

中国科学技术协会 主管
中国化学会 主办
北京师范大学
全国中文核心期刊

ISSN 1003-3807
CN 11-1923/O6
美国化学文摘 (CA) 收录源期刊

化学教育

CHINESE JOURNAL OF CHEMICAL EDUCATION

★《中文核心期刊要目总览》收录期刊
★中国核心期刊(遴选)数据库收录期刊
★中国期刊全文数据库收录期刊

★中国学术期刊综合评价数据库统计源期刊
★维普网收录源期刊
★万方数据库收录期刊



邮发代号: 2-106

ISSN 1003-3807



9 771003 380161



6

第37卷
2016

HUAXUE JIAOYU

万方数据

CHINESE JOURNAL OF CHEMICAL EDUCATION

2016 Vol. 37 No. 6

Sponsored by Chinese Chemical Society and Beijing Normal University

Survey of Chemistry

Discussion on Functional Mechanism and Selection Principles of Metal Elements in Biological Systems WANG Zhi-Peng QIU Tian YUAN Jin-Ying (1)

Theory Teaching

Graphical Summary of Chemical Reactions of Major Organic Compounds ZHANG Yu-Mei AN Bin (7)
Practice of Freshman's Lecture on Basic Inorganic Chemistry ZHAO Yun-Ling ZHAO Xin-Hua (12)
Application of PBL Method in Summary of Non-metal Elements CHEN Ya-Guang (15)
Construction and Practice of Exam Mode of Physical Chemistry in Application-oriented University
..... OUYANG Yue-Jun TANG Li-Li WU Feng ZHANG Hai-Zhou (18)
How to Increase Students' Interests in Physical Chemistry Learning CAO Ying-Yu YANG En-Cui (23)

Experiment Teaching

Comprehensive Improvement and Teaching Practice of Preparation Experiment of $K_3[Fe(C_2O_4)_3] \cdot 3H_2O$
..... WEI Xiao-Lan ZOU Zhi-Yi (28)
Formation, Types and Damage of Emulsion with Example of Water Washing Process during Biodiesel Preparation
..... CHEN Wu-Hua (33)
Optimization and Development of Experiment Contents of Liquid-liquid Extraction
..... NIE Li WANG Fang-Kuo HUANG Lei ZHENG Lei (36)
Teaching of Design Experiment of Instrumental Analysis Based on Team Cooperation
..... LI Wei-Wei HU Wan-Qun SHAO Wei (39)
Application of Classification and Comparison Teaching Method on Experiments of Element Properties
..... XU Hai ZHANG Lei (42)

Teacher Education

Argumentation Teaching in Chemistry Didactics Experiment Course with Example of Fountain Experiment
..... LUO Xiu-Ling XIAO Xin (46)

Vocational Education

Application of Special Subject Review Based on Element Concept in Organic Chemistry Teaching in Higher Vocational Educa-
tion SHEN Yang-Fan ZHANG Xun-Yun (50)
Assistance of Chemistry to Nursing Students' Professional Study LI Xiang-Su WANG Li-Qun (54)

Chemical Education for Non-Chemistry Majors

Green Reform of Fine Chemical Experiments to Cultivate Creative Talents HE Zi-Qiang ZHANG Hui-Ling (58)

Postgraduate Education

FAT • CDIO Mode for Materials Chemistry Postgraduate Cultivating GAN Ning CHEN Meng CAO Yu-Ting (61)

Investigation Report

Survey on Value of Chemistry Discipline of Pre-service Teachers
..... ZHU Li-Ying JIANG Min HUANG Min HU Xiao-Han (65)

Discussion and Thinking of Questions

Study on Chemical Equivalence and Magnetic Equivalence of Protons in 1H NMR Spectroscopy QIN Bing-Chang (71)
How to Properly Deal with Chemical Equations Containing Chemical Formula with Dot QIAO Jin-Suo (75)

History of Chemistry and Chemical Education

Discovery and Research of Arsenic and Its Derivatives PAN Bing-Li GAO Jia-Yu (77)

化 学 教 育

(半月刊·1980年创刊)

2016年 第37卷 第6期 3月18日出版

主管单位 中国科学技术协会
主办单位 中国化学会 北京师范大学
编辑出版 《化学教育》编辑部
编辑部地址 北京师范大学化学楼 217 室
邮政编码 100875
电话(传真) 010-58807875
咨询信箱 hxjy-jce@263.net
投稿网址 http://www.hxjy.org

顾问 刘知新
主编 刘正平
副主编 李艳梅 孙世刚 王磊 王祖浩
杨振忠 郑长龙 朱玉军 (专职)
刊名题字 戴安邦
印刷装订 河北天普润印刷厂
总发行处 中国邮政集团公司北京市报刊发行局
订 阅 全国各地邮局, 或本刊编辑部

刊号 ISSN 1003-3807
CN 11-1923/O6

国内邮发代号 2-106

国外发行代号 M3070

定价 12.00 元

知识介绍

生命体系中金属元素的作用机理与选择原理 王志鹏 邱天 袁金颖 (1)

理论课教学

有机化学主要章节内容的图示总结 张玉梅 安斌 (7)

大一学生开展基础无机化学专题演讲活动的尝试 赵云岑 赵新华 (12)

PBL教学法在非金属元素小结教学中的应用 陈亚光 (15)

应用型本科院校物理化学考核模式的构建与实践 欧阳跃军 唐莉莉 吴峰 张海洲 (18)

如何让学生“爱上”物理化学 曹映玉 杨恩翠 (23)

实验课教学

$K_3[Fe(C_2O_4)_3] \cdot 3H_2O$ 制备实验的综合化改造与教学实践 魏小兰 邹智毅 (28)

乳状液的形成、类型及破坏——以生物柴油制备过程中的水洗实验为例 陈五花 (33)

