

国际标准连续出版物号：ISSN 1007-1865

国内统一连续出版物号：CN44-1238/TQ

半月刊 创刊于1974年

广东化工



QK2141661

Guangdong Chemical Industry

全国石油和化工行业优秀期刊一等奖

《中国核心期刊（遴选）数据库》全文收录期刊

中国学术期刊综合评价数据库统计源期刊

美国《化学文摘》（CA）重点收录期刊

《中国学术期刊（光盘版）》收录期刊

广东省优秀科学技术期刊

2021 **19**
10月上半月刊

第48卷（总第453期）

主办单位：广东省石油与精细化工研究院



广东省科学院化工研究所



ISSN 1007-1865



9 771007 19

月刊数据

广东化工

Guangdong Chemical Industry

第48卷 第19期 10月上半月刊
(总第453期)

1974年创刊 (半月刊)

刊号 $\frac{\text{ISSN } 1007 - 1865}{\text{CN } 44 - 1238/\text{TQ}}$

- 全国石油与化工行业优秀期刊一等奖
- 高、中级化工职称资格评审认定刊物
- 中国核心期刊(遴选)数据库收录期刊

主 管: 广东省科学院

主 办: 广东省石油与精细化工研究
院

社 长: 麦裕良

出版发行: 《广东化工》编辑部

发行范围: 国内外公开发刊

地 址: 广州市越秀区越华路116号

电话/传真: (020) 83302517 83336009

在线投稿: <http://www.gdchem.com>

微 信: gdcic200

电子邮箱: gdcic200@163.com

广告经营许可证号: 440000100138

印 刷: 广州一龙印刷有限公司

订 购: 全国各地邮局、所

邮发代号: 46-211

邮局全年定价:

国内 480 元;

国外 384 美元

出版日期: 2021年10月15日

公告: 经广东省新闻出版局批准同意,
本刊变更为半月刊。

目 次

◆ 试验与研究

- 1 爽滑剂在锂电铝塑膜用聚丙烯膜层的应用与性能研究
杨如娥, 吴安理, 陈汉城, 等
- 3 1,2,3-三氮唑化合物的合成与表征
肖颖, 汪朝阳, 陈汉城, 等
- 5 碳纳米纤维修饰 $\text{Na}_3\text{V}_2(\text{PO}_4)_3$ 电极材料的研究
周子凡, 许晓纯, 卢梓淇
- 7 萤壳壳聚糖的提取
官诗棋, 邓春梅, 刘毅, 等
- 9 危险化学品智能辅助系统的开发与应用
岳大磊, 梁柏俊, 肖前, 等
- 11 不同贮藏时间的东固白寿眉的热值测定和质量评价
谭凯丹, 吴国勇, 史金萍, 等
- 13 竹粉/聚丙烯阻燃复合材料的制备及性能研究
赵璠云, 何玲飞, 吴周灼, 等
- 15 二价铁配合物 $[\text{Fe}(\text{TBZ})(\text{HTBZ})_2]\text{ClO}_4$ 的合成、晶体结构及磁性研究
孟岩, 陈威, 牛贝, 等
- 17 γ -丁内酯/PVA 抗冻水凝胶的制备及其性能研究
吴丹, 谢宇, 肖谷清, 等
- 19 新创实验: 微流条件下苯甲醛的制备
周杰, 罗帆杨, 彭凌云, 等
- 21 粉体粒径对陶瓷支撑体及制备的 NaA 分子筛膜渗透汽化性能的研究
朱月馨, 杨占照, 纪祖煊, 等
- 24 聚合硅酸铝铁的制备及性能研究
杨慧, 崔琳, 李祥
- 26 X 射线衍射法分析球形二氧化硅微粉中 α 态晶体二氧化硅含量
李建德, 蒋丽微, 赵秀芳, 等
- 28 一种新的染色方法在植物石蜡切片中的应用
陆锦鸿, 卢衍琳, 赵贻, 等
- 29 铜仁市白及药材中水分、总灰分、酸不溶性灰分的质量研究
周斌, 王元辉, 田芳, 等
- 32 MOF 及其衍生物在锂离子电池负极材料中的应用
汪萍
- 34 松香酸钠化学合成及毒性研究
刘满军, 石会丽, 牛安琦, 等
- 36 含氮杂环 Schiff 碱锌配合物合成及其金属离子识别研究
苏小红, 哈斯其美格, 魏玉梅
- 38 不同浓度的曲酸溶液对藕带褐变的抑制及抗菌作用
蒋利亚
- 41 铝基超疏水表面的制备及其冷凝性能的研究
赵娟, 艾宏儒, 杨敏建, 等
- 43 气相色谱法测定极性干胶生产中环氧氯丙烷含量研究
李建, 吴晓涛, 林培喜
- 46 中国药典与国外药典对 0.1mol/L 硫代硫酸钠滴定液的标定比较与分析
林婷婷
- 48 复合固相碳源的脱氮性能与释碳分析
周秀秀
- 50 显示钨金相影响因素的研究
岳晓聪, 黄宇彬, 阿南·辛格·迪欧达特
- 53 烟秆生物炭基 Mg/Ca 复合材料动态吸附除磷研究
何秋平, 王凤, 罗艳丽
- 55 夏枯草、何首乌水提物混合液对酪氨酸酶作用研究
卢恩琦, 解育静, 杜健婷, 等
- 57 一种抗衰老组合物、含该抗衰老组合物的冻干粉制备方法及其研究与应用
王珊珊, 徐记旺, 严心铭, 等
- 60 掺稀对稠油降粘效果的研究
朱沫
- 62 高絮凝剂柏叶洗发香波的制备与防脱发的功效测试
袁阳明, 李春元, 叶均平
- 64 紫草油应用在化妆品领域中的着色稳定性研究
彭仕奇, 彭颖华, 张荣存, 等
- 67 基于质量源于设计的原理对利伐沙班片的工艺参数进行优化
赖颖强, 林华庆, 万君吟, 等
- 69 锂电池正极材料压实密度测试的条件研究
梁华妹, 曾勇, 黄诗健, 等
- 71 新型 11-苯基-茛并喹啉-11-醇的设计、合成与表征
陈琳
- 73 水幕水带对液氯槽车泄漏扩散影响的数值模拟研究
范文恺
- 76 稀土分离中反萃后空白有机余酸含量试验研究
张五国
- 78 300MW 燃煤电厂 SCR 脱硝催化剂性能检测与分析
熊冬, 唐郭安, 张琳, 等
- 80 金纳米棒核——金纳米岛壳纳米材料的构筑及其光学特性
高珊, 吕依颖, 宗明吉

