



ISSN 1000-8438
CN 11-1815/O6

大学化学

UNIVERSITY CHEMISTRY

第34卷 第4期

Vol.34 No.4

2019



中华人民共和国教育部主管
北京大学、中国化学会主办
北京大学化学与分子工程学院大学化学编辑部出版



www.dhxh.pku.edu.cn

万方数据

目次

教育专题

构建化学实验教学新体系,培养创新创业人才 郭栋才,王玉枝,李永军,吴朝阳,刘浩然,蔡双莲,高娜,蔡焱 (1)

教学研究与改革

科研问题向课堂教学的融入 戴可,梁华,黄鹤燕,胡海龙,霍冀川 (6)

关于大学“普通化学”课程定位的思考 沈宏,徐端钧,方文军,聂晶晶 (12)

浅析化学生物学实验课程的有效教学方法 刘扬 (16)

立体化学教学中不同教学语言的运用 陈祎平,贾春满,朱文,王新广 (20)

全英文研究型教学效果探讨——基于有机材料化学课学生问卷调查分析 王丽萍 (26)

无机化学多元信息化教学模式的构建与实践研究 李玲,王娟,张弛,田丽红,朱文华 (34)

分析化学在线开放课程群建设的创新与实践 王玉枝,李颖,杨屹,宦双燕,吴硕,文志宁,苏星光,张文清 (39)

知识介绍

光致发光与荧光传感——光化学基本原理的应用 李悦,郭东升,阮文娟 (45)

值得引入物理化学教材的重要内容:势能面交叉 李全松,李泽生 (51)

化学实验

手性有机小分子催化剂6,7-二氢-5*H*-吡咯并[1,2-*a*]咪唑的合成——介绍一个大学有机化学综合实验

..... 谢芳,张振锋,章烨,张万斌 (55)

“分光光度法测定碘化铅溶度积常数”实验存在的问题及改进 韩福芹,王丽丽,宋海岩,曹晶晶,郭丽 (61)

水-煤油萃取实验中苯甲酸浓度不同测定方法的比较 钟亚兰,刘业硕,张思巍,王毅楷,黄驰,王晓玲 (66)

悬浮聚合实验的教学探索 尚成新,郝俊生 (73)

师生笔谈

生物化学中酶促“不可逆”反应及其相关问题辨析 马新雨,王志鹏,田杰,蒋振雄,姜汉杰,孙鹤,周青璇,王鑫 (77)

竞赛园地

第32届中国化学奥林匹克(决赛)试题解析(一) 曹宇辉,董浩然,傅裕,霍培昊,刘静嘉,杨可心,余子迪 (84)

动态信息

《大学化学》第六届编委会第一次会议召开 (93)

“2019年高等学校应用化学专业教学研讨会”第一轮通知 (95)

CONTENTS

Special Subject

Construction of a New Chemistry Experiment Teaching System for Cultivating Innovative and Entrepreneurial Talents

..... GUO Dongcai, WANG Yuzhi, LI Yongjun, WU Chaoyang, LIU Haoran, CAI Shuanglian, GAO Na, CAI Chi (1)

Study and Reform of Chemical Education

Integration of Scientific Research into Classroom Teaching

..... DAI Ke, LIANG Hua, HUANG Heyan, HU Hailong, HUO Jichuan (6)

Modification of the Course Orientation of "General Chemistry" in University Education

..... SHEN Hong, XU Duanjun, FANG Wenjun, NIE Jingjing (12)

Discussions on the Effective Teaching Methods of Chemical Biology Laboratory LIU Yang (16)

Application of Different Teaching Languages in Stereochemistry Teaching

..... CHEN Yiping, JIA Chunman, ZHU Wen, WANG Xinguang (20)

Discussion on the Teaching Effects of Lectures in English Based on Questionnaire Surveys of Organic Material Chemistry

..... WANG Liping (26)

Construction and Practice of Multi-information Teaching Mode of Inorganic Chemistry

..... LI Ling, WANG Juan, ZHANG Chi, TIAN Lihong, ZHU Wenhua (34)

Innovation and Practice of Online Open Course Group Construction in Analytical Chemistry WANG Yuzhi,

LI Ying, YANG Yi, HUAN Shuangyan, WU Shuo, WEN Zhining, SU Xingguang, ZHANG Wenqing (39)

Survey of Chemistry

Photoluminescence and Fluorescent Sensing: Application of the Fundamental Principles of Photochemistry

..... LI Yue, GUO Dongsheng, RUAN Wenjuan (45)

An Important Concept Worthy of Introducing to the Textbook of Physical Chemistry: Potential Energy Surface Crossing

..... LI Quansong, LI Zesheng (51)

Chemistry Laboratory

Synthesis of Chiral Organocatalysts Possessing a Skeleton of 6,7-Dihydro-5H-pyrrolo[1,2-a]imidazole: A Comprehensive

College Chemistry Experiment XIE Fang, ZHANG Zhenfeng, ZHANG Ye, ZHANG Wanbin (55)

Solution to the Problem of Spectrophotometric Determination of the Solubility Product Constant of Lead Iodide

..... HAN Fuqin, WANG Lili, SONG Haiyan, CAO Jingjing, GUO Li (61)

Method Comparison for Determining the Concentration of Benzoic Acid in the Experiment of Water-Kerosene Extraction

..... ZHONG Yalan, LIU Yeshuo, ZHANG Siwei, WANG Yikai, HUANG Chi, WANG Xiaoling (66)

Laboratory Teaching Exploration on the Suspension Polymerization Experiment

..... SHANG Chengxin, HAO Junsheng (73)

Between Teacher and Student

Discussion on the Definition of "Irreversible" Reactions and Its Related Concepts in Biochemistry MA Xinyu,

WANG Zhipeng A., TIAN Jie, JIANG Zhenxiong, JIANG Hanjie, SUN He, ZHOU Qingxuan, WANG Xin (77)

Chemical Olympiad Competition

Problem Analysis for the 32nd Chinese Chemistry Olympiad (Final Test) (Part I)

..... CAO Yuhui, DONG Haoran, FU Yu, HUO Peihao, LIU Jingjia, YANG Kexin, YU Zidi (84)