

全国中文核心期刊
美国化学文摘 (CA) 收录源期刊

IYPT 2019

国际化学元素周期表年

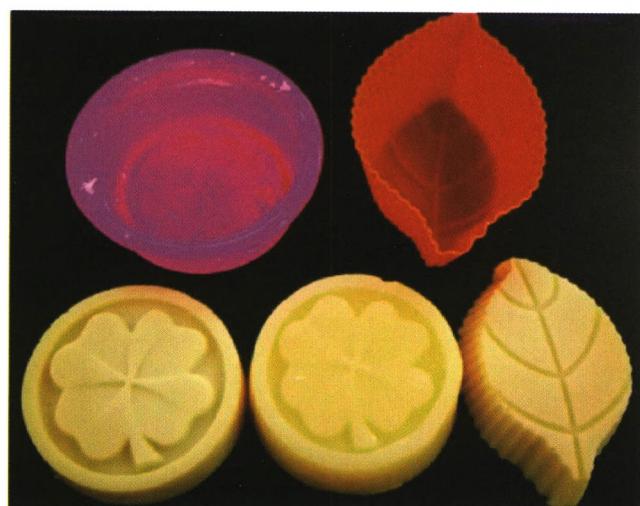
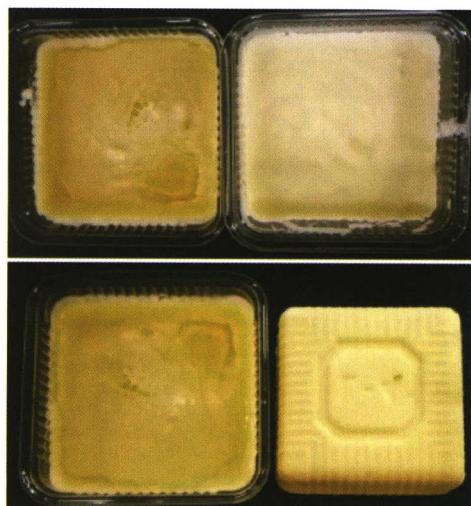


Q K 1 9 0 1 3 6 6

化学教育(中英文)

Chinese Journal of Chemical Education

2019 年 第 40 卷 第 4 期 Vol.40 No.4



邮发代号：2-106

ISSN 1003-3807



04

HUAXUE JIAOYU

万方数据



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

2019年2月

化学教育(中英文)

第40卷

第4期

目 次

国际化学元素周期表年

- 钙与建筑材料 孙国星 (1)
迈向元素周期律的第一人：约翰·沃尔夫冈·杜布莱纳 吴限 (4)

化学·生活·社会

- 原子力显微镜的基本原理及应用 赵春花 (10)
新型柔性储能器件：柔性锂离子电池 孙磊 (16)

课程·教材·评价

- 基于微课的高校无机化学翻转课堂教学效果研究——以无机化学精品资源共享课为例
杨凤磊 沈飞 王庆红 闫岩 (24)

理论教学

- 基于知识体系整合的元素无机化学教学改革 陈亚光 (30)
大学化学习题型微课的教学设计与实践——以一道易错电化学习题的教学为例 王海霞 王明德 蒲敏 (34)
研究型教学的新方法——U型7步探究法 殷开梁 (40)

实验教学

- 利用正交实验法优化聚合硫酸铁的合成条件 张玮玮 邱丽娜 郭丽芳 陆慧丽 (43)
以学生为中心的递进式“精细化工”实验教学 梁华 戴可 柯改利 (46)
大学无机化学实验碱式碳酸铜制备方法的优化
钟莲云 蕰洪湘 马少妹 白丽娟 曾俊杰 韦莹 韦晓 蓝平 廖安平 (50)
ZSM-5分子筛的可控制备及其对水中Cu²⁺吸附性能研究综合实验 龙旭 孟庆华 张光辉 孙婧 李佳佳 张拴 郭惠 李小蓉 (55)
4,4'-(2,2-二苯乙烯)-1,1-双(4,1-亚苯基)二吡啶的合成、表征及其聚集诱导发光性能研究 何田 顾峰烨 张倩 尹守春 (60)

教师教育

- 同伴指导影响师范生课堂教学基本技能的实验研究 李玉珍 (65)
基于博客的优秀化学师范生反思研究 陈凯 丁小婷 马宏佳 (70)

职业教育

- 高职有机化学抛锚式翻转课堂教学模式的构建和实践 张雪昀 申扬帆 (82)