◆ 专论与综述

- 82 纳米撞击技术的实际应用
朱晓媛
- 84 废旧锂离子电池失效机理探究及回收利用研究进展
杨昌贤, 毛雪琴, 辛春菊, 等

- 86 驱动电机用烧结钕铁硼磁体的矫顽力提高方法
陈东雯, 黄伟超, 谢觉, 等
- 88 石墨烯改性防腐涂料研究进展
宋志强, 张依然, 宋福如, 等
- 92 落新妇天然药材提取工艺及化学成分的研究进展
陈胜发, 曹军毅, 梁媛
- 94 二氧化铈纳米材料的研究进展
洪春水, 杨雷, 祝文才
- 95 高强度胶原水凝胶的制备和应用研究进展
李阳阳, 梅瑞瑶, 许婷婷, 等
- 98 纳米纤维素基自愈水凝胶的研究进展
张陆雨, 吴义强, 万才超, 等
- 100 催化干气脱硫脱碳溶剂再生系统腐蚀分析及应对措施
孙楚桥
- 102 苯甲酰胺类杀虫剂研究进展
王燕燕
- 104 盾构渣土处置和资源化应用及建议
钟仁华, 邱紫迪, 余承晔, 等
- 106 浅谈 STN 在化学药物领域检索中的基本技巧
万光
- 109 基体替代建立内标法在邻二甲苯组成的应用
张阿国
- 110 国控断面地表水采测分离工作的思考及建议
左晓宇, 王卉
- 112 隔膜表面缺陷在线检测技术的研究进展
刘天一, 张汉鸿, 王春阳
- 114 降血脂类中成药和保健食品中非法添加化学药物检测技术的研究进展
罗阳

◆ 环境保护

- 117 城市木质废弃物热解炭活化制备活性炭的可行性研究
袁国安, 张瑞娜, 陈德珍
- 119 含铜蚀刻液高价值资源化综合利用及建议
徐文彬, 李姗姗, 朱军强
- 121 健康风险评估方法及其在大气环境污染中的应用示范
张荣芝, 史密伟, 朱桂艳
- 124 浅析光伏行业生产废水常用的处理技术
万家秀, 展争艳, 赵培植, 等
- 126 药实验室废弃物处理意识调研与管理探讨
饶丽丽, 卢雅英
- 128 水体重金属污染概况及其治理技术研究进展
周秀英, 韩晓燕, 罗欢
- 129 海南大学危险化学品全生命周期管理的探索研究
周雪晴, 谢艳丽, 张名楠, 等
- 131 园林废弃物生物质炭的制备及其对水中磷的吸附性能
黄玮钰, 陈宝燕, 陈秋丽, 等
- 134 浅谈重庆市黔江区阿蓬江旅游开发对其生态环境的影响
姚兴, 石珊, 孙凡, 等
- 136 长沙市降雨对醛酮化合物浓度变化的影响研究
翟海晴, 蒋朝晖, 郑玄, 等
- 137 Fe-mof 对餐厨垃圾厌氧消化影响
张先, 王琬, 周圣, 等
- 140 餐厨垃圾处理现状及今后发展趋势
崔文静, 陆敏博
- 142 厨余垃圾筛分后不同挤压方式对物料影响的进展研究
顾晓涛, 殷俊, 乙杨敏
- 145 管式电除尘器在人造板行业中的应用研究探讨
郭旭
- 147 合成化工企业土壤调查监测问题与探讨
王鸿, 白海峰, 柏叶青
- 148 带式干化机在污泥干化领域的应用探讨
章华熔, 芦佳, 叶兴联, 等
- 150 高效厌氧在精细化工行业应用探讨
高峰, 邵汝英, 蒋伟群, 等
- 153 燃煤烟气 SCR 脱硝喷氨分布异常的快速优化调整
熊小露
- 156 团聚除尘改造技术在超低排放中的应用
张广超
- 158 黄石某钢厂重金属污染土壤修复技术示范工程实例
高扬, 张晓明, 王黎明, 等

◆ 设计与装备

- 160 船用 LNG 储罐结构设计及应用
戴冰, 曹凯, 赵超, 等
- 162 闸阀中腔低逸散密封垫的选型与设计
林剑红, 陈安定, 汪水方, 等
- 166 小议有毒气体检测报警装置设置标准对比
成关锋, 董运涛, 张文勋
- 167 天然气脱碳装置处理能力提升与节能降耗应用案例
伍锡宏, 黄顺平, 陈冠谕
- 169 移动式蒸发冷却设备对电厂主厂房工作区域的降温效果研究
梁雷欣, 余德启, 栗树果, 等

◆ 分析测试

- 173 松针茶的热值测定及质量评价
杨展丽, 史金萍, 黄春丽, 等
- 174 消毒剂中西吡嘧铵检测方法的研究
郑常格, 徐树兰, 赖创荣, 等
- 177 新疆阿勒泰阿魏根挥发油化学成分 GC-MS 分析
祖丽菲亚·吾斯曼, 乃比·艾比布拉, 玛依努尔·玉努斯, 等
- 179 HPLC 同时测定地榆中没食子酸和金丝桃苷的含量
朱前恒, 廖梅香, 丁芸, 等
- 181 气相色谱-串联质谱法测定果蔬中 40 种农药残留含量
魏魏, 杨旦旦, 肖晓峰, 等
- 183 石墨炉原子吸收光谱法直接进样测定重晶石油中痕量铁镍钒含量
林智杰
- 185 高效液相色谱法测定化妆品中对羟基苯乙酮等 6 种防腐剂
曹菲斐, 石兴红, 符秋美, 等

本期基金项目论文 (共 93 篇)

