



ISSN1007- Q K 1 9 3 6 5 3 2

CN11-3775/G4

# 中国冶金教育

CHINA METALLURGICAL EDUCATION

■ 中国冶金教育学会 主办 (双月刊)

■ 会员风采 ■



## 山东工业职业学院60周年校庆

# 2019年第4期（总第193期）目录

2019年8月31日

## ◆ 教育教学改革

- “一核心、二融合、三平台、四结合”思政育人实践与探索..... 左海青 赵红军 朱玉茹 (1)
- 面向虚拟现实开发的立体化教学课程建设..... 周萍萍 (4)
- 信息化模式下的互换性与测量技术课程教学..... 史向坤 (7)
- “一带一路”背景下工科高职院校通用职业英语课程开发..... 张 浩 (9)
- 基于技能比赛的模具专业理实一体化教学..... 韩道刚 (11)
- CCPA与高职会计专业教学的融合 ..... 曹春红 (14)
- 基于无人机创客工作室模式的“双创”教育..... 王鹏飞 (16)
- 普通高校体育教学改革态势及推进策略..... 王世友 张海军 李淑娟 张丽艳 (18)
- 基于蓝墨云班课的土力学翻转课堂教学..... 李建强 刘洪滨 田雨泽 高华国 (21)
- 材料现代研究方法课程教学改革..... 祖国胤 高 飞 丁 桦 李英龙 唐正友 (24)
- 基于混合工作室制的工业设计人才培养..... 岳 涵 徐靖涵 (26)
- 基于研究应用型人才培养的材料力学性能课程教学.....  
..... 张洪亮 王赫男 国旭明 王艳晶 王继杰 沙桂英 李 壮 张 波 农智升 邓希光 (29)
- 提高冶金工程专业学生课堂教学参与度的探索..... 春铁军 狄瞻霞 龙红明 王 平 孟庆民 (31)
- 以学生为中心教学模式下的材料力学性能教学方法.....  
..... 李华冠 吕学鹏 李红丽 强新发 张传香 朱 鼎 (34)
- 基于“双一流”建设的专业型硕士校企联合培养机制.....  
..... 陈 栋 孙英杰 孙好芬 徐爱玲 张 峰 (37)
- 基于职业素养提升的课程体系建设..... 陈 宇 (39)
- 基于工程教育认证的冶金传输原理课程教学..... 朱光俊 杨艳华 许文林 曾 红 何 红 (42)
- “新工科”背景下建筑学专业建筑结构课程教学..... 贾传洋 (45)
- 城市地下空间规划课堂教学策略..... 李 亮 褚雪松 于广明 (48)
- 流体微团运动的数学和物理解析..... 雷 洪 (50)
- 地方高校招生选拔优质博士生对策..... 吴广良 周 瑜 (54)

传统优势非热门学科“新工科”建设	金爱兵 赵怡晴 姜琳婧	( 58 )
依托行业背景的工程硕士专业学位研究生教学案例库建设		
孙建春 曹献龙 邓洪达 王 刚 尹立孟 兰 伟 曹鹏军	( 62 )	
采矿工程专业导论课程构建研究	刘建兴	( 66 )
工程认证背景下铁冶金学课程考核方式改革	柳 浩 秦跃林 高绪东 高艳宏	( 69 )
非全日制研究生教育面临的问题与对策	杜绍帅 任 瑞 宋 蕊 胡真齐	( 74 )
工程教育专业认证与“新工科”建设背景下的特色专业发展	章小峰 杨 巍	( 77 )
课程教学过程中学生创新能力培养	苗淑杰 段成燕 刘财勇 齐建家 任忠先 王晓宏	( 83 )
高职冶金类专业人才网络化培养模式	白星良 李丙亮 王振光	( 85 )
手机摄影公选课教学	高天烨	( 87 )
协同创新视角下表面工程专业硕士研究生培养模式	孙 岩 陈 燕 韩 冰 谢志文	( 89 )

## ◆ 实验实习实训

虚拟仿真实训平台在建筑专业教学中的应用	毕莹莹	( 92 )
以创新驱动为牵引的OBE服务型工程训练教学	刘 翔 曹建华 夏绪辉 王 蕈	( 94 )
基于SPOC理念的服务型工程训练体系	曹建华 夏绪辉 王 蕖 刘 翔	( 97 )
有机化学实验教学中安全意识建立与习惯培养	朱珮珣 贾宏敏	( 101 )
流通商贸业与制造业融合发展背景下高职财经商贸专业群实践教学改革	谢 欣	( 104 )

## ◆ 学生培养培育

校园文化育人的思政价值及方法	宋振海	( 107 )
高职院校人文素养教育的重要性	郭连业 王亚力	( 110 )
技能型人才培养过程中共产主义信仰调查及对策	刘风霄	( 112 )

