

应用化学

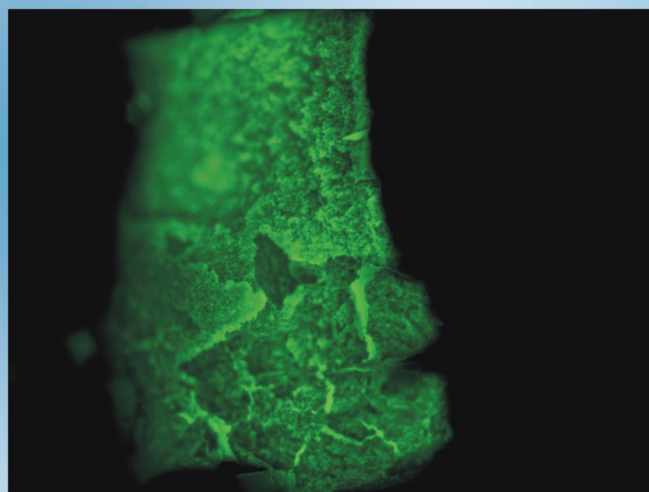
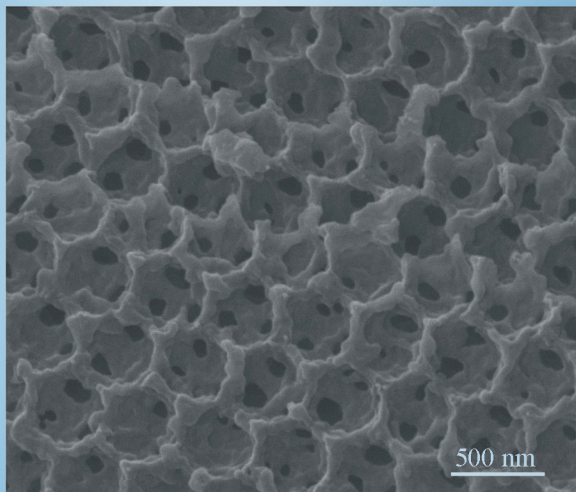
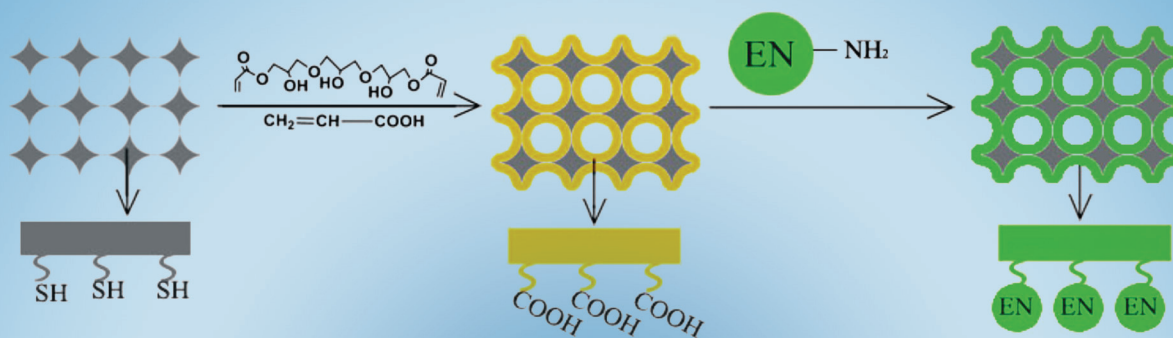
第35卷 第11期

2018

YINGYONG HUAXUE

Volume 35 Issue 11

CHINESE JOURNAL OF APPLIED CHEMISTRY

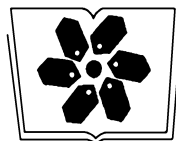


Ordered macroporous carboxyl functionalized SiO_2 @polymer composites were facilely fabricated for loading enzyme.