- 1 爽滑剂在锂电铝塑膜用聚丙烯膜层的应用与性能研究
- 3 1, 2, 3-三氯唑化合物的合成与表征
- 5 碳纳米纤维修饰 $\text{Na}_2\text{V}_2(\text{PO}_4)_3$ 电极材料的研究
- 7 鲨鱼壳聚糖的提取
- 9 危险化学品智能辅助系统的开发与应用
- 13 竹粉/聚丙烯阻燃复合材料的制备及性能研究
- 15 二价铁配合物 $[\text{Fe}(\text{TbZ})(\text{HTBZ})_2]\text{ClO}_4$ 的合成、晶体结构及磁性研究
- 17 γ -丁内酯/PVA 抗冻水凝胶的制备及其性能研究
- 19 新创实验: 微流条件下苯甲醚的制备
- 21 粉体粒径对陶瓷支撑体及制备的 NaA 分子筛膜渗透汽化性能的研究
- 24 聚合硅酸铝铁的制备及性能研究
- 26 X 射线衍射法分析球形二氧化硅微粉中 α 态晶体二氧化硅含量
- 28 一种新的染色方法在植物石蜡切片中的应用
- 29 铜仁市白及药材中水分、总灰分、酸不溶性灰分的质量研究
- 32 MOF 及其衍生物在锂离子电池负极材料中的应用
- 34 松香酸钠化学合成及毒性研究
- 36 含氮杂环 Schiff 碱锌配合物合成及其金属离子识别研究
- 38 不同浓度的曲酸溶液对霉菌褐变的抑制及抗菌作用
- 41 铝基超疏水表面的制备及其冷凝性能的研究
- 43 气相色谱法测定极性干胶生产中环氧氯丙烷含量研究
- 50 显示镉相影响因素的研究
- 53 烟杆生物炭基 Mg/Ca 复合材料动态吸附除磷研究
- 57 一种抗寒老组合物、含该抗寒老组合物的冻干粉制备方法 & 研究与应用
- 69 锂电池正极材料压实密度测试的条件研究
- 82 纳米冲击技术的实际应用
- 84 废旧锂离子电池失效机理探究及回收利用研究进展
- 86 驱动电机用烧结钕铁硼磁体的矫顽力提高方法
- 88 石墨烯改性防腐涂料研究进展
- 92 落新妇天然药材提取工艺及化学成分的研究进展
- 94 二氧化铈纳米材料的研究进展
- 95 高强度胶原水凝胶的制备和应用研究进展
- 117 城市木质废弃物热解炭活化制备活性炭的可行性研究
- 119 含铜蚀刻液高价值资源化综合利用及建议
- 121 健康风险评估方法及其在大气环境污染中的应用示范
- 124 浅析光伏行业生产废水常用的处理技术
- 126 药实验室废弃物处理意识调研与管理探讨
- 128 水体重金属污染概况及其治理技术研究进展
- 129 海南大学危险化学品全生命周期管理的探索研究
- 131 园林废弃物生物质炭的制备及其对水中磷的吸附性能
- 134 浅谈重庆市黔江区阿蓬江旅游开发对其生态环境的影响
- 136 长沙市降雨对醛酮化合物浓度变化的影响研究
- 137 Fe-mof 对餐厨垃圾厌氧消化影响
- 156 团聚除尘改造技术在超低排放中的应用
- 158 黄石某钢厂重金属污染土壤修复技术示范工程实例
- 162 闸阀中腔低逸散密封垫的选型与设计
- 173 松针茶的热值测定及质量评价
- 174 消毒剂中西吡嘧铵检测方法的研究
- 177 新疆阿勒泰阿魏根挥发油化学成分 GC-MS 分析
- 179 HPLC 同时测定地榆中没食子酸和金丝桃苷的含量
- 181 气相色谱-串联质谱法测定果蔬中 40 种农药残留含量
- 183 石墨炉原子吸收光谱法直接进样测定重晶石油中痕量铁镍钒含量
- 185 高效液相色谱法测定化妆品中对羟基苯乙酮等 6 种防腐剂
- 211 高校基础化学实验室药品管理存在的问题及对策研究
- 213 SPOC+传统课堂混合教学模式在医用基础化学课程中的探究
- 215 “石油与环境微生物技术”教学中融入“思政”的探究
- 217 成人高等教育《新型分离技术》课程思政初探
- 219 制药工程专业药理学双语教学初探
- 221 高校化学实验室绿色化管理模式的探讨
- 222 应用型本科高校“课程思政”教育在无机化学教学的探索
- 224 化工热力学课程思政教学探索
- 225 双一流建设背景下药理学实验教学优化探讨
- 226 基于危险源识别与风险评价的实验室人员职业健康安全管理
- 228 雨课堂智慧教学模式在食品专业课程《发酵工程原理》的应用与实践
- 230 中泰两所高校化工类本科专业英语教学方法对比与启发
- 232 基于翻转课堂及思政教育的色谱分析课程教学模式研究
- 234 “无机化学”课程教学中开展“课程思政”的探索
- 236 微生物燃料电池实验教学探究
- 238 思政元素的模块化建设研究——以药用基础化学课程为例
- 240 基于研究所的导师团队制培养模式改革初探——以化学工程专业研究生为例
- 243 “科教融合”模式在物理化学教学中的探索
- 245 线上辅助线下教学法在有机化学实验教学的探索和应用
- 247 《天然产物研究及利用》研究生课程线上教学的探索实践
- 249 以技能培养为核心的药理学实践教学体系的建立与实践
- 251 化工仪表及自动化课程线上教学的应用及探讨
- 253 Gaussian 系列软件在有机化学反应机理讲解中的应用
- 256 就业引导下普通高校化工与环境类专业人才培养方向分析
- 259 面向新工科《生物制药工艺学》课程教学改革
- 260 应用化学拔尖创新人才培养实践探索——以安徽工程大学为例
- 262 基于应用型人才培养为导向的药剂学实验教学改革与探索
- 264 石化行业特色高校创新创业人才培养体系的研究
- 265 生活中的化学——气球爆炸的幕后黑手
- 267 《重金属冶金学》课程思政的教学改革探索实践
- 269 课程思政在《药物色谱分析》课程中的实践探索
- 271 基于“课程思政”的中药制剂分析技术教学设计
- 272 应用型本科院校的环境工程微生物学实践教学探索
- 273 智慧课堂在结构化学教学中的应用研究
- 275 中医药类仪器分析“课程思政”教学设计案例研究——以绪论章节为例
- 289 有机化学“课程思政”教学设计案例研究——以对照异构教学为例
- 297 利用“互联网+”促进《环境化学》课程教学改革探索

- 187 84 消毒液对不同载体的杀菌效果评价 刘玉莲
 189 碱性清洗剂中水分含量测定方法探索——卡式炉卡尔费休法 马永存
 191 优化液相色谱法测定茶枯粉中三种防腐剂含量的方法 张婧婧, 刘纲勇
 193 火花源原子发射光谱法测定超低碳冷轧薄板钢中碳、氮、磷和硫含量的不确定度评定 陆向东, 宋祖峰, 陈海峰, 等

