



中国化工教育协会会刊
第39卷·第5期

ISSN 1000-6168
CN 31-1043/G4

化工高等教育

HIGHER EDUCATION IN CHEMICAL ENGINEERING



2022年10月

华东理工大学主办

化工高等教育
HIGHER EDUCATION IN CHEMICAL ENGINEERING
第39卷·第5期

2022年10月

化工高等教育

第 39 卷第 5 期 2022 年 10 月

目 次

特稿与约稿

大类招生模式下高校化工类专业人才培养现状调查与分析

..... 李伯耿,潘鹏举,王盎然,沈华芬,张 红,马 婕(2)

卓越工程师培养

基于胜任力的卓越工程师培养——以初级制造工艺工程师为例 陈万思,范惠明,张 珣(9)

校企深度融合培养油气化工卓越人才——以西南石油大学化工专业为例

..... 王 豪,段 明,张 辉,余亚兰,李 敏,刘文士(16)

基于产学研联合创新的化工人才培养路径探索与实践——以联合化学反应工程研究所为例

..... 任聪静,王靖岱,孙婧元(24)

华东理工大学 70 周年校庆专栏

“学在华理”生态传承与新时代育人创新实践 黄 婕,何 清,刘金库(29)

内涵式发展:华东理工大学研究生教育改革十年回顾、成效与展望

..... 陆荣华,杜文莉,刘 涛,郁惠蕾,孙洪锋,钱嫦萍(33)

华东理工大学“双一流”建设的回顾与展望 张宇晴,周彦波,李 剑(40)

我国工程管理硕士专业学位研究生创新能力培养模式探索——以华东理工大学为例

..... 董海艺,侯丽敏(45)

生态文明理念下化工类专业环境法教育路径研究——以华东理工大学为例

..... 张 婧,董溯战,孙晓东(54)

研究生教育

新时代化工学科研究生教育的改革创新与实践——以浙江大学为例

..... 王盎然,王亚纳,沈华芬,潘鹏举(62)

课程建设与改革

- 科研导向型吸附分离过程课程全英文教学探索与实践 赵 颂(67)
- 高分子化学全英文课程思政建设的探索与实践..... 张伟安,田 佳,黄宝萱,陈健壮(72)
- 新工科背景下基于华为“智能基座”项目的课程建设探索——以人工智能导论与基础算法实训课程为例
..... 蒋翠玲,万永菁,朱 煜,庞毅林,王 嵘(77)
- 聚焦学生解决复杂工程问题能力培养的化工原理课程三维立体式教学模式探索与实践
..... 孟秀霞,张津津,庄淑娟,黄昊飞,王 平,杨乃涛(84)
- 以学生为中心的工程材料与成型技术基础课程教学改革探索 张建军(91)
- 化工发展与人类进步课程思政建设探索与实践..... 董冠英,张亚涛(97)
- 基于 RBL 模式的师生共建微信公众平台实施路径——以化工原理课程为例
..... 张明珏,王 颖,梁 帅,徐淑婷,王盼盼(103)
- 化工原理课程思政教学案例设计研究——以热量传递为例
..... 丁 靖,王 磊,冯能杰,杜 薇,管国锋(110)
- 面向新工科的化工工艺课程教学改革 芦永红,苏保卫,卞俊杰,李春虎(115)
- 地方高校基础化学教学改革研究..... 贺理想,梁庆祥,吴爱斌,杨彩彩,赖 璐(121)
- 合作办学背景下中外联合同步课堂教学模式探索——以材料力学课程为例
..... 苏 勇,PERELYGINA Aleksandra,龚 斌,于三三(127)

实验与实践教学

- 理工结合、多学科交叉的药学三级开放实验平台的构建与实践
..... 孙仲颖,马小思,徐仲玉,刘朝阳,周 翮,马 磊(133)
- 原理驱动的化工原理实验启发式教学方案设计 徐 威,王 瑶(138)
- 利用专业实验提升学生综合能力的探索——以化工热力学实验为例
..... 李俊英,马 烽,杨鹏飞,张文郁,陈明辉(144)
- 核电系统综合换热虚拟仿真实验的建设与实施 周帼彦,邢改兰,曹 军,曾力丁(150)

主编寄语..... (1)

Main Contents

Investigation and Analysis on the Training Status of Chemical Engineering Professionals in Colleges under the Background of Classified Enrollment

..... Li Bogeng, Pan Pengju, Wang Angran, Shen Huafen, Zhang Hong, Ma Jie(2)

Cultivating Excellent Engineers Based on Competency—A Study on Junior Industrialization Engineers

..... Chen Wansi, Fan Huiming, Zhang Xun(9)

Deep Integration of University and Enterprises to Cultivate Outstanding Talents in Oil and Gas Chemical Industry—Taking the Chemical Engineering Major of SWPU as an Example