非化学专业化学教育

- 非化学化工专业“大学化学”课程考核方法改革实践与探索
于剑峰 曾景斌 刘大鹏 戴昉纳 温聪颖 孔庆池 吕仁庆 罗立文 (87)

问题讨论与思考

- 关于原子轨道等性与不等性杂化区分标准的探讨 关放 张军杰 高瑞霞 (93)

- 封面图片 (47)

- 2019年《化学教育》订阅通知 (23)

- “国际化学元素周期表年”专栏征稿通知 (86)

- 中国化学会第五届《化学教育》读者、作者、编者学术交流会暨全国化学教育高峰论坛（第一轮通知） (97)

本期责任编辑 杨金瑞

CHINESE JOURNAL OF CHEMICAL EDUCATION

2019 Vol. 40 No. 4

Sponsored by Chinese Chemical Society and Beijing Normal University

International Year of the Periodic Table of Chemical Elements

- Calcium and Building Materials: A Special Article on Calcium Element SUN Guo-Xing (1)
Johann Wolfgang Döbereiner: The Pioneer of the Periodic System of Elements WU Xian (4)

Chemistry-Life-Society

- Principles and Applications of Atomic Force Microscopy ZHAO Chun-Hua (10)
New Flexible Energy Storage Device: Flexible Lithium Ion Batteries SUN Lei (16)

Curriculum-Teaching Materials-Assessment

- Teaching Effect of Flipped Classroom Based on Micro-Courses for College Inorganic Chemistry High-Quality Sharing Course YANG Feng-Lei SHEN Fei WANG Qing-Hong YAN Yan (24)

Theory Teaching

- Teaching Reform of Inorganic Chemistry of Elements Based on Knowledge Integration CHEN Ya-Guang (30)
Instructional Design and Practice of the Exercises Type Micro-Lesson in College Chemistry Taking a Fallibility Electrochemical Exercise as Example WANG Hai-Xia WANG Ming-De PU Min (34)

- A New Method for Research Teaching and Studying: U-Type Seven-Step Inquiry YIN Kai-Liang (40)

Experiment Teaching

- Optimization of Synthetic Conditions of Polymerized Ferric Sulfate by Orthogonal Experiment ZHANG Wei-Wei QIU Li-Na GUO Li-Fang LU Hui-Li (43)

- Student-Centered Experiment Teaching of Fine Chemicals with Progressive Attempt LIANG Hua DAI Ke KE Gai-Li (46)

- Optimization of Experimental Conditions of Basic Copper Carbonate Preparation in Inorganic Chemistry Experiment Course ... ZHONG Lian-Yun KUAI Hong-Xiang MA Shao-Mei BAI Li-Juan ZENG Jun-Jie WEI Ying WEI Xiao LAN Ping LIAO An-Ping (50)

- Comprehensive Experiment of ZSM-5 Zeolite Preparation and Its Behavior Study on Adsorption of Cu²⁺ in Waste Water ... LONG Xu MENG Qing-Hua ZHANG Guang-Hui SUN Jing LI Jia-Jia ZHANG Shuan GUO Hui LI Xiao-Rong (55)

- Comprehensive Chemical Experiment: Synthesis and Characterization of 4,4'-(2,2-Diphenylethene-1,1-diyl)bis(4,1-phenylene) dipyridine and Its Aggregation-Induced Emission Property HE Tian GU Zheng-Ye ZHANG Qian YIN Shou-Chun (60)

Teacher Education

- Experimental Study on Peer Coaching to Affect the Classroom Teaching Skills of Normal University Students LI Yu-Zhen (65)

- Research on Reflection of Excellent Pre-Service Chemistry Teacher Based on Blog CHEN Kai DING Xiao-Ting MA Hong-Jia (70)

Vocational Education

- Construction and Practice of Anchored Flipped Classroom Teaching Mode of Organic Chemistry in Higher Vocational Education ZHANG Xue-Yun SHEN Yang-Fan (82)

Chemical Education for Non-Chemistry Majors

- Practice and Research on Assessment Method of College Chemistry for Non-Chemical Major YU Jian-Feng ZENG Jing-Bin LIU Da-Peng DAI Fang-Na WEN Cong-Ying KONG Qing-Chi LV Ren-Qing LUO Li-Wen (87)