◆ 教学教改

- 196 化工原理液液传质系数测定实验的误差分析与改进建议 吴青芸, 周航宇, 韩鉴琛, 等
 199 生化工程课程中的生化反应器内容教学探索 高敏杰, 许颖
 201 化学及实验(双语)混合式课程的建设与展望 刘福燕, 刘福杰, 吴泽颖, 等
 204 基于云课堂的药剂学实验混合式教学初探 胡洋, 高永峰, 周武艺, 等
 206 大学有机化学实验教学改革的探索与实践 李政, 邢月月, 王树军, 等
 208 海洋类专业无机及分析化学课程教学改革 韩海军, 马俊洁, 屈军艳, 等
 209 PBL 结合超星学习通在食品工厂设计与环境保护线上线下混合教学模式中的探索与实践 陈建平, 宋文奎, 夏秋瑜, 等
 211 高校基础化学实验室药品管理存在的问题及对策研究 袁遥, 邓婷, 周莹, 等
 213 SPOC+传统课堂混合教学模式在医用基础化学课程中的探究 刘娜, 李发胜, 牛奔, 等
 215 “石油与环境微生物技术”教学中融入“思政”的探究 朱米家, 易绍金, 陈武
 217 成人高等教育《新型分离技术》课程思政初探 臧杨, 张淮浩
 219 制药工程专业药理学双语教学初探 黄丽平, 林明琴, 周中流, 等
 221 高校化学实验室绿色化管理模式的探讨 阿布都克尤木·阿布都热西提, 艾合买提·沙塔尔
 222 应用型本科高校“课程思政”教育在无机化学教学的探索 张惠惠, 白利忠, 王超男, 等
 224 化工热力学课程思政教学探索 丁雪, 宋春敏, 刘熠斌, 等
 225 双一流建设背景下药学实验教学优化探讨 李帑洛, 刘映, 姚旭, 等
 226 基于危险源识别与风险评价的实验室人员职业健康安全管理 刘芳, 袁宗胜
 228 雨课堂智慧教学模式在食品专业课程《发酵工程原理》的应用与实践 郭举, 王先桂, 李芳香
 230 中泰两所高校化工类本科专业英语教学方法对比与启发 韩志萍, 何东宁
 232 基于翻转课堂及思政教育的色谱分析课程教学模式研究 赵龙山, 王富畅, 康正, 等
 234 “无机化学”课程教学中开展“课程思政”的探索 谢洪学, 余颖, 常文贵, 等
 236 微生物燃料电池实验教学探究 董跃, 谭啸, 隋明锐, 等
 238 思政元素的模块化建设研究——以药用基础化学课程为例 俞晨秀
 240 基于研究所的导师团队培养模式改革初探——以化学工程专业研究生为例 黄微雅, 吴淑琰, 陈勋俊, 等
 243 “科教融合”模式在物理化学教学中的探索 高杰, 刘静, 苗蕾
 245 线上辅助线下教学法在有机化学实验教学的探索和应用 卢嫣, 谢立强, 赵青华, 等
 247 《天然产物研究及利用》研究生课程线上教学的探索实践 徐静, 李嘉诚, 梁振益, 等
 249 以技能培养为核心的药学实践教学体系的建立与实践 冯学珍, 伍善广, 陆苑
 251 化工仪表及自动化课程线上教学的应用及探讨 谢文菊, 杨自涛, 刘俊劭, 等
 253 Gaussian 系列软件在有机化学反应机理讲解中的研究与应用 刘松, 孟江平, 郑士远
 256 就业引导下普通高校化工与环境类人才培养方向分析 郭先华, 白丽芳, 罗群, 等
 259 面向新工科的《生物制药工艺学》课程教学改革 宋俊梅, 陈小举
 260 应用化学拔尖创新人才培养实践探索——以安徽工程大学为例 傅应强, 高建纲, 张泽, 等
 262 基于应用型人才培养为导向的药剂学实验教学改革与探索 朱双双, 杨涛, 陈小举, 等
 264 石化行业特色高校创新创业人才培养体系的研究 李宁, 曾芳磊, 王璐瑶, 等
 265 生活中的化学——气球爆炸的幕后黑手 宋玉华, 刘欢, 胡肖肖, 等
 267 《重金属冶金学》课程思政的教学改革探索实践 贺山明, 汪金良, 廖春发, 等
 269 课程思政在《药物色谱分析》课程中的实践探索 纪顺利, 吴欢, 郑枫, 等
 271 基于“课程思政”的中药制剂分析技术教学设计 孙兰, 皇立卫, 颜延宁, 等
 272 应用型本科院校的环境工程微生物学实验教学改革探索 夏宇宙
 273 智慧课堂在结构化学教学中的应用研究 李慧妍, 花书贵, 杜攀, 等
 275 中医药类仪器分析“课程思政”教学设计案例研究——以绪论章节为例 李凤云, 张祎, 任晓亮, 等
 277 《化工分离工程》课程教学改革与实践 高道伟, 裴彦鹏, 姜占坤, 等
 279 Matlab 软件在位错应力场教学中的应用 魏祥, 王觉, 彭广威, 等
 281 二元背景下《化工安全与职业健康》教材建设的研究 何秀娟
 282 Origin 软件在雷诺温度校正图中的应用 沈海云, 邵松雷
 285 中华优秀传统文化在《有机化学》课程思政中的应用——以醇为例 林丽萍
 287 中医药院校化学实验室危险品规范化管理措施 孟珈同, 李军鸽
 289 有机化学“课程思政”教学设计案例研究——以对映异构教学为例 陈军民, 李乐, 盛寿日, 等
 290 “证据推理与模型认知”的化学教学活动 王传开
 292 化学化工专业大学生论文撰写选修课设置与教学实施 赵雪利
 294 分析化学实验教学中融入思政元素的探索与实践 崔志民, 侯永平, 钱建刚
 296 线上线下混合式教学对物理化学课堂的影响 韩华博, 韦秀华, 董辉, 等
 297 利用“互联网+”促进《环境化学》课程教学改革探究 敖子强, 梁景华, 卜妹红, 等

本刊已许可中国学术期刊(光盘版)电子杂志社在中国知网及其系列数据库产品中以数字化方式复制、汇编、发行、信息网络传播本刊全文。作者向本刊提交文章发表的行为即视为同意我社上述声明。

