adsorption of Copper Ion(II) and
Biphenol A onto Citrate-modified Layered Double
Hydroxides with Dodecylbenzenesulfonate

LI Yan*, WANG Guowang, WANG Ning

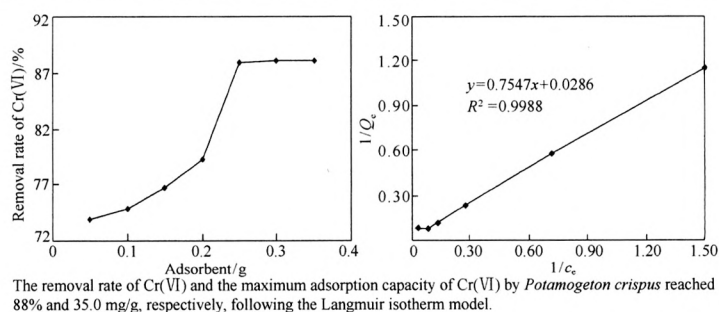
2015, 32(7):816-824



Adsorption of Cr(VI) by Dry Powder of
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REN Yidan, WANG Aili*

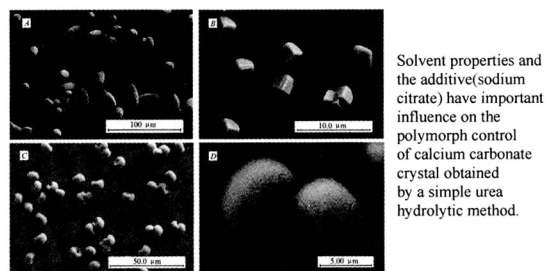
2015, 32(7):825-830



Control of Crystalline Polymorphs and Morphologies
for Calcium Carbonate with Sodium Citrate

GAO Yanfang, WANG Haishui*

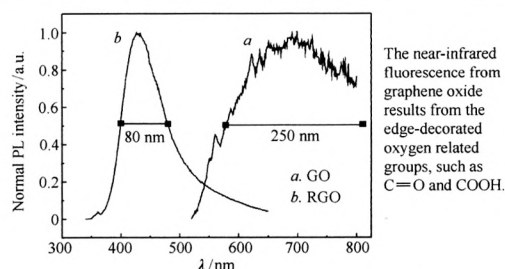
2015, 32(7):831-836



Photoluminescence of Graphene Oxide and
Hydrothermally Reduced Graphene Oxide

SHAN Yun*, ZHANG Honglin, ZHANG Feng

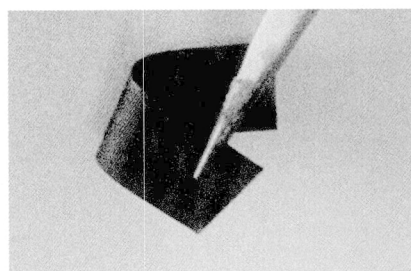
2015, 32(7):837-842



Preparation and Electrochemical Characteristics of Manganese Dioxide/graphene Composite Paper Electrode

LIU Yaliu, YUAN Zhongzhi*, LIU Liling

2015, **32**(7):843-848

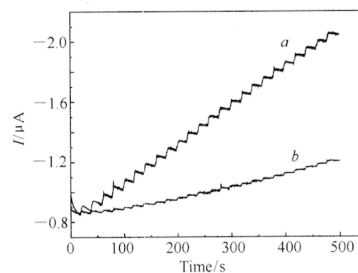


Flexible paper-like MnO₂/graphene composite electrodes were prepared and their electrochemical characteristics were investigated as the electrodes in lithium/manganese dioxide cells.

One-step Preparation of Horseradish Peroxidase Biosensor *via* Electrodeposition

YANG Shaoming*, CHEN Yansheng, LI Ruiqin, LONG Qiyang, DING Suyou

2015, **32**(7):849-854



I-t curve of CoAl-LDH-HRP-CNTs(GCE)(a), CoAl-LDH-HRP(b) on successive addition of H₂O₂.

* To whom correspondence should be addressed

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