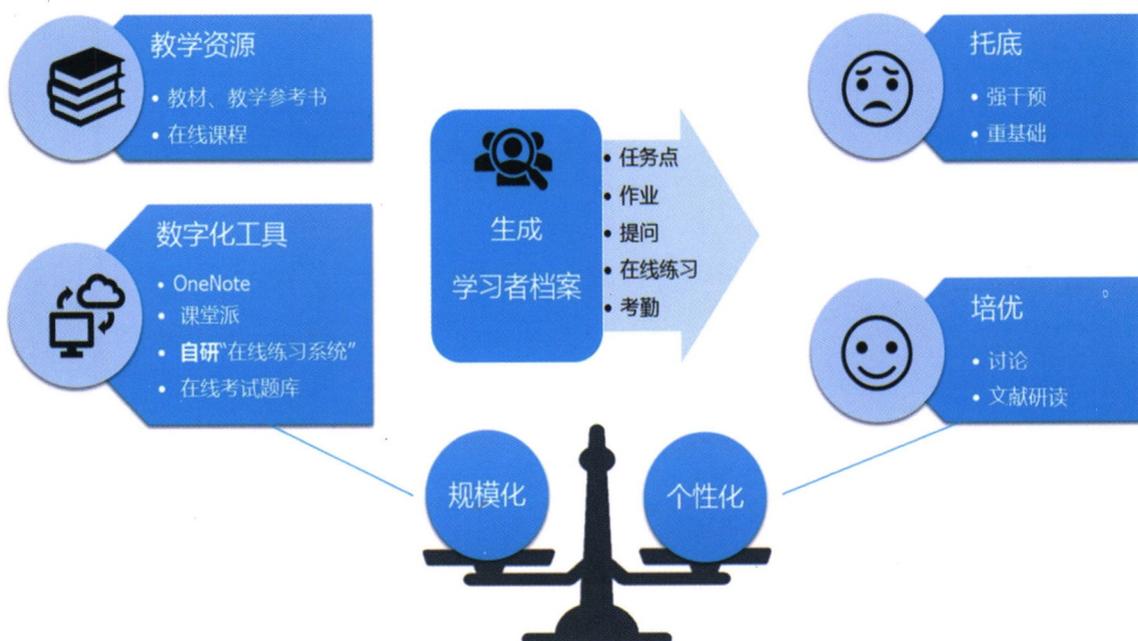


化学教育 (中英文)

Chinese Journal of Chemical Education

2022年 第43卷 第4期 Vol.43 No.4



邮发代号: 2-106

ISSN 1003-3807



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

目次

化学·生活·社会

- 二氧化碳刺激响应的荧光传感器 陆奕瑾 袁金颖 (1)
- 硫的同素异形体 曹宝月 崔孝炜 乔成芳 周春生 强元圆 王跳跳 高胜利 (8)

课程·教材·评价

- 材料表征方法理论与实践课程的改革与建设 马本华 张佳音 李卉 施展 (27)
- 双一流背景下有机化学精准教学的探究实践 李万梅 岳晓光 欧阳娅妮 章鹏飞 (33)

理论教学

- 在仪器分析课程教学中融入课程思政案例的探讨 杜振霞 杨屹 苏萍 胡高飞 吕超 张丽娟 (39)
- 建构学习仪式感 提升学习主动性——以元素化学学习为例 王峰 闫春燕 伊文涛 马杰 (43)
- 基于图形组织者的深度学习研究与实践——以无机化学课程为例 赵海燕 孙华 (49)
- 基于PDCA循环理论的完全线上教学模式探索与实践——以化工原理课程为例
..... 徐美 王剑 李煦 范小振 (55)

