

2010 年第 39 卷第 11 期

(总第 225 期)

2010 年 11 月 28 日出版

(月刊)

国内外公开发行

1972 年创刊

总 编 / 社 长: 朱明道

主 管: 陕西省科学技术厅

主 办: 陕西省石油化工研究设计院

陕西省化学学会

陕西延长石油(集团)有限责任公司

编辑出版: 应用化工杂志社

责任编辑: 雷珂

编 辑: 崔军 王兰 宋泽宇

英文审校: 解彬 张海娟

地 址: 西安市西延路 61 号

编辑部电话: (029)85561216

发行部电话: (029)85542621

广告部电话: 13363918323

传 真: (029)85542621

Http://www.zgyyhg.cn

E-mail: yyhg@vip.163.com

邮 编: 710054

印 刷: 长安大学雁塔印刷厂

国内发行: 西安市报刊发行局

订 阅: 全国各地邮局

邮发代号: 52-225

国外发行: 中国国际图书贸易总公司

(北京 399 信箱)

国外代号: M 1656

刊 号: ISSN 1671-3206

CN 61-1370/TQ

广告经营许可证号: 6100004000041

定 价: 全年 240 元

# 应

## YING

# 用

## YONG

### 目 次

#### 科研与开发

- 离子液体中羰基钴催化 3-羟基丙酸甲酯加氢制 1,3-丙二醇  
..... 吕志果,王恒生,郭振美,等(1613)
- 茶油精炼副产物皂脚制备生物柴油的研究  
..... 杜勋军,辛莎,王焯,等(1617)
- 相变石蜡储热性能的正交实验研究  
..... 鄢瑛,张瑞杰,张会平(1620)
- 沸石分子筛对大港减压渣油超临界萃取物的加氢催化  
..... 王艳秋,周立雪,魏贤勇,等(1624)
- 新型烷基糖苷季铵盐的制备及性能  
..... 牛华,姜平均,丁徽,等(1628)
- 优先结晶法纯化曲克芦丁 ..... 江正祥,李国防(1632)
- 离子交换树脂吸附苯酚的性能研究  
..... 谢祖芳,何星蓉,吴燕平(1635)
- PMMA/MMT 纳米复合材料聚合反应过程动力学及机理研究  
..... 杨瑞成,夏渊,李进娟,等(1639)
- SnO<sub>2</sub>-高岭土负载硫酸镓催化合成己酸己酯  
..... 金邻豫,汤积德,张福莲,等(1642)
- 一种新型抗静电剂的制备 ..... 王晓康,张定军,吴有智,等(1646)
- Mg-Al 类水滑石催化大豆油酯交换制备生物柴油  
..... 袁冰,张新,袁营,等(1649)
- Li<sub>1.02</sub>Mn<sub>1.92</sub>Al<sub>0.02</sub>Cr<sub>0.02</sub>Mg<sub>0.02</sub>O<sub>4-x</sub>F<sub>x</sub>尖晶石正极材料的研究  
..... 蔡红福,张海朗,王俊芳(1653)
- 单取代烷烃的焓和吉布斯自由能与分子结构的关系  
..... 霍平,刘万云(1658)
- 聚双甲基丙烯酸聚乙二醇酯固-固相变储能材料的制备  
..... 覃忠琼,王峰,李真(1664)
- 粳碎米中大米蛋白提取工艺研究 ..... 吴英华,向开祥(1667)
- 微波辐射下无溶剂催化合成环己酮 1,2-丙二醇缩酮  
..... 章爱华,刘文萍,邓斌,等(1670)
- 混合酸催化环己醇合成环己烯的研究  
..... 徐海云,来兰梅,刘瑛(1673)
- 一种离子液体为介质主体的纳米流体的制备  
..... 朱守圃,丁素芳(1676)
- 计算脂肪醇沸点的新方法 ..... 刘万云,霍平,曾义英(1680)
- 复合固体超强酸 S<sub>2</sub>O<sub>8</sub><sup>2-</sup>/Fe<sub>2</sub>O<sub>3</sub>/ZnO/ZrO<sub>2</sub> 催化合成环己烯  
..... 杜君,孟双明,郭永,等(1685)
- TiO<sub>2</sub>/膨润土柱撑复合材料的吸附性能及应用  
..... 毛树红,王润平,王艳,等(1688)
- 复合增韧酚醛泡沫塑料及其热稳定性能的研究  
..... 殷锦捷,戴英华,赵志超,等(1693)
- 微波辐射下聚硅氧烷微乳液的制备及动力学研究  
..... 储丽玲,曹光群,杨成(1696)
- 一种含羟基表面活性剂 HDXA 界面特性研究  
..... 刘静,蒲春生,刘涛,等(1701)