Discussion and Thinking of Questions

- Discussion on Criterion of Identifying Equivalent and Nonequivalent Hybridization of Hybrid Orbitals GUAN Fang ZHANG Jun-Jie GAO Rui-Xia (93)

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)

2019年 第40卷 第4期 2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(中英文)》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
杨屹 杨振忠 郑长龙 朱玉军(专职)
刊名题字 戴安邦
印刷装订 保定华泰印刷有限公司
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

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 21.00 元

CHINESE JOURNAL OF CHEMICAL EDUCATION

2019 Vol. 40 No. 4

Sponsored by Chinese Chemical Society and Beijing Normal University

International Year of the Periodic Table of Chemical Elements

- Calcium and Building Materials: A Special Article on Calcium Element SUN Guo-Xing (1)
Johann Wolfgang Döbereiner: The Pioneer of the Periodic System of Elements WU Xian (4)

Chemistry-Life-Society

- Principles and Applications of Atomic Force Microscopy ZHAO Chun-Hua (10)
New Flexible Energy Storage Device: Flexible Lithium Ion Batteries SUN Lei (16)

Curriculum-Teaching Materials-Assessment

- Teaching Effect of Flipped Classroom Based on Micro-Courses for College Inorganic Chemistry High-Quality Sharing Course YANG Feng-Lei SHEN Fei WANG Qing-Hong YAN Yan (24)

Theory Teaching

- Teaching Reform of Inorganic Chemistry of Elements Based on Knowledge Integration CHEN Ya-Guang (30)
Instructional Design and Practice of the Exercises Type Micro-Lesson in College Chemistry Taking a Fallibility Electrochemical Exercise as Example WANG Hai-Xia WANG Ming-De PU Min (34)

- A New Method for Research Teaching and Studying: U-Type Seven-Step Inquiry YIN Kai-Liang (40)

Experiment Teaching

- Optimization of Synthetic Conditions of Polymerized Ferric Sulfate by Orthogonal Experiment ZHANG Wei-Wei QIU Li-Na GUO Li-Fang LU Hui-Li (43)

- Student-Centered Experiment Teaching of Fine Chemicals with Progressive Attempt LIANG Hua DAI Ke KE Gai-Li (46)

- Optimization of Experimental Conditions of Basic Copper Carbonate Preparation in Inorganic Chemistry Experiment Course ... ZHONG Lian-Yun KUAI Hong-Xiang MA Shao-Mei BAI Li-Juan ZENG Jun-Jie WEI Ying WEI Xiao LAN Ping LIAO An-Ping (50)

- Comprehensive Experiment of ZSM-5 Zeolite Preparation and Its Behavior Study on Adsorption of Cu²⁺ in Waste Water ... LONG Xu MENG Qing-Hua ZHANG Guang-Hui SUN Jing LI Jia-Jia ZHANG Shuan GUO Hui LI Xiao-Rong (55)

- Comprehensive Chemical Experiment: Synthesis and Characterization of 4,4'-(2,2-Diphenylethene-1,1-diyl)bis(4,1-phenylene) dipyridine and Its Aggregation-Induced Emission Property HE Tian GU Zheng-Ye ZHANG Qian YIN Shou-Chun (60)

Teacher Education

- Experimental Study on Peer Coaching to Affect the Classroom Teaching Skills of Normal University Students LI Yu-Zhen (65)

- Research on Reflection of Excellent Pre-Service Chemistry Teacher Based on Blog CHEN Kai DING Xiao-Ting MA Hong-Jia (70)

Vocational Education

- Construction and Practice of Anchored Flipped Classroom Teaching Mode of Organic Chemistry in Higher Vocational Education ZHANG Xue-Yun SHEN Yang-Fan (82)

Chemical Education for Non-Chemistry Majors

- Practice and Research on Assessment Method of College Chemistry for Non-Chemical Major YU Jian-Feng ZENG Jing-Bin LIU Da-Peng DAI Fang-Na WEN Cong-Ying KONG Qing-Chi LV Ren-Qing LUO Li-Wen (87)

Discussion and Thinking of Questions

- Discussion on Criterion of Identifying Equivalent and Nonequivalent Hybridization of Hybrid Orbitals GUAN Fang ZHANG Jun-Jie GAO Rui-Xia (93)

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)

2019年 第40卷 第4期 2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(中英文)》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
杨屹 杨振忠 郑长龙 朱玉军(专职)
刊名题字 戴安邦
印刷装订 保定华泰印刷有限公司
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

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 21.00 元