

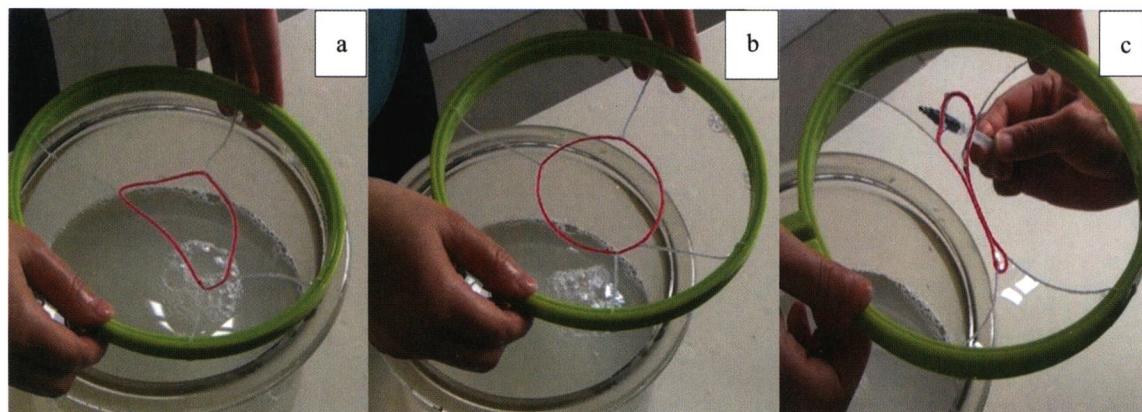
全国中文核心期刊
美国化学文摘（CA）收录源期刊

ISSN 1003-3807
Q K 2 1 1 2 8 2 9
CN 10-1515/O6

化学教育(中英文)

Chinese Journal of Chemical Education

2021 年 第 42 卷 第 8 期 Vol.42 No.8



邮发代号：2-106

ISSN 1003-3807



HUAXUE JIAOYU



CHINESE
CHEMICAL
SOCIETY



主管：中国科学技术协会
主办：中国化学会
北京师范大学

万方数据

目 次

化学·生活·社会

“钙”世英雄 耿旺昌 冯娟 颜静 闫毅 (1)

非金属元素砷的同素异形体研究进展 马艺 魏灵灵 李淑妮 高胜利 王长号 (5)

课程·教材·评价

基于学科交叉融合的通识选修课程建设实践——以“化学与文物考古”课程为例 白凤华 薛辉 郭艳 (17)

“工程化学”SPOC的建设与教学效果 李振 于丽波 (23)

理论教学

进阶式分组任务在无机化学混合式教学中的应用探讨 李玲 (28)

Navier-Stokes方程组证明及理论本质探究 陈金庆 吕宏凌 (34)

物理化学教学中希托夫法计算离子迁移数的新策略 陈钰 赵娣 朱政静 乔科攀 牟天成 (39)

实验教学

演示实验在大学物理化学课堂教学中的应用 梁红莲 王树军 傅丽 陈钰 (43)

综合型有机化学实验设计：*N*-苄氧基-2-氯-2-苯乙酰胺的合成与表征

..... 王刚 孙琦 何照林 岑江波 袁华 尹传奇 (49)

CBS还原合成手性1-苯乙醇实验设计 于月娜 房芳 (53)

生物质废弃物碳作为锂离子电池负极材料研究的综合性实验设计 王秋芬 缪娟 张成立 (58)

综合有机化学实验：生物碱*essramycin*类似物的合成与表征 卢爱党 彭文浩 张东升 李红岩 (63)

职业教育

产教融合下高职“三三结合式”人才培养模式——以药品生产技术专业为例 刘云霞 (69)

非化学专业化学教育

荧光染料-硅藻土复合物显现潜在手印的实验探究——将法庭科学融入化学实验教学 袁传军 (74)

基于产品工程理念的聚乙二醇类物质脱硫脱氮实验教学设计

..... 高家俊 熊春艳 熊芸 吴华东 戴亚芬 姜兴茂 (79)

研究生教育

前沿科研成果在研究生物理化学课的教学实践——以甲醛分解反应为例 周佳 (84)