Contents

◆ Experiment & research

- 1 Application and Properties of the Slipping Agent in PP Film for Lithium Al-plastic Film Yang Rue, Wu Anli, Chen Hancheng, Lin Jiesheng
 3 Synthesis and Characterization of 1,2,3-azides Xiao Ying, Wang Zhaoyang, Chen Hancheng, Wu Anli, Yang Rue, Luo Shihe
 5 Na₃V₂(PO₄)₃ Nanoparticles Encapsulated in Carbon Nanofibers with Excellent Na⁺ Storage for Sodium-ion Batteries Zhou Zifan, Xu Xiaochun, Lu Ziqi
 7 Extraction of Chitosan from Limulus Shell Guan Shiqi, Deng Chunmei, Liu Yi, Li Shaoyu
 9 Development and Application of Intelligent Auxiliary System for Hazardous Chemicals Yue Dalei, Liang Baijun, Xiao Qian, Peng Subiao, Wang Haojian, Deng Liangjian
 11 Calorific Value Determination and Quality Evaluation of Donggu Baishoumei with Different Storage Time Tan Kaidan, Wu Guoyong, Shi Jinping, Huang Chunli, Zhou Libing
 13 Fabrication and Property of Bamboo Powder/Polypropylene Flame-retardant Composites Material Zhao Jinyun, He Lingfei, Wu Zhouzhuo, Cao Xiangqing, Hu Jiapeng, Mu Jilin
 15 Synthesis, Crystal Structure and Magnetic Research of Coordination Compound [Fe(TBZ)(HTBZ₂)ClO₄] Meng Yan, Chen Wei, Niu Bei, Wang Yang
 17 Preparation and Properties of γ -butyrolactone/PVA Antifreezing Hydrogel Wu Dan, Xie Yu, Xiao Guqing, Zhong Tongsheng
 19 Synthesis of Benzaldehyde in Microfluidic Systems Zhou Jie, Luo Fanyang, Peng Lingyun, Liu Minqi, Mao Zuxing
 21 Study of Powder Particle Size on Ceramic Supports and Pervaporation Performance of NaA Membranes Prepared on Thus Supports Zhu Yuexin, Yang Zhanzhao, Ji Zuhuan, Qing Tian
 24 Preparation, Characterization and Flocculation Performance of Polymeric Ferric Aluminum Silicate Yang Hui, Cui Lin, Li Xiang
 26 Analysis of Content of α -Crystalline Silica in Spherical Silica Powder Cristobalite by X-Ray Powder Diffraction Li Jiande, Jiang Liwei, Zhao Xiufang, Xu Yanyan, Gao Lirong, Shu Mindi
 28 A New Dyeing Method Applied to Plant Paraffin Sections Lu Jinhong, Lu Yanlin, Zhao Gan, Zhang Shaohong
 29 Quality Study on Water, Total Ash and Acid Insoluble Ash in Bletilla Striata in Tongren Zhou Bin, Wang Yuanhui, Tian Fang, Yang Di, Liu Qinglan, Yang Fang
 32 Application of MOF and its Derivatives as Anodes for Lithium-ion Batteries Wang Ping
 34 Study on Rosin Acid Sodium Chemical Synthesis and Toxicity Liu Manjun, Shi Huili, Niu Anqi, Wang Xiaoping, Cao Xiaoping, Gao Rong, Cui Xiaomin
 36 Synthesis and Metal Ion Recognition of Zinc Schiff base Complex Containing Nitrogen Heterocyclic Su Xiaohong, Hasi Qimeige, Wei Yumei
 38 Inhibition and Antibacterial Effect of Kojic Acid Solution with Different Concentrations on Browning of Lotus Root Belt Jiang Liya
 41 Preparation of Super-hydrophobic Aluminum Surface and Condensation Research Zhao Juan, Ai Hongru, Yang Minjian, Zhang Ping
 43 Study on Determination of Epichlorohydrin Content in Polar Dry Adhesive by Gas Chromatography Li Jian, Wu Xiaotao, Lin Peixi
 46 Comparison and Analysis of the Calibration of 0.1mol/L Sodium Thiosulfate Volumetric Solution between Chinese Pharmacopoeia and Foreign Pharmacopoeia Lin Tingting
 48 Study on Carbon Release and Enhanced Denitrification Performance of Composite Solid Carbon Source Zhou Xiuxiu
 50 Study on the Influencing Factors of Indium Metallography Yue Xiaocong, Huang Yubin, Anand Singh-Deodutt
 53 Study on Dynamic Adsorption of Phosphorus in Water by Tobacco Stalk Biochar Loaded Mg/Ca Composites He Qiuping, Wang Feng, Luo Yanli
 55 Effect of the Mixture of Water Extract of Prunella Vulgaris and Polygonum Multiflorum on Tyrosinase Lu Enqi, Xie Yujing, Du Jianting, Du Jiaying, Zhu Baofu
 57 An Anti-aging Composition, Preparation Method and Research and Application of Lyophilized Powder Containing the Anti-aging Composition Wang Shanshan, Xu Jiawang, Yan Xinming, Pang Kelian, Chen Haijia
 60 Research on the Effect of Heavy Oil Viscosity Reduction by Blending Diluting Oil Zhu Mo
 62 Preparation of Platycladus Orientalis Shampoo with High Flocculation Layer and its Anti-hair Loss Efficacy Test Yuan Yangming, Li Chunyuan, Ye Junping
 64 Study on the Colored Stability of the Application of Arnebia Radix Oil in Cosmetics Peng Shiqi, Peng Yinghua, Zhang Rongcun, Yu Zhenbei, Huang Yu
 67 Optimization of Process Parameters of Rivaroxaban Tablets Based on the Principle of Quality by Design Lai Yingqiang, Lin Huaqing, Wan Junhan, Qiu Jiazhi
 69 Study on the Conditions of Compaction Density Test for Positive Electrode Material of Lithium Battery Liang Huamei, Zeng Yong, Huang Shijian, Yang Yadi
 71 Design, Synthesis and Characterization of a Novel 11- phenyl-indenoquinoline-11-alcohol Chen Lin
 73 Numerical Simulation of the Influence of Water Curtain Hose on the Leakage and Diffusion of Liquid Chlorine Tank Car Fan Wenkai
 76 Experimental Research on the Content of Blank Organic Residual Acids after Stripping in Rare Earth Separation Zhang Wuguo
 78 Performance Analysis of the SCR De-NOX Catalyst in a 300MW Coal-fired Power Plant Xiong Dong, Tang Guoan, Zhang Lin, Zhu Wentao
 80 Construction and Optical Properties of Gold Nanorod Core-gold Nano Island Shell Nanomaterials Gao Shan, Lyu Yiyi, Zong Mingji

