

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



17

第36卷  
2015

HUAXUE JIAOYU

万方数据

# CHINESE JOURNAL OF CHEMICAL EDUCATION

2015 Vol. 36 No. 17

Sponsored by Chinese Chemical Society and Beijing Normal University

## Survey of Chemistry

Introduction of Column Chromatography for Mixture Separation ..... XIANG Yun(1)

## Special Topics

Thought Experiment and Its Enlightenment on Chemical Simulation Experiment Teaching ..... JIN Ying(4)

## Investigation on Courses and Teaching Materials

Comparison of Selection and Organization of Solution Contents in Junior High School Science of China and Japan .....  
..... WANG Xiu-Hong MITSUISHI Hatsuo(9)

Thinking about the Characteristics of Organic Chemistry Knowledge in *Revise* Matched Textbooks of British Salters Advanced Chemistry Courses as Review Material ..... XIONG Yan-Lin WANG Chen-Xi(13)

## New curriculum Forum

Practice and Reflection on Teaching of Basic Experiments in Junior High School Chemistry .....  
..... SHEN Yu-Juan MIAO Xu(20)

Teaching Design of Dissolution Equilibrium of Insoluble Electrolyte ..... ZHANG Wen-Hui(24)

## Teaching Research

Application of Grounded Theory in Study on Topics of High-quality Chemistry Class Competition .....  
..... WANG Xiu JIANG Jia-Fa(28)

Strengthening Pre-class Preparation to Improve Teaching Effectiveness ..... ZHU Jian(33)

Teaching Design of Ammonia based on Construction of Chemical Big Ideas ..... JIANG Yan-Xia LU Wei(37)

Implementation of Creative Inquiry Mode in Senior High School Chemistry Teaching ..... FANG Hong(42)

From Open Inquiry to Deep Thinking in Teaching of Hydrolysis of Salt ..... LI Ji-Liang YU Nai-Jia(46)

## Reform of College Entrance Examination

Analysis of Consistency between Senior High School Chemical Academic Proficiency Test and Curriculum Standard .....  
..... LIU Xue-Wen HAN Qing-Kui GUO Min ZHANG Yu-Qiang(49)

## Teacher Education

Structure and Construction Strategies of TPACK of Chemistry Teachers ..... HUANG Xue-Mei LIU Jian-Wei(55)

## Findings Report

Status of Inquiry Teaching of Middle School Chemistry Teachers in Beijing of China ..... WANG Qin-Zhong(60)

## Experiment Teaching and Teaching Aid Development

Importance of Thinking Guidance in Chemical Experiment Teaching ..... LIU Ju-Feng(65)

Control of White Phosphorus Burning in Water Using Test Tube ..... WANG Ke-Lin(68)

## Discussion and Thinking of Questions

Discussion on the Sequence of Metal Activity ..... CHEN Ju-Ping(70)

Experimental Inquiry on College Entrance Examination Questions of Chemistry ..... BAI Chang-Qing LI Jun(72)

## History of Chemistry and Chemical History Education

Historical Study on Avogadro Constant ..... LONG Qi(75)

# 化 学 教 育

(半月刊·1980年创刊)

2015年 第36卷 第17期 9月2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  
电子信箱 hxjy-jce@263.net  
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**

混合物分离知识的课外拓展——柱色谱法简介 ..... 项云 (1)

**专论**

思想实验及其对化学仿真实验教学的启示 ..... 靳莹 (4)

**课程与教材研讨**

中国与日本初中理科中“溶液”内容选择及组织对比 ..... 王秀红 三石初雄 (9)

英国索尔特高级化学课程(A2)教材配套复习材料 *Revise* 中有机化学知识的呈现特点与思考 ..... 熊言林 王晨希 (13)

**新课程天地**

初中化学开展“基础实验”教学的实践与思考 ..... 沈郁娟 缪徐 (20)

再谈“难溶电解质的溶解平衡”教学设计 ..... 张文惠 (24)

**教学研究**

应用“扎根理论”研究化学优质课大赛选题的实践与思考 ..... 汪秀 江家发 (28)

强化课前准备 提升教学实效 ..... 朱建 (33)

基于化学基本观念建构的“氨”的教学设计研究 ..... 姜言霞 卢巍 (37)

高中化学教学中实施“创造性探究模式”的尝试 ..... 房宏 (42)