信息技术与化学

利用Chirality-2进行有机化学游戏化教学模式的实施 余凡 王亮 李艾华 刘芸 龚四林 李宝 (89)

调研报告

化学专业学生线上学习平台和学习效果评价研究 刘虎成 高妍 洪小燕 周朵朵 刘广建 邢国文 (94)

问题讨论与思考

溯源辨析“活化分子”概念在化学教材中的角色定位 郑超 (99)

酶促反应动力学教学刍议：米氏方程衍生公式与图像

..... 王志鹏 车子良 马新雨 Farica Zhuang 蒋振雄 尹晨 王鹏 (105)

化学史与化学史教育

中国著名无机化学家关实之 贺天伟 (111)

2021年《化学教育》订阅通知 (42)

第六届全国化学教育高峰论坛通知 (88)

封面图片 (46)

本期责任编辑 杨金瑞 齐娜

CHINESE JOURNAL OF CHEMICAL EDUCATION

2021 Vol. 42 No. 8

Sponsored by Chinese Chemical Society and Beijing Normal University

Chemistry-Life-Society

- The Hero of Calcium GENG Wang-Chang FENG Juan YAN Jing YAN Yi (1)
Research Progress of Allotropes of Non-Metallic Element Arsenic MA Yi WEI Ling-Ling LI Shu-Ni GAO Sheng-Li WANG Chang-Hao (5)

Curriculum-Teaching Materials-Assessment

- Construction and Practical Exploration of General Elective Courses Based on Interdisciplinary Integration: Taking the Course of Chemistry and Archaeology as Example BAI Feng-Hua XUE Hui GUO Yan (17)
Construction and Teaching Effect of Engineering Chemistry SPOC LI Zhen YU Li-Bo (23)

Theory Teaching

- Application of Progressive Group Tasks in Blended Teaching of Inorganic Chemistry LI Ling (28)
Proof of Navier-Stokes Equations and Investigation of Its Theoretical Essences CHEN Jin-Qing LV Hong-Ling (34)
New Strategy for Calculating Ion Transference Number by Hittorf Method in Physical Chemistry Teaching CHEN Yu ZHAO Di ZHUMei-Jing QIAO Ke-Pan MU Tian-Cheng (39)

Experiment Teaching

- Application of Demonstration Experiment in Physics Chemistry Classroom Teaching LIANG Hong-Lian WANG Shu-Jun FULi CHEN Yu (43)
Design of Comprehensive Organic Experiment: Synthesis and Characterization of N-(Benzylxy)-2-Chloro-2-Phenylacetamide WANG Gang SUN Qi HE Zhao-Lin XI Jiang-Bo YUAN Hua YIN Chuan-Qi (49)
Experimental Design for Enantioselective Synthesis of Chiral 1-Phenylethanol Through CBS Reduction YU Yue-Na FANG Fang (53)
Design of Comprehensive Experiment of Carbon Derived from Biomass Wastes as Anode Material for Lithium Ion Battery WANG Qiu-Fen MIAO Juan ZHANG Cheng-Li (58)
Comprehensive Organic Chemistry Experiment: Synthesis and Characterization of ESSRAMycin Analogue LU Ai-Dang PENG Wen-Hao ZHANG Dong-Sheng LI Hong-Yan (63)

Vocational Education

- “Three Three Combination” Talent Training Mode in Higher Vocational Colleges Under the Integration of Production and Education Taking Pharmaceutical Production Technology as Example LIU Yun-Xia (69)

Chemical Education for Non-Chemistry Majors

- Experimental Investigation of Fluorescent Dye-Diatomite Composites for Latent Fingerprint Development: Integrating Forensic Science Frontiers into Chemical Experiment Teaching YUAN Chuan-Jun (74)
Product Engineering Concept-Based Experimental Teaching Design of Extractive Desulfurization and Denitrogenation by Polyethylene Glycols GAO Jia-Jun XIONG Chun-Yan XIONG Yun WU Hua-Dong DAI Ya-Fen JIANG Xing-Mao (79)