..... Wang Hao, Duan Ming, Zhang Hui, Yu Yalan, Li Min, Liu Wenshi(16)

Exploration and Practice of Chemical Talent Training Path Based on Industry-university-research Joint Innovation; Case Study of Joint Chemical Reaction Engineering Institute

..... Ren Congjing, Wang Jingdai, Sun Jingyuan(24)

Inherit and Innovative Practice of Good Learning Atmosphere in East China University of Science and Technology in the New Era

..... Huang Jie, He Qing, Liu Jinku(29)

Connotative Development: Review, Achievements and Prospects of Postgraduate Education Reforms of East China University of Science and Technology in Ten Years

..... Lu Ronghua, Du Wenli, Liu Tao, Yu Huilei, Sun Hongfeng, Qian Changping(33)

Review and Prospect on the Construction of "Double First-Class" in ECUST

..... Zhang Yuqing, Zhou Yanbo, Li Jian(40)

Research on MEM Student's Cultivation Mode of Innovation Capability in China—Take East China University of Science and Technology as an Example

..... Dong Haiyi, Hou Limin(45)

Research on Environmental Law Education of Chemical Engineering—Taking East China University of Science and Technology as an Example

..... Zhang Jing, Dong Suzhan, Sun Xiaodong(54)

Reform Innovation and Practice of Graduate Education for Chemical Engineering Discipline in the New Era; Taking Zhejiang University as an Example

..... Wang Angran, Wang Yana, Shen Huafen, Pan Pengju(62)

Exploration and Practice of Scientific Research Oriented Teaching All in English of Adsorption Separation Process Course

..... Zhao Song(67)

Exploration and Practice on Ideological and Political Education of Polymer Chemistry English Course

..... Zhang Weian, Tian Jia, Huang Baoxuan, Chen Jianzhuang(72)

Course Construction Exploration Based on "Smart Base" Project in the Context of New Engineering: A Report from the Course of Artificial Intelligence Introduction and Basic Algorithms Training	Jiang Cuiling, Wan Yongjing, Zhu Yu, Pang Yilin, Wang Rong(77)
Exploration and Practice of Three-dimensional Teaching Mode in Unit Operations of Chemical Engi- neering Focused on the Cultivation of Students' Ability to Solve Complex Engineering Problems	Meng Xiuxia, Zhang Jinjin, Zhuang Shujuan, Huang Haofei, Wang Ping, Yang Naitao(84)
Exploration of Student-centered Teaching Reform of the Course of Fundamentals of Engineering Ma- terial and Formation Technology	Zhang Jianjun(91)
Exploration and Practice of Ideological and Political Education in Curriculum of Chemical Engineering Development and Human Progress	Dong Guanying, Zhang Yatao(97)
Implementation Path of Teacher-student Cooperation for WeChat Public Platform Based on RBL Mode—A Case Study of Principles of Chemical Engineering	Zhang Mingjue, Wang Ying, Liang Shuai, Xu Shuting, Wang Panpan(103)
Research on the Design of Curriculum Ideology and Politics Case in Principles of Chemical Engineer- ing: Taking the Instructional Design of Heat Transfer as an Example	Ding Jing, Wang Lei, Feng Nengjie, Du Wei, Guan Guofeng(110)
Teaching Reform in the Course of Chemical Engineering Technology under the Background of Emer- ging Engineering Education	Lu Yonghong, Su Baowei, Bian Junjie, Li Chunhu(115)
Research on the Reform of Basic Chemistry Teaching in Local Colleges	He Lixiang, Liang Qingxiang, Wu Aibin, Yang Caicai, Lai Lu(121)
Exploration of Sino-Foreign Joint Synchronous Classroom Teaching Mode under the Background of Cooperative Education—Take Mechanics of Materials as an Example	Su Yong, Perelygina Aleksandra, Gong Bin, Yu Sansan(127)
Construction and Practice of the Pharmaceutical Three-level Opening Experimental Platform of Multi- disciplinary and Combination of Science and Technology	Sun Zhongying, Ma Xiaosi, Xu Zhongyu, Liu Chaoyang, Zhou Xuan, Ma Lei(133)
Principle-driven Teaching Scheme Design on Experiment of Chemical Engineering Principle Based on Heuristic Method	Xu Wei, Wang Yao(138)
Exploration of Improving Students' Comprehensive Ability by the Professional Experiments—Taking the Experimental Teaching of Chemical Engineering Thermodynamics as an Example	Li Junying, Ma Feng, Yang Pengfei, Zhang Wenyu, Chen Minghui(144)
Construction and Implementation of Virtual Simulation Experiment for Comprehensive Heat Transfer of Nuclear Power System	Zhou Guoyan, Xing Gailan, Cao Jun, Zeng Liding(150)
The Chief Editor's Words	(1)