◆ Summarize

- 82 Practical Application of Nanoimpact Technology Zhu Xiaoyuan
 84 Research Progress on Failure Mechanism and Recycling of Waste Lithium-ion batteries Yang Changxian, Mao Xueqin, Xin Chunju, Jiang Lohai, Luo Han, Liu Chunli, Zhan Xinxing
 86 Method for Improving Coercivity of Sintered NdFeB Magnet Used in Driving Motor Chen Dongwen, Huang Weichao, Xie Jue, Chen Yuxin, Tang Jin
 88 Research Progress of Graphene Modified Anticorrosive Coatings Song Zhiqiang, Zhang Yiran, Song Furu, You Chuanbang, Li Dongfeng
 92 Research Progress on Extraction Technology and Chemical Components of Astilbe Chinensis Chen Shengfa, Cao Junyi, Liang Yuan
 94 Research Progress of ZnO:Eu Nanomaterials Hong Chunshui, Yang Lei, Zhu Wencai
 95 Research Progress on Preparation and Application of High Strength Collagen Hydrogels Li Yangyang, Mei Yaoyao, Xu Tingting, Chen Bingqing, Li Jiheng
 98 Research Progress of Nanocellulose-based Self-healing Hydrogels Zhang Luyu, Wu Yiqiang, Wan Caichao, Liu Xinyi, Tian Wenyang
 100 Corrosion Analysis and Countermeasures of Desulfurization and Decarburization Solvent Regeneration System for FCC Dry Gas Sun Chuqiao
 102 Research Progress of Benzoylurea Insecticides Wang Yanyan
 104 Treatment and Reclamation of Shield Dregs and Suggestions Zhong Renhua, Qiu Zidi, Yu Chengye, Wu Ansong, Cai Hongchun, Yu Hongqiang
 106 Skills of Using STN to Search Technology in the Field of Chemicals Wan Guang
 109 Application of Matrix Substitution Internal Standard Method in the Composition of O-xylene Zhang Aqiao
 110 Consideration and Suggestion on Mining, Surveying and Separation of Surface Water in National Controlled Section Zuo Xiaoyu, Wang Hui
 112 Research Progress of Membrane Roller Coating Device for Lithium Battery Liu Tianyi, Zhang Hanhong, Wang Chunyang
 114 Research Progress on Analytical Technologies of Illegal Adulterated Chemical Drugs in Lipid-lowering Chinese Patent Medicines and Health Foods Luo Yang

◆ Environmental protection

- 117 Feasibility Study on the Preparation of Activated Carbon by Activation of Pyrolysis Char from Wood Waste Yuan Guoan, Zhang Ruina, Chen Dezhen
 119 Comprehensive Utilization and Suggestion of Copper-containing Waste Etching Solution Yao Wenbin, Li Shanting, Zhu Junqiang
 121 Review of Health Risk Assessment Methods and Their Application Demonstration in Air Pollution Zhang Rongzhi, Shi Miwei, Zhu Guiyan
 124 A Brief Analysis of the Commonly Used Treatment Technology of Production Wastewater in Photovoltaic Industry Wan Jiaxiu, Zhan Zhengyan, zhao Peizhi, Shi Zhenhua, Wan Jialiang
 126 Investigation and Management of Waste Treatment in Pharmaceutical Laboratories Rao Lili, Lu Yaying
 128 Research Situation and Treatment Technology on Heavy Metal Pollution in Water Environment Zhou Xiuying, Han Xiaoyan, Luo Huan
 129 Safety Lifecycle Management of Hazardous Chemicals in Hainan University Laboratories Zhou Xueqing, Yanli Xie, Mingnan Zhang, Guizhen Wang, Yuhong Feng
 131 Preparation of Biochar from Garden Waste and Its Adsorption Capacity for Phosphorus in Water Huang Weiyu, Chen Baoyan, Chen Qiuli, Zheng Zhicheng, Du Zehou, Zhang Yu
 134 Introduction to the Chongqing Qianjiang Apeng River Tourism Development on its Ecological Environment Yao Xing, Shi Shan, Sun Fan, Fu Liangtong, Xing Ying
 136 Effect of Rainfall on the Concentration of Carbonyls in Changsha Zhai Haiqing, Jiang Zhaohui, Zheng Xuan, Zhao Wenyu, Wang Qiong
 137 Effect of Fe-mof on Anaerobic Digestion of Kitchen Waste Zhang Xian, Wang Wan, Zhou Sheng, Wen Liling
 140 The Present Disposing Situation and Development Trend of Kitchen Waste Cui Wenjing, Lu Minbo
 142 Research on the Influence of Different Extrusion Methods on the Material of Kitchen Waste after Screening Gu Xiaotao, Yin Jun, Yi Jingmin
 145 Application of Tubular Electrostatic Precipitator in Wood Based Panel Industry Guo Xu
 147 Investigation and Monitoring of Soil Investigation in Synthetic Chemical Enterprises Wang Hong, Bai Haifeng, Bai Yeqing
 148 Application of Belt Dryer in Sludge Drying Field Zhang Huarong, Lu Jia, Ye Xingjian, Zhou Zongyong
 150 Discussion on Application of High-efficient Anaerobic Technology in Fine Chemical Industry Gao Feng, Shao Ruying, Jiang Weiqun, Zhao Zhenhua
 153 Rapid Optimization and Adjustment of Abnormal Ammonia Injection Distribution in SCR Denitrification of Coal-fired Flue Gas Xiong Xiaolu
 156 Application of Agglomeration Dust Removal Technology in Ultra-low Emission Zhang Guangchao
 158 Engineering Instances of Remediation Technology Demonstration Project of Heavy Metal Contaminated Sites in a Steel Plant in Huangshi Gao Yang, Zhang Xiaoyun, Wang Liming, Ruan Yedong

◆ Design & equipment

- 160 Structural Design and Application of Marine LNG Storage Tank Dai Bing, Cao Kai, Zhao Chao, Wang Tingyong

- 162 Selection and Design of Fugitive Emission Bonnet Gasket for Gate Valve Lin Jianhong, Chen Anding, Wang Shuifang, Hu Shushan, Shan Huading
 166 Comparison of Setting Standards of Poisonous Gas Detection and Alarm Devices Cheng Guanfeng, Dong Yuntao, Zhang Wenxun
 167 Application Case of Capacity Improvement and Energy Saving of Natural Gas Decarbonization Unit Wu Xihong, Huang Shuping, Chen Guanyu
 169 Study on Cooling Effect of Mobile Evaporative Cooling Equipment on Working Area of Main Power House Liang Leixin, Yu Qide, Li Shuguo, Liu Gang, Feng Yiwei, Hong Yang