应用化学

(YINGYONG HUAXUE)

第 35 卷 第 11 期 2018 年 11 月



中国科学院科学出版基金资助出版

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介绍了一种简易的制备方法用于制备功能化有序大孔氧化硅@聚合物材料,并将其用作固载酶的新型载体。
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Modification of Ordered Macroporous Silica by a Functional Polymer Layer and Immobilization of Glucoamylase on the Macropore Walls

YE Lifang, WU Quanzhou*

A facile method is presented for the preparation of ordered macroporous silica@ polymers composites as a novel support for the immobilization of enzymes.

For details see pp1309-1316

Review

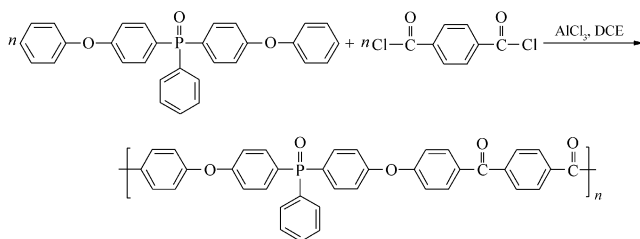
Recent Progress in the Lithium-Rich Ternary Layered Cathode Materials

ZHANG He, ZHANG Mengshi, LIAO Shijun*

2018, 35(11):1277-1288

Full Papers

Synthesis and Characterization of Poly(aryl ether ether ketone ketone) Containing Phenyl Phosphine Oxide



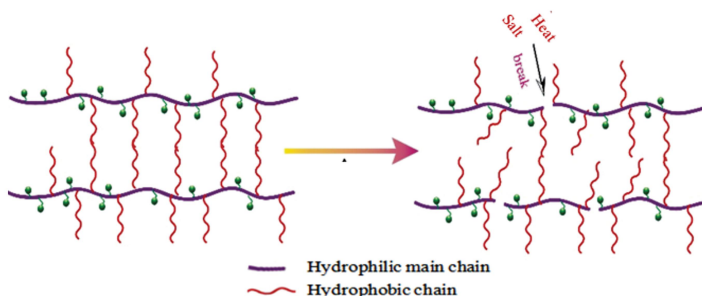
LIU Yongjun, ZHONG Ming, SONG Cheng*, SHENG Shouri, HOU Haoqing, SONG Caisheng

Poly(aryl ether ether ketone ketone) containing phenyl phosphine oxide with good solubility, high heat resistance and good flame retardancy was prepared.

2018, 35(11):1289-1294

Synthesis and Properties of Modified Polymer Fracturing Fluid

LU Dali*, CHEN Yong, ZHANG Jun, YANG Xue

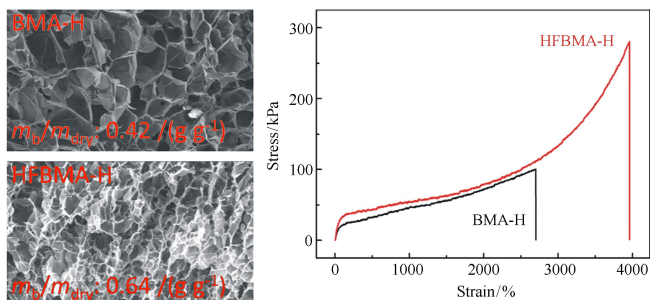


Conventional polymers break under high temperature and salt conditions, however, the polymer with a long hydrophobic chain will not be completely destroyed and retain a certain viscosity.

2018, 35(11):1295-1300

Effect of Non-freezing Water on the Mechanical Properties of Microspherical Composite Hydrogels

LIANG Xuechen, DENG Yukun,
PEI Xiaopeng, ZHAI Kankan, XU Kun*,
TAN Ying*, WANG Pixin

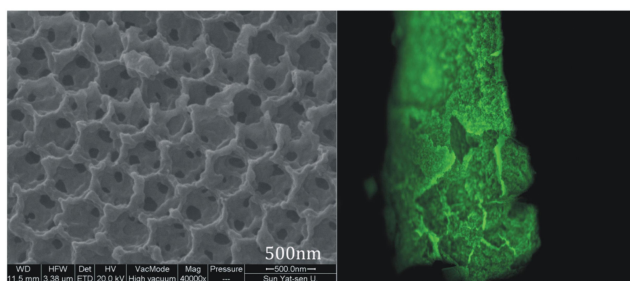


The more non-freezing water, the better mechanical properties.

