

ISSN 2095-0411
CN 32-1822/N

常州大学学报

JOURNAL OF CHANGZHOU UNIVERSITY

自 | 然 | 科 | 学 | 版

NATURAL SCIENCE EDITION



2
2015

Vol.27 No.2
第27卷 第2期

中国 常州
CHANGZHOU CHINA

常州大学学报(自然科学版)

第 27 卷 第 2 期(总第 103 期)

2015 年 4 月

期刊基本参数:CN 32-1822/N * 1989 * q * A4 * 96 * zh * P * ¥8.00 * 1000 * 19 * 2015-04

目 次

化学化工

- 通过 RAFT 聚合和点击反应合成苯乙烯和丙烯酸丁酯的多嵌段共聚物 孔立智, 徐庆锟, 蒋必彪(1)
三氯异氰尿酸促进硫代磷酸酯的高效简便合成 王亮, 陈群, 何明阳(6)
微溶剂法合成咪唑啉缓蚀剂及性能评价 林富荣, 崔存凤(11)
邻、对氯苯腈合成新工艺 王海波, 马江权, 殷云武, 薛宝安, 景小涛(16)
高分散 Pd/氧化石墨烯催化肉桂醛选择加氢 刘平, 武梦瑶, 常婉亭, 张卫红, 李永昕(19)

材料科学与工程

- Zn-Fe-Zr 三元系富锌角的第一性原理计算及热力学评估 吴长军, 彭浩平, 苏旭平, 涂浩(25)
T型 ECAP 变形纯铝微观组织与力学性能研究 魏伟, 马志俊, 魏坤霞, 杜庆柏, 胡静(30)
热处理对微型磁致伸缩材料传感器磁性能的影响 胡佳佳, 叶雪梅, 胡静(35)
纳米二氧化硅的制备及在生物医学领域的应用 姜兴茂, 李亚情, 张涛(39)

环境科学与工程

- 活性炭纤维负载 Ag_3PO_4 光催化剂的可见光催化性能 马建锋, 黄代琴, 邹静, 陈毅忠, 李定龙(45)
横山桥镇农村供水管网水质模型构建及应用 赵玲萍, 张凤娥, 董良飞, 涂保华, 陈春芳(51)
 A^2/O -MBR 工艺在市政工程中的应用研究 刘博, 杨爱, 周勇, 周味贤(55)

计算机与信息工程

- 基于时间序列分析的 DNS 服务器的 DDoS 攻击检测 倪彤光, 顾晓清, 王洪元(59)
基于 FxLMS 算法和预测滤波器的数字耳机降噪研究 郁战, 戴永惠, 王振海, 陶亚辉(64)
一种门限可追踪的匿名签密方案 殷凤梅, 潘光宁, 侯整风(68)

油气与天然气工程

- 海底管线天然气泄漏过程数值模拟 文闯, 延斌, 王完全, 张玉蛟, 王树立, 杨燕(72)
输气管道储气调峰设计方法 江国业, 李玉星(78)

其他

- 细丝蛋白与其蛋白配体的相互作用 邱琳, 李静燕, 王建浩, 蒋鹏举(81)
电场对粉尘凝并效应的实验研究 马若白, 王凯全(88)

Contents

Chemistry and Chemical Technology

- Synthesis of Multiblock Copolymer of Styrene and Butyl Acrylate via RAFT Polymerization and Click Reaction KONG Li-zhi, XU Qing-kun, JIANG Bi-biao(1)
Trichloroisocyanuric Acid-Promoting the Convenient and Efficient Synthesis of Thiophosphates
..... WANG Liang, CHEN Qun, HE Ming-yang(6)
Synthesis of Imidazoline Corrosion Inhibitor with Few Solvent and Its Performance Test
..... LIN Fu-rong, CUI Cun-feng(11)
A New Synthetic Process of 2-Chlorobenzonitrile and 4-Chlorobenzonitrile
..... WANG Hai-po, MA Jiang-quan, YIN Yun-wu, XUE Bao-an, JING Xiao-tao(16)
Selective Hydrogenation of Cinnamaldehyde over Highly-Dispersed Pd/Graphene Oxide
..... LIU Ping, WU Meng-yao, CHANG Wan-ting, ZHANG Wei-hong, LI Yong-xin(19)