## ◆ 专家专题论坛

从工程师向高职教师角色的转变	孙华云 于乐海 李明晶	( 114 )
基于多元评价理念的高职院校学生就业影响实证研究	张伟华	( 117 )
振兴辽宁视阈下高校知联会建设的功能定位及实现路径	李双翼	( 121 )

# CHINA METALLURGICAL EDUCATION ( Bimonthly )

No.4, 2019  
August 31<sup>th</sup>, 2019

## ♦Education and Teaching Reform

- “One Core, Two Integration, Three Platforms, Four Integration” Practice and Exploration of Ideological Education ..... ZUO Haiqing, ZHAO Hongjun, ZHU Yuru (1)
- Three-Dimensional Teaching Curriculum Construction for Virtual Reality Development ..... ZHOU Pingping (4)
- Teaching of Exchangability and Measurement Technology Course Based on Information Teaching Model ..... SHI Xiangkun (7)
- On Common-Usage English Course Development in Industrial Vocational College in Background of Belt and Road Initiative ..... ZHANG Hao (9)
- Integrated Teaching of Theory and Practice in Mould Special ..... HAN Daogang (11)
- Integration of CCPA and Professional Accounting Teaching ..... CAO Chunhong (14)
- “Double Innovation” Education Based on Model of UAV Studio ..... WANG Pengfei (16)
- Basic Situational of P.E. Reform in Teaching Universities and its Advance Strategy ..... WANG Shiyou, ZHANG Haijun, LI Shujuan, ZHANG Liyan (18)
- Flipped Classroom Teaching Practice for Soil Mechanics Based on Mosoteach ..... LI Jianqiang, LIU Hongbin, TIAN Yuze, GAO Huaguo (21)
- Teaching Reform of Modern Research Methods of Materials ..... ZU Guoyin, GAO Fei, DING Hua, LI Yinglong, TANG Zhengyou (24)
- Training Mode of Industrial Design Talents Under Mixed Studio System ..... YUE Han, XU Jinghan (26)
- Course Teaching of Mechanical Properties of Materials Based on Cultivation of Research-Based Applied Talents ..... ZHANG Hongliang, WANG Henan, GUO Xuming, WANG Yanjing, WANG Jijie, SHA Guiying, LI Zhuang, ZHANG Bo, NONG Zhisheng, DENG Xiguang (29)
- Exploration of Improving Class Participation for Metallurgical Engineering Major Students ..... CHUN Tiejun, DI Zhanxia, LONG Hongming, WANG Ping, MENG Qingmin (31)
- Teaching Method of Mechanical Properties of Materials Under “Student-Centered” Teaching Mode ..... LI Huaguan, LV Xuepeng, LI Hongli, QIANG Xinfia, ZHANG Chuanxiang, ZHU Ding (34)
- Professional Master's School Enterprise Joint Training Mechanism Based on “Double First Class” Construction ..... CHEN Dong, SUN Yingjie, SUN Haofen, XU Ailing, ZHANG Feng (37)
- Construction of Curriculum System Based on Vocational Literacy Improvement ..... CHEN Yu (39)
- Course Teaching of Transfer Principles of Metallurgy in Based on Engineering Education Certification ..... ZHU Guangjun, YANG Yanhua, XU Wenlin, ZENG Hong, HE Hong (42)
- Architecture Course Teaching of Architecture Professional Under Background of New Engineering ..... JIA Chuanyang (45)
- Teaching Strategy for Urban Underground Space Planning Course ..... LI Liang, ZHU Xuesong, YU Guangming (48)
- Mathematical and Physical Analysis About Motion of Fluid Element ..... LEI Hong (50)
- Countermeasures for Local Universities to Recruit and Select High-Quality Doctoral Students ..... WU Guangliang, ZHOU Yu (54)
- Exploration of Emerging Engineering Education Construction of Non-Hot Traditional Predominant Disciplines ..... JIN Aibing, ZHAO Yiqing, JIANG Linjing (58)