◆ Analysis testing

- 173 Determination of Calorific Value and Quality Evaluation of Pine Needle Tea Yang Chenli, Shi Jinping, Huang Chunli, Zhou Libing
 174 Study on the Detection Method of Cetylpyridinium Chloride in Disinfectant Zheng Changge, Xu Shulan, Lai Chuangrong, Zhong Weibo, Jiang Minhua
 177 GC-MS Analysis of Volatile Oil of Ferula roots from Xinjiang Altay
 179 Simultaneous Determination of the Contents of Gallic Acid and Hyperoside in *Sanguisorba Officinalis* L. by HPLC Zulfeyziya Wusiman, Naibi Aibibula, Mayinuer Yunusi, Subati Saimaiti, Maiwulanjiang Yizibula
 181 Simultaneous Determination of 40 Pesticide Residues in Fruits and Vegetables by Gas Chromatography-Tandem Mass Spectrometry Zhu Qianheng, Liao Meixiang, Ding Yun, Chen Jiaoting, Zhang Daoying, Wen Huiling
 183 Determination of Trace Iron, Nickel and Vanadium in Heavy Naphtha by Graphite Furnace Atomic Absorption Spectrometry Wei Wei, Yang Dandan, Xiao Xiaofeng, Sun Chunyan, Zhu Yawei, Jiang Xingwang
 185 Determination of 6 Preservatives in Cosmetics by HPLC Lin Zhijie
 187 Evaluation of the Sterilization Effect of 84 Disinfectant on Different Carriers Cao Feifei, Shi Xinghong, Fu Qiumei, Qiu Yingheng, Wu Xiaou
 189 Determination of Water Content in Alkaline Detergent by Karl Fischer Method Liu Yulian
 191 Optimization of the Chromatography Method for the Determination of Three Preservatives in Tea Seed Powder Zhang Jingjing, Liu Gangyong
 193 Uncertainty Evaluation for Determination of Carbon, Nitrogen, Phosphorus and Sulfur in Ultra-low Carbon Cold-Reduced Sheet Steel by Spark Source Atomic Emission Spectrometry Ma Yongcun
 Lu Xiangdong, Song Zufeng, Chen Haifeng, Fu Wanyun, Wang Zhongle