由开放探究引向深层思维——以“盐类的水解”教学为例 ..... 李继良 于乃佳 (46)

**高考改革**

高中化学学业水平考试与课程标准的一致性分析 ..... 刘学文 韩庆奎 郭敏 张雨强 (49)

**教师教育**

化学教师的TPACK结构及建构策略 ..... 黄学梅 刘建伟 (55)

**调查报告**

北京市中学化学教师开展探究式教学的现状与分析 ..... 王钦忠 (60)

**实验教学与教具研制**

浅谈化学实验教学中思维引导的重要性 ..... 刘居峰 (65)

利用试管控制白磷在水中燃烧 ..... 王克林 (68)

**问题讨论与思考**

金属活动性顺序的探讨——由一道初中化学试题引发的思考 ..... 陈菊平 (70)

对高考化学试题的实验探究及启发 ..... 白长青 李军 (72)

**化学史与化学史教育**

关于“阿伏伽德罗常数”的历史考量 ..... 龙琪 (75)

欢迎订阅2016年《化学教育》 ..... (12)

化学教育改革与教师发展论坛暨第三届《化学教育》读者、作者、编者学术交流会纪要 ..... (23)

本期责任编辑 陈会玲 张育青

# CHINESE JOURNAL OF CHEMICAL EDUCATION

2015 Vol. 36 No. 17

Sponsored by Chinese Chemical Society and Beijing Normal University

## Survey of Chemistry

Introduction of Column Chromatography for Mixture Separation ..... XIANG Yun(1)

## Special Topics

Thought Experiment and Its Enlightenment on Chemical Simulation Experiment Teaching ..... JIN Ying(4)

## Investigation on Courses and Teaching Materials

Comparison of Selection and Organization of Solution Contents in Junior High School Science of China and Japan .....  
..... WANG Xiu-Hong MITSUISHI Hatsuo(9)

Thinking about the Characteristics of Organic Chemistry Knowledge in *Revise* Matched Textbooks of British Salters Advanced Chemistry Courses as Review Material ..... XIONG Yan-Lin WANG Chen-Xi(13)

## New curriculum Forum

Practice and Reflection on Teaching of Basic Experiments in Junior High School Chemistry .....  
..... SHEN Yu-Juan MIAO Xu(20)

Teaching Design of Dissolution Equilibrium of Insoluble Electrolyte ..... ZHANG Wen-Hui(24)

## Teaching Research

Application of Grounded Theory in Study on Topics of High-quality Chemistry Class Competition .....  
..... WANG Xiu JIANG Jia-Fa(28)

Strengthening Pre-class Preparation to Improve Teaching Effectiveness ..... ZHU Jian(33)

Teaching Design of Ammonia based on Construction of Chemical Big Ideas ..... JIANG Yan-Xia LU Wei(37)

Implementation of Creative Inquiry Mode in Senior High School Chemistry Teaching ..... FANG Hong(42)

From Open Inquiry to Deep Thinking in Teaching of Hydrolysis of Salt ..... LI Ji-Liang YU Nai-Jia(46)

## Reform of College Entrance Examination

Analysis of Consistency between Senior High School Chemical Academic Proficiency Test and Curriculum Standard .....  
..... LIU Xue-Wen HAN Qing-Kui GUO Min ZHANG Yu-Qiang(49)

## Teacher Education

Structure and Construction Strategies of TPACK of Chemistry Teachers ..... HUANG Xue-Mei LIU Jian-Wei(55)

## Findings Report

Status of Inquiry Teaching of Middle School Chemistry Teachers in Beijing of China ..... WANG Qin-Zhong(60)

## Experiment Teaching and Teaching Aid Development

Importance of Thinking Guidance in Chemical Experiment Teaching ..... LIU Ju-Feng(65)

Control of White Phosphorus Burning in Water Using Test Tube ..... WANG Ke-Lin(68)

## Discussion and Thinking of Questions

Discussion on the Sequence of Metal Activity ..... CHEN Ju-Ping(70)

Experimental Inquiry on College Entrance Examination Questions of Chemistry ..... BAI Chang-Qing LI Jun(72)

## History of Chemistry and Chemical History Education

Historical Study on Avogadro Constant ..... LONG Qi(75)

# 化 学 教 育

(半月刊·1980年创刊)

2015年 第36卷 第17期 9月2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  
电子信箱 hxjy-jce@263.net  
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