2018, **35**(11):1301-1308

Modification of Ordered Macroporous Silica by a Functional Polymer Layer and Immobilization of Glucoamylase on the Macropore Walls

YE Lifang, WU Quanzhou*



3DOM SiO₂-COOH materials

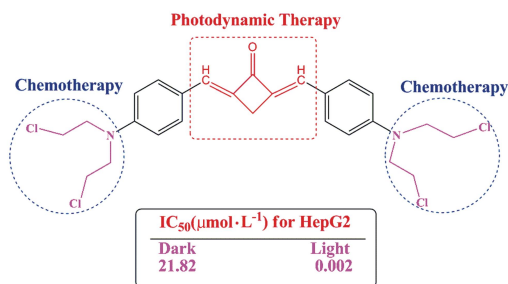
FITC-GLA@3DOM SiO₂-COOH materials

A facile method for the preparation of ordered macroporous silica@polymers composites is presented as a novel support for the immobilization of enzymes.

2018, **35**(11):1309-1316

Synthesis, Crystal Structures and Phototoxicity *in Vitro* of Nitrogen Mustard-Linked Bis(arylmethylene)cycloalkanones

QU Xiaofang, CAO Yaping, WU Qing,
HU Qinghong, YUAN Zeli*

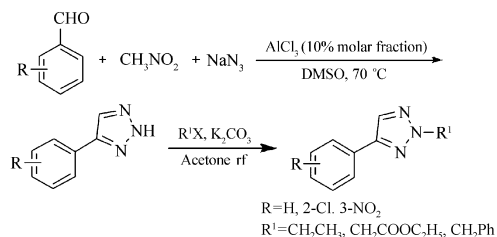


A new nitrogen mustard-linked bis(arylmethylene)cyclobutanone showed a good phototoxicity against to HepG2 human hepatoma cells.

2018, **35**(11):1317-1324

Synthesis and Fungicidal Activity of 2-Substituted-4-aryl-2H-1,2,3-triazole Derivatives

LI Yuanxiang*, LIU Yilin, LEI Sufang,
CHEN Dizhao, BO Rui, LI Sunyong

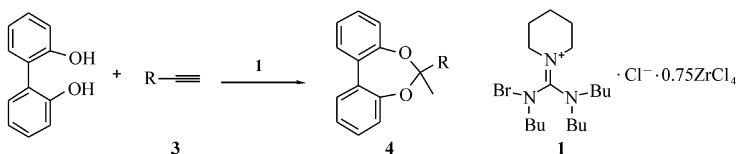


Eleven 2-substituted-4-aryl-2H-1,2,3-triazoles were synthesized, and the bactericidal activity test showed that the inhibition rate of 4-phenyl-2H-1,2,3-triazole against *Gibberella zeae* was 80.4%.

2018, **35**(11):1325-1330

Regioselective Synthesis of Dibenzo[d,f][1,3]dioxepines

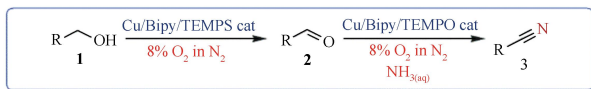
ZHANG Baohua, SHI Lanxiang*



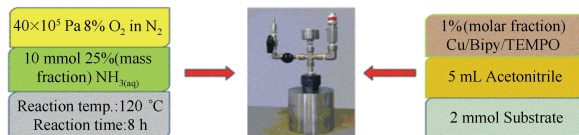
Catalyzed by Lewis acidic guanidinium ionic liquid, dibenzo[d,f][1,3]dioxepines were obtained in high regioselectivity.