# 化

HUA

# 工

GONG

- 大型模胎用硬质聚氨酯泡沫塑料的制备研究  
..... 礼嵩明,张广成,米星宇(1703)
- Ni-Co/Al<sub>2</sub>O<sub>3</sub>催化乙醇水蒸气重整制氢性能研究  
..... 毛丽萍,胡勋,吕功焯(1707)
- 高性能SSBR的制备及性能研究 ... 崔英,龚光碧,胡才仲,等(1713)
- 调和制备船用燃料油的研究 ..... 刘美,赵德智(1718)
- 新型搭口胶的制备及其对卷烟品质的影响  
..... 温光和,沈靖轩,马涛,等(1722)
- 4,4'-二甲氧基二苯甲酰甲烷的合成..... 董刚,李敏宜,魏丹,等(1726)
- 反应条件对调驱剂羧甲基淀粉封堵性能的影响..... 王博,郭俊吕(1729)
- 2-甲基咪唑4,5-二羧酸镍配合物的合成及其晶体结构  
..... 陈金珠,涂勇刚,徐平,等(1732)
- 芳香-脂肪型超支化聚酯的合成及端基改性 ..... 张新荔(1735)
- 南瓜酱的研制 ..... 刘政,徐金军,刘莹,等(1739)
- 环己基多硫醚缓蚀剂的合成及性能评价  
..... 王福生,战风涛,吕志凤,等(1743)

## 专论与综述

- 膨润土在水处理方面的应用研究进展 ... 王艳,苗康康,姜红波,等(1746)
- 近红外光谱技术在烟草行业的应用进展  
..... 祝元元,陈永宽,刘志华,等(1750)
- BaTiO<sub>3</sub>超细粉体的制备研究进展 ..... 何飞刚(1754)
- 超分子化学研究的新进展..... 张来新,杨琼,赵卫星(1758)
- 持久性有机污染物的污染现状与控制对策  
..... 王佩华,赵大伟,聂春红,等(1761)

## 分析测试

- 淀粉-碘化镉法检测聚丙烯酰胺类聚合物浓度测量条件的优化  
..... 舒炼,柳建新,吕鑫,等(1766)
- 莪术中挥发性成分的酶提取及GC-MS分析 ..... 汤洪波,周健(1770)
- 乳酸菌处理虾壳发酵液总酸度的测定方法研究  
..... 孔祥平,王娟,黄爽,等(1773)
- 高效液相色谱测定偶氮二异戊腈的含量  
..... 何咏梅,陈安群,罗延谷,等(1776)
- ICP-AES法测定活性炭负载型催化剂中铂、镍的含量  
..... 杨红晓,张林群(1778)
- 改良离子选择电极法测定水样中氟化物..... 赵庆武(1780)

## 应用技术

- 数字成像颗粒分析仪在聚乙烯粉料测试中的应用  
..... 郭正阳,刘萃莲,任春红,等(1783)
- 40%毒死蜱水乳剂的配方研究 ..... 彭江涛,周渝,谭涓,等(1786)
- 用于液晶取向材料的聚酰亚胺中间体IPDA的制备  
..... 张振中,张玉祥,江元汝,等(1789)



本刊为:

- 中国科技核心期刊  
中国石油和化工行业核心期刊  
RCCSE 中国核心学术期刊  
陕西省优秀科技期刊  
中国科技论文统计源期刊  
中国科学引文数据库来源期刊  
中文科技期刊数据库收录期刊  
中国学术期刊综合评价数据来源期刊  
中国科技期刊精品数据库收录期刊  
科技部万方期刊数据库来源期刊  
俄罗斯《文摘杂志》(AJ) 收录期刊  
波兰《哥白尼索引》(IC) 来源期刊  
美国《乌利希期刊指南》来源期刊  
中国期刊全文数据库全文收录期刊  
美国《化学文摘》(CA) 千刊表收录期刊  
《中国化学化工文摘》收录期刊  
首届《CAJ-CD 规范》执行优秀期刊奖  
全国石油和化工行业优秀期刊一等奖

2009年版中国期刊引证报告 2008年应用化工计量指标 总被引频次787;影响因子0.419;5年影响因子0.511;即年指标0.035;他引率0.92;引用刊数370;学科扩散指标2.13;学科影响指标0.44;基金论文比0.551;被引半衰期3.49;H指数5。