“液-液萃取”实验教学内容的选择与拓展 聂丽 王方阔 黄磊 郑蕾 (36)

基于团队合作的仪器分析设计实验教学初探 李维维 胡万群 邵伟 (39)

归类比较教学法在元素性质实验课中的应用 许海 张雷 (42)

教师教育

“化学实验教学论”课程中论证教学的探索——以喷泉系列实验为例 罗秀玲 肖信 (46)

职业教育

基于元素观的专题式复习教学法在高职有机化学教学中的应用 申扬帆 张雪昀 (50)

化学对护理专业学习的助力作用 李湘苏 王力群 (54)

非化学专业化学教育

培养创新型人才的精细化工实验绿色化改革 何自强 张惠玲 (58)

研究生教育

材料化学专业研究生 FAT·CDIO 人才培养新模式 于宁 陈梦 曹玉廷 (61)

调研报告

职前教师化学学科价值观的调查研究 竺丽英 江敏 黄敏 胡小寒 (65)

问题讨论与思考

1H NMR 谱中质子的化学等价性和磁等价性问题探讨 秦丙昌 (71)

要正确处理化学方程式中含有中圆点的化学式 乔金锁 (75)

化学史与化学史教育

青蒿素类化合物的发现过程与研究现状 潘炳力 高嘉屿 (77)

欢迎订阅 2016 年《化学教育》 (70)

中国化学会第四届全国化学类专业研究生化学课程与教学研讨会 (第一轮通知) (封3)

本期责任编辑 杨金瑞

CHINESE JOURNAL OF CHEMICAL EDUCATION

2016 Vol. 37 No. 6

Sponsored by Chinese Chemical Society and Beijing Normal University

Survey of Chemistry

Discussion on Functional Mechanism and Selection Principles of Metal Elements in Biological Systems WANG Zhi-Peng QIU Tian YUAN Jin-Ying (1)

Theory Teaching

Graphical Summary of Chemical Reactions of Major Organic Compounds ZHANG Yu-Mei AN Bin (7)
Practice of Freshman's Lecture on Basic Inorganic Chemistry ZHAO Yun-Ling ZHAO Xin-Hua (12)
Application of PBL Method in Summary of Non-metal Elements CHEN Ya-Guang (15)
Construction and Practice of Exam Mode of Physical Chemistry in Application-oriented University
..... OUYANG Yue-Jun TANG Li-Li WU Feng ZHANG Hai-Zhou (18)
How to Increase Students' Interests in Physical Chemistry Learning CAO Ying-Yu YANG En-Cui (23)

Experiment Teaching

Comprehensive Improvement and Teaching Practice of Preparation Experiment of $K_3[Fe(C_2O_4)_3] \cdot 3H_2O$
..... WEI Xiao-Lan ZOU Zhi-Yi (28)
Formation, Types and Damage of Emulsion with Example of Water Washing Process during Biodiesel Preparation
..... CHEN Wu-Hua (33)
Optimization and Development of Experiment Contents of Liquid-liquid Extraction
..... NIE Li WANG Fang-Kuo HUANG Lei ZHENG Lei (36)
Teaching of Design Experiment of Instrumental Analysis Based on Team Cooperation
..... LI Wei-Wei HU Wan-Qun SHAO Wei (39)
Application of Classification and Comparison Teaching Method on Experiments of Element Properties
..... XU Hai ZHANG Lei (42)

Teacher Education

Argumentation Teaching in Chemistry Didactics Experiment Course with Example of Fountain Experiment
..... LUO Xiu-Ling XIAO Xin (46)

Vocational Education

Application of Special Subject Review Based on Element Concept in Organic Chemistry Teaching in Higher Vocational Educa-
tion SHEN Yang-Fan ZHANG Xun-Yun (50)
Assistance of Chemistry to Nursing Students' Professional Study LI Xiang-Su WANG Li-Qun (54)

Chemical Education for Non-Chemistry Majors

Green Reform of Fine Chemical Experiments to Cultivate Creative Talents HE Zi-Qiang ZHANG Hui-Ling (58)

Postgraduate Education

FAT • CDIO Mode for Materials Chemistry Postgraduate Cultivating GAN Ning CHEN Meng CAO Yu-Ting (61)

Investigation Report

Survey on Value of Chemistry Discipline of Pre-service Teachers
..... ZHU Li-Ying JIANG Min HUANG Min HU Xiao-Han (65)

Discussion and Thinking of Questions

Study on Chemical Equivalence and Magnetic Equivalence of Protons in 1H NMR Spectroscopy QIN Bing-Chang (71)
How to Properly Deal with Chemical Equations Containing Chemical Formula with Dot QIAO Jin-Suo (75)

History of Chemistry and Chemical Education

Discovery and Research of Arsenic and Its Derivatives PAN Bing-Li GAO Jia-Yu (77)

化 学 教 育

(半月刊·1980年创刊)

2016年 第37卷 第6期 3月18日出版

主管单位 中国科学技术协会
主办单位 中国化学会 北京师范大学
编辑出版 《化学教育》编辑部
编辑部地址 北京师范大学化学楼 217 室
邮政编码 100875
电话(传真) 010-58807875
咨询信箱 hxjy-jce@263.net
投稿网址 http://www.hxjy.org

顾问 刘知新
主编 刘正平
副主编 李艳梅 孙世刚 王磊 王祖浩
杨振忠 郑长龙 朱玉军(专职)
刊名题字 戴安邦
印刷装订 河北天普润印刷厂
总发行处 中国邮政集团公司北京市报刊发行局
订 阅 全国各地邮局,或本刊编辑部

刊号 ISSN 1003-3807
CN 11-1923/O6

国内邮发代号 2-106

国外发行代号 M3070

定价 12.00 元