2018, **35**(11):1331-1334

CuI/2,2'-Bipyridine/2,2,6,6-Tetramethylpiperidinoxy
Catalytic Oxidation Process of Alcohol to Nitrile



XU Kunlun, CAO Zubin*, QIAO Haiyan,
HAN Dongyun, SHI Weiwei

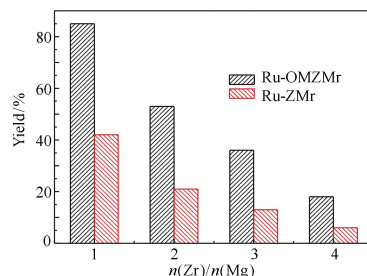


The conversion of alcohol to the corresponding nitrile with high efficiency and high selectivity is suitable for industrial production.

2018, **35**(11):1335-1341

Synthesis of Ordered Mesoporous Ru-MgZr Composite
Oxide Catalysts for Isomerization of Linoleic Acid

CHEN Jiebo*, XIE Weijie, WANG Lu,
WANG Yiming, LEI Yufeng, WEI Yali

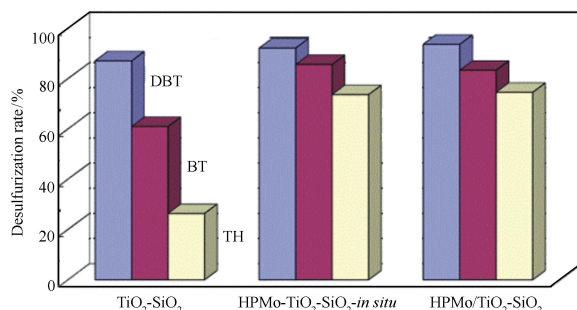


The ordered mesoporous structure improved the activity of catalysts, but the surface basicities of catalysts improved the activity more significantly.

2018, **35**(11):1342-1350

Preparation of High Activity Oxidative Desulfurization
Catalyst from Phosphomolybdic Acid and
Titania Silica Nanocomposite

LIU Di, TONG Huan, YUAN Linjie, ZHANG Zipeng,
MA Kangfu, YUAN Lin, ZHANG Wanyu,
CHEN Lidong*, WANG Xiangsheng, GUO Hongchen*

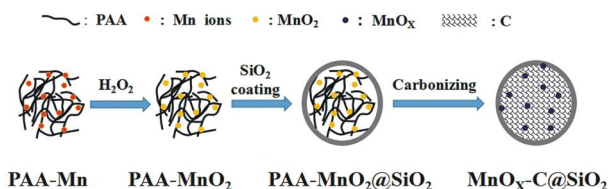


New phosphomolybdic acid and titania-silica nanocomposite catalysts exhibit high oxidative activities for sulfur-containing compounds.

2018, **35**(11):1351-1356

Preparation and Catalytic Properties of
MnO_x-C@SiO₂ Core-Shell Particles

MENG Qingnan*, DU Lulu, TANG Yufei,
ZHAO Kang, ZHAO Lang

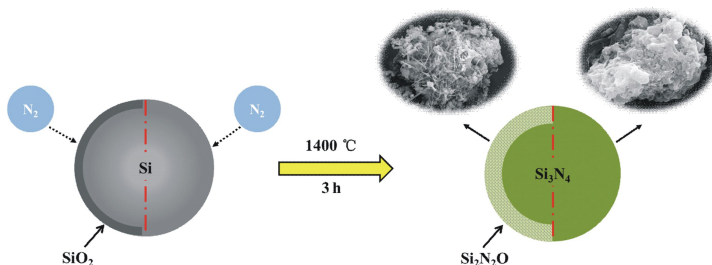


The simply fabricated catalyst containing small-size and low-valenced manganese oxides shows good catalytic performance for methylene blue degradation.