Postgraduate Education

- Teaching Practice of Cutting-Edge Scientific Research in Graduate-Level Physical Chemistry: Dissociation of Formaldehyde as Example ZHOU Jia (84)

Information Technology and Chemistry

- Using Chirality-2 to Implement the Game Teaching Mode of Organic Chemistry YU Fan WANG Liang LI Ai-Hua LIU Yun GONG Si-Lin LI Bao (89)

Investigation Report

- Study on the Online Learning Platforms and the Evaluation of Learning Effect for Chemistry Majors LIU Hu-Cheng GAO Yan HONG Xiao-Yan ZHOU Duo-Duo LIU Guang-Jian XING Guo-Wen (94)

Discussion and Thinking of Questions

- Historical Analysis on the Role of the Concept of Activated Molecules in Chemical Textbooks ZHENG Chao (99)
Discussion on Teaching Enzyme Kinetics: Plots of Michaelis-Menten Equation Derivatives and Their Figures WANG Zhipeng A CHE Zi-Liang MA Xin-Yu ZHUANG Farica JIANG Zhen-Xiong YIN Sheng WANG Peng (105)

History of Chemistry and Chemical History Education

- GUAN Shi-Zhi: A Well-Known Inorganic Chemist in China HE Tian-Wei (111)

化学教育(中英文)

(半月刊·1980年创中文刊·2017年变更为中英文刊)

2021年 第42卷 第8期 4月18日出版

| | | | |
|----------|--------------------------------|---------------------|------------------|
| 主管单位 | 中国科学技术协会 | 顾 师 | 刘知新 |
| 主办单位 | 中国化学会 北京师范大学 | 问 编 | 刘正平 |
| 编辑出版 | 《化学教育(中英文)》编辑部 | 副 主 编 | 姜雪峰 施 展 孙世刚 王 磊 |
| 编辑部地址 | 北京师范大学化学楼 217 室 | 王祖浩 杨 岷 郑长龙 朱玉军(专职) | |
| 邮 政 编 码 | 100875 | 刊名题字 | 戴安邦 |
| 电 话(传 真) | 010—58807875 | 印 刷 装 订 | 保定华泰印刷有限公司 |
| 咨 询 信 箱 | hxjy-jce@263.net | 总 发 行 处 | 中国邮政集团公司北京市报刊发行局 |
| 投 稿 网 址 | http://www.hxjy.chemsoc.org.cn | 订 阅 | 全 国 各 地 邮 局 |

刊号 ISSN 1003 - 3807
CN 10 - 1515/O6

国内邮发代号 2-106

国外发行代号 M3070

定 价 26.00 元

CHINESE JOURNAL OF CHEMICAL EDUCATION

2021 Vol. 42 No. 8

Sponsored by Chinese Chemical Society and Beijing Normal University

Chemistry-Life-Society

- The Hero of Calcium GENG Wang-Chang FENG Juan YAN Jing YAN Yi (1)
Research Progress of Allotropes of Non-Metallic Element Arsenic MA Yi WEI Ling-Ling LI Shu-Ni GAO Sheng-Li WANG Chang-Hao (5)

Curriculum-Teaching Materials-Assessment

- Construction and Practical Exploration of General Elective Courses Based on Interdisciplinary Integration: Taking the Course of Chemistry and Archaeology as Example BAI Feng-Hua XUE Hui GUO Yan (17)
Construction and Teaching Effect of Engineering Chemistry SPOC LI Zhen YU Li-Bo (23)

Theory Teaching

- Application of Progressive Group Tasks in Blended Teaching of Inorganic Chemistry LI Ling (28)
Proof of Navier-Stokes Equations and Investigation of Its Theoretical Essences CHEN Jin-Qing LV Hong-Ling (34)
New Strategy for Calculating Ion Transference Number by Hittorf Method in Physical Chemistry Teaching CHEN Yu ZHAO Di ZHUMei-Jing QIAO Ke-Pan MU Tian-Cheng (39)