实验教学

- 挫折教育方法用于化学综合实验的改革探索 邹博 杨胥微 郭玉鹏 夏宝辉 (60)
- 自建便携式学习平台在无机化学实验教学中的应用初探
..... 李玲 张驰 王娟 田丽红 朱文华 王峥 付棋 (65)
- 科研成果向教学实验的转化设计与实践成效 刘万民 秦牡丹 王伟刚 申斌 (71)
- “看见”氢键：低共熔溶剂体系的建立与应用综合型教学实验设计与实践
..... 吴萍萍 宋磊 殷长龙 李军 白鹏 (75)
- 翻转课堂与内容本位语言教学在有机化学实验课程中的整合应用研究 杨爱红 申蕊 琚辉 寇晓娣 (81)

职业教育

- 基于立体化教材建设的高职生物药物分离技术课程改革与实践 刘鹏 牛红军 袁文蛟 (88)

非化学专业化学教育

- 药学专业有机化学个性化学习路径的构建与实践 董颖 江辰 张晓进 黄玥 杜鼎 唐伟方 芦金荣 (96)
- 新工科建设背景下制药工程专业化工原理教学创新设计 刘红梅 韩永萍 侯春娟 李可意 袁鑫 (101)

信息技术与化学

- 基于MOE软件的虚拟仿真实验——多奈哌齐与乙酰胆碱酯酶的分子对接 汪泽 (107)

问题讨论与思考

- 环加成反应、环合反应、电环化反应与环化反应的区别 许家喜 陈宁 (112)

国内外动态

- 中美无机化学课程比较与探讨——以美国康奈尔大学与河北工业大学无机化学课程为例
..... 杨芳 陈玉焕 孙姣 杨春 刘晓莉 (117)

化学史与化学史教育

- 硼元素概念的发展史 魏兴华 袁振东 (124)

论文简报

- 基于知识图谱的国内实验室安全管理研究的可视化分析 肖慧娟 杜婕 张旻 (129)

- 2022年《化学教育》订阅通知 (80)

- 封面图片 (97)

本期责任编辑 齐娜 杨金瑞

CHINESE JOURNAL OF CHEMICAL EDUCATION

2022 Vol. 43 No. 4

Sponsored by Chinese Chemical Society and Beijing Normal University

Chemistry-Life-Society

- Fluorescent Sensors Based on CO₂-Stimuli Responsive Polymer LU Yi-Jin YUAN Jin-Ying (1)
The Allotropes of Sulfur CAO Bao-Yue CUI Xiao-Wei QIAO Cheng-Fang ZHOU Chun-Sheng
QIANG Yuan-Yuan WANG Tiao-Tiao GAO Sheng-Li (8)

Curriculum-Teaching Materials-Assessment

- Reform and Construction of the Theory and Practice Course of Material Characterization Method
..... MA Ben-Hua ZHANG Jia-Yin LI Hui SHI Zhan (27)
Exploration and Practice of Precise Teaching of Organic Chemistry Under the Double First-Class Background
..... LI Wan-Mei YUE Xiao-Guang OU-YANG Ya-Ni ZHANG Peng-Fei (33)

Theory Teaching

- Discussion on the Teaching of Instrument Analytical Course Combined with Ideology and Politics Cases
..... DU Zhen-Xia YANG Yi SU Ping HU Gao-Fei LV Chao ZHANG Li-Juan (39)
Encouraging Learning Initiative by Ritualized Teaching; Taking Elemental Chemistry Learning as Example
..... WANG Feng YAN Chun-Yan YI Wen-Tao MA Jie (43)
Research and Practice of Deep Learning Based on Graphic Organizers; Taking Inorganic Chemistry Course as Example
..... ZHAO Hai-Yan SUN Hua (49)
Exploration and Practice of Complete Online Teaching Mode Based on PDCA Cycle Theory; Taking Chemical Engineering
Principle Course as Example XU Mei WANG Jian LI Xu FAN Xiao-Zhen (55)