2018, **35**(11):1357-1363

Preparation of High-Purity Silicon Nitride
from Diamond-Wire Cutting Waste

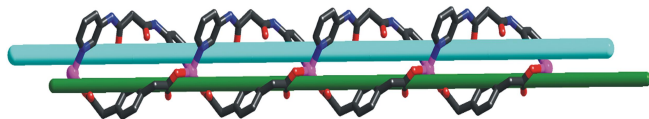
JIN Xing, KONG Jian, WANG Jingqiang,
XING Pengfei*, GAO Bo



Si₃N₄ powder produced from diamond-wire cutting waste instead of silicon powder decreased the cost of the produced Si₃N₄ powder and improved the environment.

2018, **35**(11):1364-1371

Synthesis and Fluorescence Properties of
a Zinc Complex Based on the One-Dimensional
Double-Helical Chains



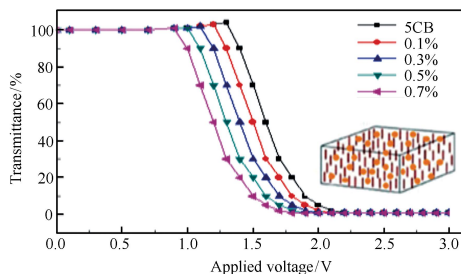
A new zinc complex based on the 1D double-helical chains hydrothermally synthesized and structurally characterized, displays strong fluorescent property and remarkable fluorescent sensing behaviors for the solvent molecules and metal ions.

LIN Hongyan^{*}, TIAN Yuan, WANG Qinglin,
ZENG Ling, LIU Guocheng, ZHAO Yanyu

2018, **35**(11):1372-1377

Effect of Polyhedral Oligomeric Silsesquioxanes-
modified Gold Nanoparticles on 4-*n*-Pentyl-4'-
cyanobiphenyl Liquid Crystal Properties

MA Li, XU Jingwei, YANG Chuanqi, LI Yunhui,
MA Yuqin^{*}, ZHAO Yongxia^{*}

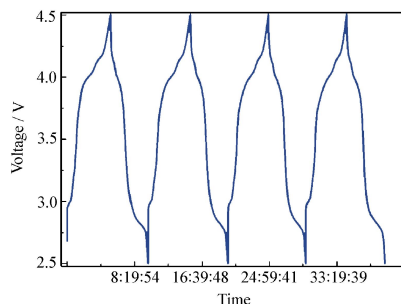


Doping with POSS-modified gold nanoparticles
lowered the threshold voltage of 5CB.

2018, **35**(11):1378-1383

Spinel Lithium Manganese Oxide Octahedral
Nanoparticles with Excellent Electrochemical
Performance as Cathode Materials for
Lithium-Ion Batteries

CHEN Lihui, WU Qiuhan, PAN Pei,
SONG Zixuan, WANG Feng, DING Yu^{*}

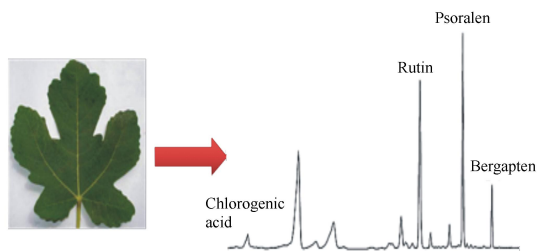


The charge-discharge capacity of LiMn_2O_4 material prepared by high-temperature solid-state method was $147/179 \text{ mA} \cdot \text{h/g}$. After 50 cycles, the capacities remained at 180 and $181 \text{ mA} \cdot \text{h/g}$, respectively.

2018, **35**(11):1384-1390

Identification and Content Determination of
Active Constituents of Fig Leaves

ZHAO Mohan, LIU Zhiqiang,
GENG Aifang^{*}, XIE Wenbing^{*}



Chlorogenic acid, rutin psoralen and bergalactone in fig leaves were simultaneously extracted, identified and assayed, and chlorogenic acid was quantitatively analyzed for the first time.

2018, **35**(11):1391-1398