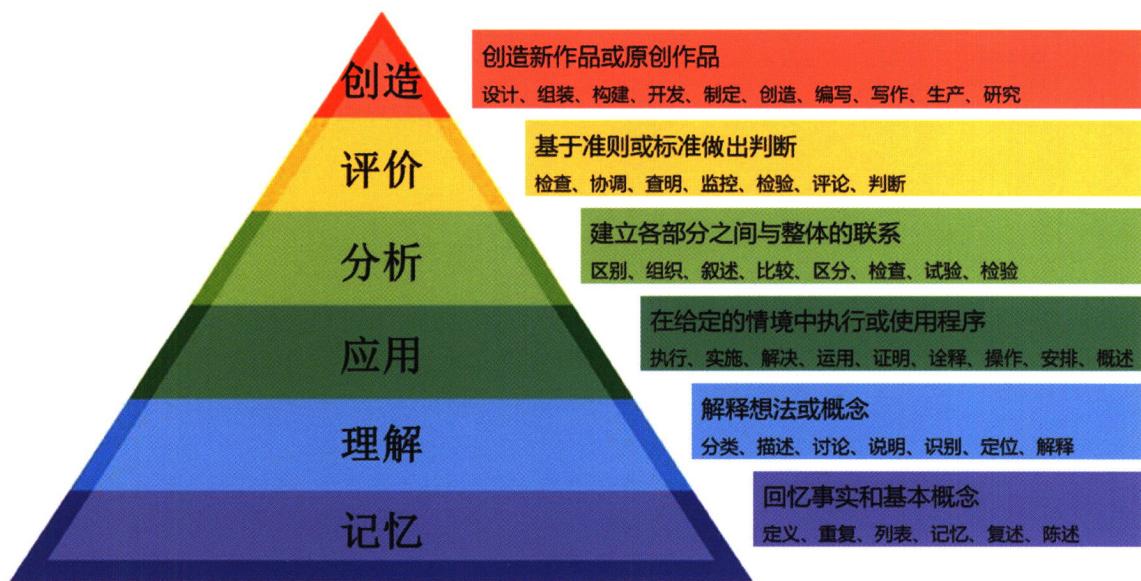


化学教育(中英文)

Chinese Journal of Chemical Education

2022 年 第 43 卷 第 22 期 Vol.43 No.22



邮发代号：2-106

ISSN 1003-3807
9 771003 380222
HUA XUE JIAO YU



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

- 化妆品中的肽化学 廖燕燕 孟娇龙 姜雪峰 (1)

课程·教材·评价

- 教育现代化视域下大学普通化学课程思政教育资源的开发与利用 张颖 刘松艳 周屹博 菅文平 贾琼 (12)

- 成果导向教育理念下的涂料配方设计课程教学改革和实践 丁永波 高飞 舒金兵 申亮 (18)

理论教学

- 普通化学线上教学的实践与探索——以原子的电子层结构为例 姚平平 (26)

- 应用研究式学习提高理论课程教学的质量——以高分子材料课程为例 王瀚文 姜凯昕 高长有 (31)

实验教学

- 综合创新实验：水溶性荧光防伪墨水 $\text{YVO}_5:\text{Eu}^{3+}$ 纳米材料的合成与表征 彭宇 李春光 潘庆芝 华佳 施展 (39)

- 高锰酸钾氧化环己醇制备己二酸实验探讨与改进 程绍玲 韩聪 刘艳华 贾青竹 (44)

- 新工科背景下大型仪器培训体系的创新与实践——以扫描电镜为例 赵鹏 于川茗 (49)

- 物理化学实验改进：修饰的 BZ 化学振荡反应在食品检测中的应用 宗丽娜 刘叶 郑云香 王向鹏 蒋秀燕 (55)

教师教育

- 职前化学教师学科知识与 PCK 关系的个案研究——以“物质的量”主题为例 赖萍 刘瑞 张静 (62)

- 化学师范生学科理解能力的培养研究：问题与对策 王伟 吴海生 马愿愿 王后雄 (72)

职业教育

- 基于移动端虚实结合的高职药学专业有机化学实验教学 张青芳 (77)

- 基于“1+X”证书的中职食品生物工艺专业分析化学活页式教材的开发与探索——以分光光度计的使用为例 唐雪娟 汪海滨 李俊文 李萍 (82)

非化学专业化学教育

- 基于新工科内涵的环境化学课程建设 闫方友 贾青竹 (88)

- 基础化学教学中从化学视角解释医学知识——以“龋齿的形成与防护”为例 李佳佳 杨慧娟 王其召 张拴 史亚军 唐于平 孟庆华 张光辉 张赛 (94)

- 大学化学中引入自组织沉淀斑图的教学实践 郑菊花 潘长伟 吕小丽 马娟 高庆宇 (100)

信息技术与化学

- 量子化学计算在有机化合物核磁共振教学中的应用 林斌 孙世涛 郝金乐 (107)