Experiment Teaching

- Reformation and Exploration of Frustration Education Method Used in Comprehensive Chemical Experiment
..... ZOU Bo YANG Xu-Wei GUO Yu-Peng XIA Bao-Hui (60)
Preliminary Exploration of Teaching of Inorganic Chemistry Experiment Based on Self-Built Portable Learning Platform
..... LI Ling ZHANG Chi WANG Juan TIAN Li-Hong ZHU Wen-Hua WANG Zheng FU Qi (65)
Conversion Design and Practical Effect of Scientific Research Achievements into Teaching Experiments
..... LIU Wan-Min QIN Mu-Lan WANG Wei-Gang SHEN Bin (71)
Visualizing Hydrogen Bond: Design and Practice of Comprehensive Teaching Experiment on Eutectic Solvents Preparation and
Application WU Ping-Ping SONG Lei YIN Chang-Long LI Jun BAI Peng (75)
Study on the Integration of Flipped Classroom and Content-Based Language Teaching in Organic Chemistry Experiment Course
..... YANG Ai-Hong SHEN Rui JU Hui KOU Xiao-Di (81)

Vocational Education

- Teaching Reform and Practice of Biological Drug Separation Technology Course Based on Multi-Dimensional Teaching Materials
Construction LIU Peng NIU Hong-Jun YUAN Wen-Jiao (88)

Chemical Education for Non-Chemistry Majors

- Construction and Practice of Personalized Learning Paths of Organic Chemistry for Pharmacy Undergraduates
..... DONG Ying JIANG Chen ZHANG Xiao-Jin HUANG Yue DU Ding TANG Wei-Fang LU Jin-Rong (96)
Teaching Innovation Design for the Principles of Chemical Engineering for Pharmaceutical Engineering Under the Background of
New Engineering Construction LIU Hong-Mei HAN Yong-Ping HOU Chun-Juan LI Ke-Yi YUAN Xin (101)

Information Technology and Chemistry

- Virtual Simulation Experiment for Undergraduates Based on MOE Software; Molecular Docking Study on Donepezil-Acetyl-
cholinesterase Interaction WANG Ze (107)

Discussion and Thinking of Questions

- Differentiation of Cycloaddition, Annulation, Electrocyclic Reaction, and Cyclization XU Jia-Xi CHEN Ning (112)

Domestic and Overseas Trends

- Comparison and Discussion of Inorganic Chemistry Course Between China and America; Taking the Inorganic Chemistry Course
of Cornell University and Hebei University of Technology as Example
..... YANG Fang CHEN Yu-Huan SUN Jiao YANG Chun LIU Xiao-Li (117)

History of Chemistry and Chemical History Education

- Development History of the Concept of Boron WEI Xing-Hua YUAN Zhen-Dong (124)

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)

2022年 第43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.chemsoc.org.cn

顾问 刘知新
主编 刘正平
副主编 姜雪峰 施展 孙世刚 王磊
王祖浩 杨屹 郑长龙 朱玉军(专职)
刊名题字 戴安邦
印刷装订 保定市海天印务有限公司
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 36.00元

CHINESE JOURNAL OF CHEMICAL EDUCATION

2022 Vol. 43 No. 4

Sponsored by Chinese Chemical Society and Beijing Normal University

Chemistry-Life-Society

- Fluorescent Sensors Based on CO₂-Stimuli Responsive Polymer LU Yi-Jin YUAN Jin-Ying (1)
The Allotropes of Sulfur CAO Bao-Yue CUI Xiao-Wei QIAO Cheng-Fang ZHOU Chun-Sheng
QIANG Yuan-Yuan WANG Tiao-Tiao GAO Sheng-Li (8)

Curriculum-Teaching Materials-Assessment

- Reform and Construction of the Theory and Practice Course of Material Characterization Method
..... MA Ben-Hua ZHANG Jia-Yin LI Hui SHI Zhan (27)
Exploration and Practice of Precise Teaching of Organic Chemistry Under the Double First-Class Background
..... LI Wan-Mei YUE Xiao-Guang OU-YANG Ya-Ni ZHANG Peng-Fei (33)