Material Science and Engineering

- The Zn-Rich Corner of the Zn-Fe-Zr System: First-Principle Calculation and Thermodynamic Assessment WU Chang-jun, PENG Hao-ping, SU Xu-ping, TU Hao(25)
Microstructure and Mechanical Properties of Pure Aluminum Processed by T-Shaped Equal Channel Angular Pressing (T-ECAP) WEI Wei, MA Zhi-jun, WEI Kun-xia, DU Qing-bo, HU Jing(30)
Effect of Annealing on the Performance of Microscale Magnetostrictive Sensors
..... HU Jia-jia, YE Xue-mei, HU Jing(35)
Preparation of Nano-Silica and Its Applications in Biomedicine
..... JIANG Xing-mao, LI Ya-qing, ZHANG Tao(39)

Environmental Science and Engineering

- Visible-Light Photocatalytic Activity of Ag_3PO_4 Dispersed on Activated Carbon Fiber
..... MA Jian-feng, HUANG Dai-qin, ZOU Jing, CHEN Yi-zhong, LI Ding-long(45)

Journal of Changzhou University(Natural Science Edition)

Vol. 27 No. 2(Sum No. 103)

Apr. 2015

Establishment and Application of Water Quality Model in Villages Water Distribution System of Hengshanqiao Town
..... ZHAO Ling-ping, ZHANG Feng-e, DONG Liang-fei, TU Bao-hua, CHEN Chun-fang(51)

Research of A²/O-MBR on the Municipal Engineering
..... LIU Bo, YANG Ai, ZHOU Yong, ZHOU Wei-xian(55)

Computer and Information Engineering

Detection of DDoS Attack Towards DNS Server Based on Time Series Analysis
..... NI Tong-guang, GU Xiao-qing, WANG Hong-yuan(59)

Digital Headphone Noise Cancellation Research Based on FxLMS Algorithm and Prediction Filter ...
..... HUAN Zhan, DAI Yong-hui, WANG Zhen-hai, TAO Ya-hui(64)

A Threshold Traceable Anonymous Signcryption Scheme
..... YIN Feng-mei, PU Guang-ning, HOU Zheng-feng(68)

Oil and Natural Gas Engineering

Numerical Simulation of Natural Gas Leakage in Subsea Pipelines
..... WEN Chuang, YAN Bin, WANG Xian-quan, ZHANG Yu-jiao, WANG Shu-li, YANG Yan(72)

Peak-Shaving Design Method for a Gas Transmission Pipeline JIANG Guo-ye, LI Yu-xing(78)

Others

Filamins and Their Protein Ligands QIU Lin, LI Jing-yan, WANG Jian-hao, JIANG Peng-ju(81)

Experimental Study on Effect of Electric Field on the Particle Coagulation
..... MA Ruo-bai, WANG Kai-quan(88)

本刊被下列数据库列为来源期刊

- 美国《化学文摘》
- 美国《乌利希期刊指南》
- 《万方数据库》
- 《中国学术期刊全文数据库》
- 《中文科技期刊数据库(全文版)》
- RCCSE 中国核心(扩展版)学术期刊



常州大学学报(自然科学版)

Changzhou Daxue Xuebao(Ziran Kexue Ban)
(季刊 1989 年 3 月创刊)
第 27 卷 第 2 期(总第 103 期)
2015 年 4 月 25 日出版

Journal of Changzhou University(Natural Science Edition)
(Quarterly, Started in Mar.1989)
Vol.27, No.2(Sum No.103)
Apr.25, 2015 Publication

主管单位:江苏省教育厅
主办单位:常州大学
主 编:史国栋
编辑出版:常州大学学报编辑部
发行范围:公 开
电子信箱:xb@cczu.edu.cn
电 话:(0519)86330173
地 址:江苏常州科教城
印 刷:常州市今日照排印务有限公司
发 行:常州大学学报编辑部
国外发行:中国国际图书贸易集团有限公司
订 购:天津市大寺泉集北里别墅 17 号联合征订服务部(邮编:300385)

Administered by:Department of Education of Jiangsu Province
Sponsored by:Changzhou University(CCUZ)
Chief Editor:Shi Guodong
Edited & Published by:Editorial Department of Journal of CCZU
Distribution Scope:Distributed Publicly at Home and Abroad
E-mail:xb@cczu.edu.cn
Telephone:+86-519-86330173
Address:Science and Education Town, Changzhou, Jiangsu, China
Printed by:Changzhou Today Printing Co.,Ltd.
Distributed by:Editorial Department of Journal of CCZU
Overseas Distributed:China International Book Trading Co.,Ltd.
Subscription:The Associated Subscription Service
(No.17 Villa of Jibeili Dasiquan, Tianjin 300385)

ISSN 2095-0411

中国标准连续出版物号: ISSN 2095-0411
CN 32-1822/N 定价:8.00 元