Foreign

ISSN 1671-3206

CN61-1370/TQ

Subscription RMB 240 yuan per year

期刊基本参数:CN61-1370/TQ\*1972\*m\*16\*178\*zh\*p\*¥20.00\*5000\*49\*2010-11

# APPLIED CHEMICAL INDUSTRY

## Contents

### Research and Development

- Synthesis of 1,3-propanediol from hydrogenation of methyl 3-hydroxypropionate catalyzed by cobalt carbonyl in room temperature ionic liquids ..... *LÜ Zhi-guo, WANG Heng-sheng, GUO Zhen-mei, et al* (1613)
- Study on the preparation of biodiesel from soapstock of camellia oil ..... *DU Xun-jun, XIN Sha, WANG Ye, et al* (1617)
- Orthogonal test analysis for improving properties of phase change paraffin  
..... *YAN Ying, ZHANG Rui-jie, ZHANG Hui-ping* (1620)
- Catalytic hydroconversion of the fractions from supercritical fluid extraction of Dagang vacuum residue with catalyzer zeolite molecular sieve ..... *WANG Yan-qiu, ZHOU Li-xue, WEI Xian-yong, et al* (1624)
- Preparation and property of a new type of alkyl polyglucosides quaternary ammonium salt  
..... *NIU Hua, LOU Ping-jun, DING Hui, et al* (1628)
- Purification of roxerutin by preferential crystallization ..... *JIANG Zheng-xiang, LI Guo-fang* (1632)
- Study on the behavior of anion exchange resin for adsorbing phenol ..... *XIE Zu-fang, HE Xing-rong, WU Yan-ping* (1635)
- Polyreaction process dynamics and mechanism research of PMMA/MMT nanometer compound materials  
..... *YANG Rui-cheng, XIA Yuan, LI Jin-juan, et al* (1639)
- Preparation of SnO<sub>2</sub>-kaolin supported Ca<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> for catalytic synthesis of hexyl hexanoate  
..... *JIN Lin-yu, TANG Ji-de, ZHANG Fu-lian, et al* (1642)
- Preparation of a new antistatic agent ..... *WANG Xiao-kang, ZHANG Ding-jun, WU You-zhi, et al* (1646)
- The production of biodiesel via transesterification of soybean oil over Mg-Al hydrotalcite catalyst  
..... *YUAN Bing, ZHANG Xin, YUAN Ying, et al* (1649)
- An investigation of the spinel materials Li<sub>1.02</sub>Mn<sub>1.92</sub>Al<sub>0.02</sub>Cr<sub>0.02</sub>Mg<sub>0.02</sub>O<sub>4-x</sub>F<sub>x</sub>  
..... *CAI Hong-fu, ZHANG Hai-lang, WANG Jun-fang* (1653)
- The relation between the entropy and Gibbs free energy of monosubstituted alkanes and their molecular structure  
..... *HUO Ping, LIU Wan-yun* (1658)
- Preparation of polyethylene glycol dimethacrylate ester solid-solid phase change storage energy materials  
..... *QIN Zhong-qiong, WANG Feng, LI Zhen* (1664)
- Study on extracting protein from broken long-grain rice ..... *WU Ying-hua, XIANG Kai-xiang* (1667)
- Catalytic synthesis of cyclohexanone 1,2-propanediol ketal without solvent under microwave irradiation  
..... *ZHANG Ai-hua, LIU Wen-ping, DENG Bin, et al* (1670)
- Preparation of cyclohexene from dehydration of cyclohexanol catalyzed by mixed acid  
..... *XU Hai-yun, LAI Lan-mei, LIU Ying* (1673)
- Preparation of nanofluid using a kind of ionic liquid as the main medium ..... *ZHU Shou-pu, DING Su-fang* (1676)
- New method for calculating the boiling point of aliphatic alcohols ..... *LIU Wan-yun, HUO Ping, ZENG Yi-ying* (1680)
- Synthesis of cyclohexene on solid super acid catalyst S<sub>2</sub>O<sub>8</sub><sup>2-</sup>/Fe<sub>2</sub>O<sub>3</sub>/ZnO/ZrO<sub>2</sub>  
..... *DU Jun, MENG Shuang-ming, GUO Yong, et al* (1685)
- Absorptive performance and application of TiO<sub>2</sub>/bentonite pillared composite  
..... *MAO Shu-hong, WANG Run-ping, WANG Yan, et al* (1688)
- Study on composite toughing and thermal stability of phenolic foam  
..... *YIN Jin-jie, DAI Ying-hua, ZHAO Zhi-chao, et al* (1693)
- Study on preparation and polymerization kinetics of silicone microemulsion under microwave irradiation  
..... *CHU Li-ling, CAO Guang-qun, YANG Cheng* (1696)
- Investigation of interfacial properties of a carboxylic surfactant HDXA ... *LIU Jing, PU Chun-sheng, LIU Tao, et al* (1701)
- Study on preparation of rigid polyurethane foam for large mould tire  
..... *LI Song-ming, ZHANG Guang-cheng, MI Xing-yu* (1703)
- Performance of Ni-Co/Al<sub>2</sub>O<sub>3</sub> used for preparation of hydrogen from ethanol steam reforming  
..... *MAO Li-ping, HU Xun, LÜ Gong-xuan* (1707)
- Preparation and determination of SSBR with high performance ..... *CUI Ying, GONG Guang-bi, HU Cai-zhong, et al* (1713)