Theory Teaching

- Discussion on the Teaching of Instrument Analytical Course Combined with Ideology and Politics Cases
..... DU Zhen-Xia YANG Yi SU Ping HU Gao-Fei LV Chao ZHANG Li-Juan (39)
Encouraging Learning Initiative by Ritualized Teaching; Taking Elemental Chemistry Learning as Example
..... WANG Feng YAN Chun-Yan YI Wen-Tao MA Jie (43)
Research and Practice of Deep Learning Based on Graphic Organizers; Taking Inorganic Chemistry Course as Example
..... ZHAO Hai-Yan SUN Hua (49)
Exploration and Practice of Complete Online Teaching Mode Based on PDCA Cycle Theory; Taking Chemical Engineering
Principle Course as Example XU Mei WANG Jian LI Xu FAN Xiao-Zhen (55)

Experiment Teaching

- Reformation and Exploration of Frustration Education Method Used in Comprehensive Chemical Experiment
..... ZOU Bo YANG Xu-Wei GUO Yu-Peng XIA Bao-Hui (60)
Preliminary Exploration of Teaching of Inorganic Chemistry Experiment Based on Self-Built Portable Learning Platform
..... LI Ling ZHANG Chi WANG Juan TIAN Li-Hong ZHU Wen-Hua WANG Zheng FU Qi (65)
Conversion Design and Practical Effect of Scientific Research Achievements into Teaching Experiments
..... LIU Wan-Min QIN Mu-Lan WANG Wei-Gang SHEN Bin (71)
Visualizing Hydrogen Bond: Design and Practice of Comprehensive Teaching Experiment on Eutectic Solvents Preparation and
Application WU Ping-Ping SONG Lei YIN Chang-Long LI Jun BAI Peng (75)
Study on the Integration of Flipped Classroom and Content-Based Language Teaching in Organic Chemistry Experiment Course
..... YANG Ai-Hong SHEN Rui JU Hui KOU Xiao-Di (81)

Vocational Education

- Teaching Reform and Practice of Biological Drug Separation Technology Course Based on Multi-Dimensional Teaching Materials
Construction LIU Peng NIU Hong-Jun YUAN Wen-Jiao (88)

Chemical Education for Non-Chemistry Majors

- Construction and Practice of Personalized Learning Paths of Organic Chemistry for Pharmacy Undergraduates
..... DONG Ying JIANG Chen ZHANG Xiao-Jin HUANG Yue DU Ding TANG Wei-Fang LU Jin-Rong (96)
Teaching Innovation Design for the Principles of Chemical Engineering for Pharmaceutical Engineering Under the Background of
New Engineering Construction LIU Hong-Mei HAN Yong-Ping HOU Chun-Juan LI Ke-Yi YUAN Xin (101)

Information Technology and Chemistry

- Virtual Simulation Experiment for Undergraduates Based on MOE Software; Molecular Docking Study on Donepezil-Acetyl-
cholinesterase Interaction WANG Ze (107)

Discussion and Thinking of Questions

- Differentiation of Cycloaddition, Annulation, Electrocyclic Reaction, and Cyclization XU Jia-Xi CHEN Ning (112)

Domestic and Overseas Trends

- Comparison and Discussion of Inorganic Chemistry Course Between China and America; Taking the Inorganic Chemistry Course
of Cornell University and Hebei University of Technology as Example
..... YANG Fang CHEN Yu-Huan SUN Jiao YANG Chun LIU Xiao-Li (117)

History of Chemistry and Chemical History Education

- Development History of the Concept of Boron WEI Xing-Hua YUAN Zhen-Dong (124)

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)

2022年 第43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.chemsoc.org.cn

顾问 刘知新
主编 刘正平
副主编 姜雪峰 施展 孙世刚 王磊
王祖浩 杨屹 郑长龙 朱玉军(专职)
刊名题字 戴安邦
印刷装订 保定市海天印务有限公司
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 36.00元