Construction of Base-BASE Based on Industry Background for Professional Degree of Engineering Master .....	SUN Jianchun, CAO Xianlong, DENG Hongda, WANG Gang, YIN Limeng, LAN Wei, CAI Wei ( 62 )
Research on Construction of Introduction Course of Mining Engineering .....	LIU Jianxing ( 66 )
Reform of Examination Mode of Iron Metallurgy Course Under Background of Engineering Certification .....	LIU Hao, QIN Yuelin, GAO Xudong, GAO Yanhong ( 69 )
Problems and Countermeasures of Part-Time Postgraduate Education .....	DU Shaoyu, REN Rui, SONG Rei, HU Zhenqi ( 74 )
Characteristic Professional Development of Engineering Education Professional Certification and Construction of "New Engineering" .....	ZHANG Xiaofeng, YANG Yin ( 77 )
Innovation Capability Cultivating in Teaching .....	MIAO Shujie, DUAN Chengyan, LIU Chaiyong, QI Jianjia, REN Zhongxian, WANG Xiaohong ( 83 )
Talent Cultivation Mode by Network of Metallurgical Engineering in Higher Vocational Education .....	BAI Xingliang, LI Bingliang, WANG Chenguang ( 85 )
Course Teaching of Photography Mobile .....	GAO Tianye ( 87 )
Master's Training Mode of Surface Engineering Under Perspective of Collaborative Innovation .....	SUN Yan, CHEN Yan, HAN Bing, XIE Zhiwen ( 89 )

#### ♦Experimental Practice Training

Application of Virtual Simulation Training Platform in Teaching of Construction Specialty .....	BI Yingying ( 92 )
OBE Service-Oriented Engineering Training Teaching With Innovation Drive as Traction .....	LIU Xiang, CAO Jianhua, XIA Xuhui, WANG Lei ( 94 )
Service Engineering Training System Based on SPOC Concept .....	CAO Jianhua, XIA Xuhui, WANG Lei, LIU Xiang ( 97 )
Establishment of Safety Consciousness and Habit Cultivation in Experimental Teaching of Organic Chemistry .....	ZHU Peixun, JIA Hongmin ( 101 )
Reform of Practice Teaching at Majors-Group of Finance and Commerce in Context of Integration of Trade Business and Manufacturing Industry .....	XIE Xin ( 104 )

#### ♦Students Cultivation

Value and Methods of Governance of Campus Culture Education .....	SONG Zhenhai ( 107 )
Importance of Humanities Literacy Education in Higher Vocational Colleges .....	GUO Lianye, WANG Yali ( 110 )
Investigation and Constructive Way of Building Communist Belief in Process of Training Skilled Talents.....	LIU Fengxiao ( 112 )

#### ♦Expert Special Forum

From Engineer to Higher Vocational Teacher's Role Transformation .....	SUN Huayun, YU Le hai , LI Mingjing ( 114 )
Empirical Study on Employment Impact of Students in Higher Vocational Colleges Based on Theory of Multiple Evaluation .....	ZHANG Weihua ( 117 )
Function Orientation and Realization Path of Intellectual Fraternity of Universities Under Vision of Revitalizing Liaoning Province.....	LI Shuangyi ( 121 )



# 山东工业职业学院成果采撷

## 荣获2018年职业教育国家级教学成果奖

山东工业职业学院主持完成的《基于“技艺技能传承”的洁净钢冶炼专门人才培养创新与实践》教学成果,是在钢铁工业转型升级过程中,“工匠型”高技术技能人才紧缺的背景下,针对人才培养契合度不够、教学内容滞后、师资技能欠缺等问题,在省企校共建“洁净钢生产专业”的基础上,通过实施企校深度融合,独创了洁净钢专业“技艺技能传承式”人才培养新模式,实现了教育理念和实践的创新突破。该成果于2018年先后获得山东省职业教育教学成果一等奖、全国冶金职业教育教学成果特等奖和职业教育国家级教学成果二等奖。

## 示范带动国家级现代学徒制试点改革

山东工业职业学院是山东省唯一以冶金为特色的高职院校。学院以“技术引领,产教融合,协同育人”的改革理念为引导,紧密对接山东省新旧动能转化重大工程和钢铁产业转型升级对人才培养的新需求,优先选择与省内大型企业合作实施冶金技术、机械设备维修与管理、电气自动化等国家级现代学徒制专业试点,通过探索招生与招工一体化、深化工学结合人才培养模式改革,发挥高素质技术技能型人才在产业转型升级中的支撑作用,形成和推广政府引导、行业参与、社会支持、企业和职业院校双主体育人的中国特色现代学徒制。学院2017年获批教育部国家现代学徒制试点单位,连续2次获批山东省现代学徒制试点项目建设。

主管单位:中国钢铁工业协会  
主办单位:中国冶金教育学会  
主编:李福奇  
常务副主编:王庆厚  
副主编:王丽  
投稿邮箱:yjjyxh@sina.com  
万方数据

出版发行:《中国冶金教育》编辑部  
印刷单位:北京九州迅驰传媒文化有限公司  
出版时间:每双月月底  
发行范围:国内外公开发行  
封面设计:彭俊清  
刊号 ISSN1007-0958  
CN11-3775/G4



定 价: 16.00元