- Study on reconcile preparation of marine fuel ..... *LIU Mei, ZHAO De-zhi*(1718)
- Preparation of new seam adhesive and its influents on cigarette quality  
..... *WEN Guang-he, SHEN Jing-xuan, MA Tao, et al*(1722)
- Synthesis of 4,4'-dimethoxy-dibenzoylmethane ..... *DONG Gang, LI Min-yi, WEI Dan, et al*(1726)
- Effect of reaction conditions on plugging properties of profile control agent carboxymethyl starch  
..... *WANG Bo, GUO Jun-lü*(1729)
- Synthesis and crystal structure of nickel (II) complex of 2-methyl-1H-imidazole-4,5-dicarboxylate  
..... *CHEN Jin-zhu, TU Yong-gang, XU Ping, et al*(1732)
- Synthesis of aromatic-aliphatic hyperbranched polyester and modification of its end groups ..... *ZHANG Xin-li*(1735)
- Research and preparation of pumpkin sauce ..... *LIU Zheng, XU Jin-jun, LIU Ying, et al*(1739)
- Study on synthesis of cyclohexene polysulfide corrosion inhibitor and the corrosion mitigation performance  
..... *WANG Fu-sheng, ZHAN Feng-tao, LÜ Zhi-feng, et al*(1743)

## Monograph and Review

- Application of bentonite in wastewater treatment ..... *WANG Yan, MIAO Kang-kang, JIANG Hong-bo*(1746)
- Advance on near infrared spectroscopic technology in tobacco industry  
..... *ZHU Yuan-yuan, CHEN Yong-kuan, LIU Zhi-hua, et al*(1750)
- Research progress of preparation of barium titanate ultrafine powder ..... *HE Fei-gang*(1754)
- Recent research progress of supramolecular chemistry ..... *ZHANG Lai-xin, YANG Qiong, ZHAO Wei-xing*(1758)
- Current state of pollutions and control countermeasure about persistent organic pollutants  
..... *WANG Pei-hua, ZHAO Da-wei, NIE Chun-hong, et al*(1761)

## Analysis Test

- Measurement optimization of polymer concentration of polyacryamide by the starch-cadmium iodine method  
..... *SHU Lian, LIU Jian-xin, LÜ Xin, et al*(1766)
- Analysis of cellulase extraction from the volatile components of *Curcuma phaeocaulis* Val. by GC-MS  
..... *TANG Hong-bo, ZHOU Jian*(1770)
- Study on determination methods of the total acidity of shrimp waste by lactic acid fermentation  
..... *KONG Xiang-ping, WANG Juan, HUANG Shuang, et al*(1773)
- Determination of 2,2'-azobis-(2-methylbutyronitrile) by HPLC  
..... *HE Yong-mei, CHEN An-qun, LUO Yan-gu, et al*(1776)
- Analysis Pt, Ni content in active carbon support catalysts by ICP-AES ..... *YANG Hong-xiao, ZHANG Lin-qun*(1778)
- Improved ion selective electrode determination of fluoride in water samples ..... *ZHAO Qing-wu*(1780)

## Applied Technique

- The application of particle analysis apparatus by digital image in measurement of polyethylene powder  
..... *GUO Zheng-yang, LIU Cui-lian, REN Chun-hong, et al*(1783)
- The formula study of 40% chlorpyrifos emulsion in water ..... *PENG Jiang-tao, ZHOU Yu, TAN Juan, et al*(1786)
- Synthesis of intermediate IPDA used for polyimide material of liquid crystal alignment  
..... *ZHANG Zhen-zhong, ZHANG Yu-xiang, JIANG Yuan-ru, et al*(1789)

**Sponsor:** Shaanxi Provincial Research and Design Institute of Petroleum  
and Chemical Industry  
Shaanxi Provincial Society of Chemical Industry and  
Engineering  
Shaanxi Yanchang Petroleum (Group) Co., Ltd.

**Address:** NO. 61 Xiyan Road, Xi'an, China  
**Post Code:** 710054  
**Tel:** (029) 85561216, 85542621, 13363918323  
**Fax:** (029) 85542621  
**E-mail:** yyhg@vip.163.com

**Edited and Published:** Applied Chemical Industry Editorial Office

**Http:** //www.zgyyhg.cn

**Chief Editor:** Zhu Ming-dao

**ISSN:** 1671-3206

**Executive Editor:** Lei Ke

**CN:** 61-1370/TQ

**English Editor:** Xie Bin

**CODEN:** YHIUA7