调研报告

- 大一学生实验室安全教育实效研究 王娟 金星龙 王晓艳 (112)

- 大学生的化学自我效能感对自我调节学习策略及学业成就的影响研究 陆典 叶建宏 曾振芳 (116)

问题讨论与思考

- 卤化氢与烯烃亲电加成反应的机理及立体选择性 许家喜 麻远 (124)

书评

- 模块化、分层次、混合式无机化学教学——评《无机化学》教材 白新伟 何超 陈定梅 (129)

- 《化学教育》订阅通知 (17)

- 封面图片 (20)

本期责任编辑 杨金瑞 齐娜

CHINESE JOURNAL OF CHEMICAL EDUCATION

2022 Vol. 43 No. 22

Sponsored by Chinese Chemical Society and Beijing Normal University

Chemistry-Life-Society

Peptide Chemistry in Cosmetics LIAO Yan-Yan MENG Jiao-Long JIANG Xue-Feng (1)

Curriculum-Teaching Materials-Assessment

Development and Utilization of "Course Ideology and Politics" Educational Resources in General Chemistry Under the Vision of Education Modernization ZHANG Ying LIU Song-Yan ZHOU Yi-Bo JIAN Wen-Ping JIA Qiong (12)
Teaching Reform and Practice for Coatings Formulation Design Course Under the Outcome-Based Education Framework DING Yong-Bo GAO Fei SHU Jin-Bing SHEN Liang (18)

Theory Teaching

Practice and Exploration of Online Teaching of General Chemistry: Electron Configuration for Atoms YAO Ping-Ping (26)
Applying Research-Based Learning to Improve the Teaching Quality of Theoretical Course: Polymer Materials WANG Han-Wen JIANG Kai-Xin GAO Chang-You (31)

Experiment Teaching

Comprehensive Innovative Experiment: Synthesis and Characterization of Water-Soluble Fluorescent Anti-Counterfeiting Ink YVO₄:Eu³⁺ Nanomaterials PENG Yu LI Chun-Guang PAN Qing-Zhi HUA Jia SHI Zhan (39)
Discussion and Improvement for Preparation of Adipic Acid Through Oxidation of Cyclohexanol by Potassium Permanganate CHENG Shao-Ling HAN Cong LIU Yan-Hua JIA Qing-Zhu (44)
Innovation and Practice of Large-Scale Instrument Training System Under Background of "Emerging Engineering Education": Scanning Electron Microscopy ZHAO Peng YU Chuan-Ming (49)
Improved Experiments in Physical Chemistry: Application of Modified Belousov-Zhabotinskii Oscillation Chemical Reaction in Food Detection ZONG Li-Na LIU Ye ZHENG Yun-Xiang WANG Xiang-Peng JIANG Xiu-Yan (55)

Teacher Education

Case Study on the Relationship Between Preservice Chemistry Teachers' Content Knowledge and PCK: Theme of Amount of Substance LAI Ping LIU Rui ZHANG Jing (62)
Research on the Cultivation of Normal Students' Understanding of Chemistry: Problems and Countermeasures WANG Wei WU Hai-Sheng MA Yuan-Yuan WANG Hou-Xiong (72)

Vocational Education

Virtual-Actual Combination Organic Chemistry Experiment Teaching Based on Mobile Terminal in Higher Vocational College ZHANG Qing-Fang (77)
Analysis Chemistry Loose-Leaf Teaching Material Based on "1+X" Certificate for the Food Biotechnology Specialty in Secondary Vocational School: Spectrophotometer TANG Xue-Juan WANG Hai-Bin LI Jun-Wen LI Ping (82)
Chemical Education for Non-Chemistry Majors
Environmental Chemistry Curriculum Construction Based on New Engineering Connotation YAN Fang-You JIA Qing-Zhu (88)
Explanation of Medical Knowledge from Chemistry in Basic Chemistry Teaching: Formation and Protection of Dental Caries LI Jia-Jia YANG Hui-Juan WANG Qi-Zhao ZHANG Shuan SHI Ya-Jun TANG Yu-Ping MENG Qing-Hua ZHANG Guang-Hui ZHANG Sai (94)
Teaching Practice of Introducing Self-Organizing Precipitation Pattern into University Chemistry ZHENG Ju-Hua PAN Chang-Wei LV Xiao-Li MA Juan GAO Qing-Yu (100)

Information Technology and Chemistry

Application of Quantum Chemistry Calculations in the Teaching Process of Nuclear Magnetic Resonance of Organic Compounds LIN Bin SUN Shi-Tao HAO Jin-Le (107)

Investigation Report

Study on the Real Effect of Laboratory Safety Education Among First-Year Undergraduates WANG Juan JIN Xing-Long WANG Xiao-Yan (112)
Influence of Chemical Self-Efficacy on Self-Regulated Learning Strategy and Academic Achievement of College Students LU Dian YE Jian-Hong ZENG Zhen-Fang (116)