Experiment Teaching

- Application of Demonstration Experiment in Physics Chemistry Classroom Teaching LIANG Hong-Lian WANG Shu-Jun FULi CHEN Yu (43)
Design of Comprehensive Organic Experiment: Synthesis and Characterization of N-(Benzylxy)-2-Chloro-2-Phenylacetamide WANG Gang SUN Qi HE Zhao-Lin XI Jiang-Bo YUAN Hua YIN Chuan-Qi (49)
Experimental Design for Enantioselective Synthesis of Chiral 1-Phenylethanol Through CBS Reduction YU Yue-Na FANG Fang (53)
Design of Comprehensive Experiment of Carbon Derived from Biomass Wastes as Anode Material for Lithium Ion Battery WANG Qiu-Fen MIAO Juan ZHANG Cheng-Li (58)
Comprehensive Organic Chemistry Experiment: Synthesis and Characterization of ESSRAMycin Analogue LU Ai-Dang PENG Wen-Hao ZHANG Dong-Sheng LI Hong-Yan (63)

Vocational Education

- “Three Three Combination” Talent Training Mode in Higher Vocational Colleges Under the Integration of Production and Education Taking Pharmaceutical Production Technology as Example LIU Yun-Xia (69)

Chemical Education for Non-Chemistry Majors

- Experimental Investigation of Fluorescent Dye-Diatomite Composites for Latent Fingerprint Development: Integrating Forensic Science Frontiers into Chemical Experiment Teaching YUAN Chuan-Jun (74)
Product Engineering Concept-Based Experimental Teaching Design of Extractive Desulfurization and Denitrogenation by Polyethylene Glycols GAO Jia-Jun XIONG Chun-Yan XIONG Yun WU Hua-Dong DAI Ya-Fen JIANG Xing-Mao (79)

Postgraduate Education

- Teaching Practice of Cutting-Edge Scientific Research in Graduate-Level Physical Chemistry: Dissociation of Formaldehyde as Example ZHOU Jia (84)

Information Technology and Chemistry

- Using Chirality-2 to Implement the Game Teaching Mode of Organic Chemistry YU Fan WANG Liang LI Ai-Hua LIU Yun GONG Si-Lin LI Bao (89)

Investigation Report

- Study on the Online Learning Platforms and the Evaluation of Learning Effect for Chemistry Majors LIU Hu-Cheng GAO Yan HONG Xiao-Yan ZHOU Duo-Duo LIU Guang-Jian XING Guo-Wen (94)

Discussion and Thinking of Questions

- Historical Analysis on the Role of the Concept of Activated Molecules in Chemical Textbooks ZHENG Chao (99)
Discussion on Teaching Enzyme Kinetics: Plots of Michaelis-Menten Equation Derivatives and Their Figures WANG Zhipeng A CHE Zi-Liang MA Xin-Yu ZHUANG Farica JIANG Zhen-Xiong YIN Sheng WANG Peng (105)

History of Chemistry and Chemical History Education

- GUAN Shi-Zhi: A Well-Known Inorganic Chemist in China HE Tian-Wei (111)

化学教育(中英文)

(半月刊·1980年创中文刊·2017年变更为中英文刊)

2021年 第42卷 第8期 4月18日出版

| | | | |
|----------|--------------------------------|---------------------|------------------|
| 主管单位 | 中国科学技术协会 | 顾 师 | 刘知新 |
| 主办单位 | 中国化学会 北京师范大学 | 问 编 | 刘正平 |
| 编辑出版 | 《化学教育(中英文)》编辑部 | 副 主 编 | 姜雪峰 施 展 孙世刚 王 磊 |
| 编辑部地址 | 北京师范大学化学楼 217 室 | 王祖浩 杨 岜 郑长龙 朱玉军(专职) | |
| 邮 政 编 码 | 100875 | 刊名题字 | 戴安邦 |
| 电 话(传 真) | 010—58807875 | 印 刷 装 订 | 保定华泰印刷有限公司 |
| 咨 询 信 箱 | hxjy-jce@263.net | 总 发 行 处 | 中国邮政集团公司北京市报刊发行局 |
| 投 稿 网 址 | http://www.hxjy.chemsoc.org.cn | 订 阅 | 全 国 各 地 邮 局 |

刊号 ISSN 1003 - 3807
CN 10 - 1515/O6

国内邮发代号 2-106

国外发行代号 M3070

定 价 26.00 元