◆ Teaching reform

- 196 Error Analysis and Improvement Suggestion of Liquid-liquid Mass Transfer Coefficient Measurement as an Experiment of Chemical Engineering Principles Wu Qingyun, Zhou Hangyu, Han Jianchen, Gan Zhiguo, He Rongwei
 199 Teaching Exploration of Biochemical Reactor in the Course of Biochemical Engineering Gao Minjie, Xu Ying
 201 Construction and Prospects of Chemistry and Experiment (Bilingual) Blended Courses Liu Fuyan, Liu Fujie, Wu Zeyang, Chen Xinhong
 204 Exploration of Cloud Classroom-contained Hybrid Teaching Method in the Application of Experiments for Pharmaceutics Hu Yang, Gao Yongfeng, Zhou Wuyi, Huo Lijian, Yang Zhuohong
 206 Exploration and Practice of Organic Chemistry Experiment Teaching Reform in University Li Zheng, Xing Yueyue, Wang Shujun, Xiao Liwei
 208 Teaching Reform of Inorganic and Analytical Chemistry for Marine Majors Han Haijun, Ma Junjie, Qu Junyan, Shao Dongxu, Chen Wen, Luo Xiaoxue
 209 Exploration and Practice of Online and Offline Mixed Teaching Based on PBL combined with Superstar Learning Access in Food Factory Design and Environmental Protection Chen Jianping, Song Wenkui, Xia Qiuyu, Deng Caixia
 211 Problems and Countermeasures Discussion of Chemicals Management in University Fundamental Chemistry Laboratory Yuan Yao, Deng Ting, Zhou Ying, Ma Qiang
 213 The Study on SPOC+ Traditional Teaching Bending Learning Mode in Medical Chemistry Course Liu Na, Li Fasheng, Niu Ben, Yu Kun, Teng Wenfeng, Li Hongyan, Zhou Zhaoqing, Yan Xiaomei, Xu Najin
 215 To Explore the Application of "Curriculum Ideological and Political Theory" Concept in "Petroleum and Environmental Microbiology Technology" Course Zhu Mijia, Yi Shaolin, Chen Wu
 217 A Preliminary Exploration on the Ideological and Political Teaching of New Separation Techniques for Adult Higher Education Zang Yang, Zhang Huaihao
 219 Exploration on Bilingual Teaching of Pharmacology Course for Pharmaceutical Engineering Major Huang Liping, Lin Mingqin, Zhou Zhongliu, Lin Sanqing, Xia Jingmin
 221 Discussion on Green Management Mode of Chemical Laboratory in University Abdulkaiyum Abdurashid, Ahmat Sattar
 222 Exploration and Practice of "Course Ideology and Political Education" in inorganic Chemistry Teaching in Application-oriented Universities Zhang Huihui, Bai Lizhong, Wang Chaonan, Zhang Qinghua, Zhao Feng
 224 Exploration on Ideological and Political Teaching of Chemical Engineering Thermodynamics Ding Xue, Song Chunmin, Liu Yibin, Yang Junwei, Tan Yawen
 225 Discussion on Experimental Teaching Reform of Pharmacy under the Background of Double First-rate Construction Li Tangluo, Liu Ying, Yao Xu, Peng Ying, Guo Yu, He Weiguo
 226 Occupational Health and Safety Management of Laboratory Personnel Based on Hazard Identification and Risk Assessment Liu Fang, Yuan Zongsheng
 228 Application and Practice of Rain Classroom Wisdom Teaching Mode in the Food Specialty Course of Fermentation Engineering Principle Guo Ju, Wang Xiangui, Li Fangxiang
 230 Comparative Analysis of the English Teaching Strategies in Chemical Field in Chinese and Thai Universities Han Zhiping, He Dongning
 232 Research on the Teaching Mode of Chromatographic Analysis Course Based on Flipped Classroom and Ideological and Political Education Zhao Longshan, Wang Fuchang, Kang Zheng, Xiong Zhili
 234 Exploration of "Curriculum Ideological and Political" in "Inorganic Chemistry" Classroom Teaching Xie Hongxue, Yu Ying, Chang Wengui, Dai Panpan
 236 Research on Experimental Teaching of Microbial Fuel Cell Dong Yue, Tan Xiao, Sui Mingrui, Jiang Yiyang
 238 A Study on the Modular Construction of Ideological and Political Elements: Take Basic Medicinal Chemistry Courses as an Example Yu Chenxiu
 240 The Reform of the Cultivating Mode of Graduate Tutor Team Based on Research Institutes—Taking Chemical Engineering Graduate Students as an Example Huang Weiya, Wu Shuyun, Chen Xunjun, Yang Kai
 243 Exploration of the Teaching Model of Integration of Scientific Research and Teaching in the Principle of Physical Chemistry Gao Jie, Liu Jing, Miao Lei
 245 The Exploration and Application of Online-assisted-offline Teaching Method in Organic Chemistry Experiment Teaching Lu Yan, Xie Liqiang, Zhao Qinghua, Zhuang Jianping
 247 Exploration and Practice of Online Teaching and Learning Mode for Graduate Curriculum "Natural Product Research and Development" Xu Jing, Li Jiacheng, Liang Zhenyi, Zhou Jing, Yu Gaobo
 249 Establishment and Practice of Pharmacy Practice Teaching System with Basic Skills Training at its Core Feng Xuezhen, Wu Shanguang, Lu Yuan
 251 Application and Discussion of Chemical Instrument and Automation in Online Teaching Xie Wenju, Yang Zitao, Liu Junshao, Wu Gangdi
 253 Research and Application of Reaction Mechanism Teaching Using Gaussian Series Software in Organic Chemistry Liu Song, Meng Jiangping, Zheng Shiyuan
 256 Analysis on Talent Cultivation Direction of Chemical Engineering and Environmental Major in Ordinary Universities under the Employment Guidance Guo Xianhua, Bai Lifang, Luo Qun, Zhao Lidan
 259 Teaching Reform and Exploration of Biopharmaceutical Process under the Background of New Engineering Song Junmei, Chen Xiaojun
 260 Exploring the Practice of Training Top-notch Innovative Talents in Applied Chemistry-taking Anhui Polytechnic University as an Example Fu Yingqiang, Gao Jiangang, Zhang Ze, Zhu Xiandong, Ren Yiming, Wu Zhichuan
 262 Reform and Exploration of Pharmaceutics Experimental Teaching Based on the Raising of Applied Talents Zhu Shuangshuang, Yao Tao, Chen Xiaojun, Wang Wei, Ge Bichen
 264 Research on the Cultivation System of Innovative and Entrepreneurial Talents in Universities with Characteristics of Petrochemical Industry Li Ning, Zeng Fanglei, Wang Luyao, Yin Peng, Feng Keyu, Huang Shaojuan, Li Jinchun
 265 Chemistry in Life—behind the Balloon Explosion Song Yuhua, Liu Huan, Hu Xiaoxiao, Ma Lin
 267 Exploration and Practice on Teaching Reform of Ideological and Political Education in Heavy Metal Metallurgy He Shanming, Wang Jinliang, Liao Chunfa, Tong Zhifang, Deng Gengfeng
 269 Practical Exploration of Curriculum Ideology and Politics in the Course of "Pharmaceutical Chromatography Analysis" Ji Shunli, Wu Huan, Zheng Feng, Wang Lei
 271 Teaching Design of Traditional Chinese Medicine Preparation Analysis Technology Based on "Course Ideological and Political" Sun Lan, Huang Liwei, Yan Yanning, Zhang Yong
 272 Exploration of Environmental Engineering Microbiology Experiment Teaching Reforming for the Application-oriented Universities Xia Yuzhou
 273 Study on the Application of Smart Classroom in Teaching Structural Chemistry Li Huiyan, Hua Shugui, Du pan, Zhang Yajie
 275 Instructional Design Case Study on the Curriculum Politics in Instrumental Analysis of Traditional Chinese Medicine: an Example of Introduction Chapter Li Fengyun, Zhang Yi, Ren Xiaoliang, Wu Lijie, Wang Kai, Yao Yaqi, Chen Meiling
 277 Teaching Reform and Practice of Chemical Separation Engineering Course Gao Daowei, Pei Yanpeng, Jiang Zhankun, Chen Guozhu
 279 Application of Matlab Software in dislocation stress field Teaching Wei Xiang, Wang Jue, Peng Guangwei, Liu Baogang, Wu Jiwen, Kong Lingnan
 281 Research on Textbook Construction of Chemical Industry Safety and Occupational Health under Dual Background He Xiujuan
 282 Application of Origin Software in Reynolds Correction Curves Shen Haiyun, Shao Songxue
 285 The Application of Excellent Traditional Chinese Culture in the Ideological and Political Teaching of Organic Chemistry - Taking Alcohol as an Example Lin Liping
 287 Standardized Management Measures for Hazardous Chemicals in Chemical Laboratories of Chinese Medicine Colleges Meng Jiatong, Li Junge
 289 Instructional Design Case Study on the Course Ideology and Politics in Organic Chemistry: Teaching the Enantiomerism Section as an Example Chen Junmin, Li Le, Sheng Shouri, Xu Zhaohui
 290 Chemistry Teaching Activities Based on "Evidence Reasoning and Model Cognition" Wang Chuankai
 292 Design and Teaching of Thesis Writing Curriculum in the Field of Chemistry and Chemical Engineering Zhao Xueli
 294 Exploration and Practice of Integrating Course Ideological and Political Elements into Analytical Chemistry Experiment Teaching Cui Zhimin, Hou Yongping, Qian Jiangang
 296 The Effect of Online & Offline Blended Teaching Model on the Physical Chemistry Teaching Outcomes Han Huabo, Wei Xiuhua, Dong Hui, Du Bingbing
 297 Teaching Reform and Practice of *Environmental Chemistry* under the Background of "Internet Plus" Ao Ziqiang, Liang Jinghua, Bu Meihong, Long Mingzhong, Zhou Mingding

Sponsor and Publisher: Guangdong Petroleum and Fine Chemicals Institute
 Editor: The Editorial Office of Guangdong Chemical Industry

Address: The Editorial Office of Guangdong Chemical Industry, 116 Yuehua Road, Guangzhou, 510030 China
 Tel/Fax: 86-20-83336009, 86-20-833302517
 E-mail: gdcic200@163.com http://www.gdchem.com



广东省科学院化工研究所