Discussion and Thinking of Questions

Mechanism and Stereoselectivity in the Electrophilic Addition of Alkenes with Hydrogen Halides XU Jia-Xi MA Yuan (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22期 11月18日出版

主管单位	中国科学技术协会	顾 问	刘知新
主办单位	中国化学会 北京师范大学	主 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 昀 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	保定市海天印务有限公司
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 36.00 元

CHINESE JOURNAL OF CHEMICAL EDUCATION

2022 Vol. 43 No. 22

Sponsored by Chinese Chemical Society and Beijing Normal University

Chemistry-Life-Society

Peptide Chemistry in Cosmetics LIAO Yan-Yan MENG Jiao-Long JIANG Xue-Feng (1)

Curriculum-Teaching Materials-Assessment

Development and Utilization of "Course Ideology and Politics" Educational Resources in General Chemistry Under the Vision of Education Modernization ZHANG Ying LIU Song-Yan ZHOU Yi-Bo JIAN Wen-Ping JIA Qiong (12)
Teaching Reform and Practice for Coatings Formulation Design Course Under the Outcome-Based Education Framework DING Yong-Bo GAO Fei SHU Jin-Bing SHEN Liang (18)

Theory Teaching

Practice and Exploration of Online Teaching of General Chemistry: Electron Configuration for Atoms YAO Ping-Ping (26)
Applying Research-Based Learning to Improve the Teaching Quality of Theoretical Course: Polymer Materials WANG Han-Wen JIANG Kai-Xin GAO Chang-You (31)

Experiment Teaching

Comprehensive Innovative Experiment: Synthesis and Characterization of Water-Soluble Fluorescent Anti-Counterfeiting Ink YVO₄:Eu³⁺ Nanomaterials PENG Yu LI Chun-Guang PAN Qing-Zhi HUA Jia SHI Zhan (39)
Discussion and Improvement for Preparation of Adipic Acid Through Oxidation of Cyclohexanol by Potassium Permanganate CHENG Shao-Ling HAN Cong LIU Yan-Hua JIA Qing-Zhu (44)
Innovation and Practice of Large-Scale Instrument Training System Under Background of "Emerging Engineering Education": Scanning Electron Microscopy ZHAO Peng YU Chuan-Ming (49)
Improved Experiments in Physical Chemistry: Application of Modified Belousov-Zhabotinskii Oscillation Chemical Reaction in Food Detection ZONG Li-Na LIU Ye ZHENG Yun-Xiang WANG Xiang-Peng JIANG Xiu-Yan (55)

Teacher Education

Case Study on the Relationship Between Preservice Chemistry Teachers' Content Knowledge and PCK: Theme of Amount of Substance LAI Ping LIU Rui ZHANG Jing (62)
Research on the Cultivation of Normal Students' Understanding of Chemistry: Problems and Countermeasures WANG Wei WU Hai-Sheng MA Yuan-Yuan WANG Hou-Xiong (72)

Vocational Education

Virtual-Actual Combination Organic Chemistry Experiment Teaching Based on Mobile Terminal in Higher Vocational College ZHANG Qing-Fang (77)
Analysis Chemistry Loose-Leaf Teaching Material Based on "1+X" Certificate for the Food Biotechnology Specialty in Secondary Vocational School: Spectrophotometer TANG Xue-Juan WANG Hai-Bin LI Jun-Wen LI Ping (82)
Chemical Education for Non-Chemistry Majors
Environmental Chemistry Curriculum Construction Based on New Engineering Connotation YAN Fang-You JIA Qing-Zhu (88)
Explanation of Medical Knowledge from Chemistry in Basic Chemistry Teaching: Formation and Protection of Dental Caries LI Jia-Jia YANG Hui-Juan WANG Qi-Zhao ZHANG Shuan SHI Ya-Jun TANG Yu-Ping MENG Qing-Hua ZHANG Guang-Hui ZHANG Sai (94)
Teaching Practice of Introducing Self-Organizing Precipitation Pattern into University Chemistry ZHENG Ju-Hua PAN Chang-Wei LV Xiao-Li MA Juan GAO Qing-Yu (100)

Information Technology and Chemistry

Application of Quantum Chemistry Calculations in the Teaching Process of Nuclear Magnetic Resonance of Organic Compounds LIN Bin SUN Shi-Tao HAO Jin-Le (107)

Investigation Report

Study on the Real Effect of Laboratory Safety Education Among First-Year Undergraduates WANG Juan JIN Xing-Long WANG Xiao-Yan (112)
Influence of Chemical Self-Efficacy on Self-Regulated Learning Strategy and Academic Achievement of College Students LU Dian YE Jian-Hong ZENG Zhen-Fang (116)

Discussion and Thinking of Questions

Mechanism and Stereoselectivity in the Electrophilic Addition of Alkenes with Hydrogen Halides XU Jia-Xi MA Yuan (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22期 11月18日出版

主管单位	中国科学技术协会	顾 问	刘知新
主办单位	中国化学会 北京师范大学	主 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 昀 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	保定市海天印务有限公司
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 36.00 元