



“中国期刊网(CNKI)”全文收录期刊  
 《中国核心期刊(遴选)数据库》收录期刊  
 《中国学术期刊综合评价数据库》来源期刊  
 《中文科技期刊数据库》全文收录期刊  
 《中国学术期刊(光盘版)》全文收录期刊  
 美国《化学文摘》(CA)源刊  
 河北省优秀期刊

ISSN 2095-2716

华北理工大学

HUABEI LIGONG DAXUE XUEBAO ZIRANKEXUEBAN

(原河北联合大学学报·自然科学版)

JOURNAL OF  
 NORTH CHINA UNIVERSITY OF  
 SCIENCE AND TECHNOLOGY  
 NATURAL SCIENCE EDITION

自然科学版  
 学报

Vol.42 No.2  
 第42卷 第2期

2  
 2020

万方数据

# 华北理工大学学报 (自然科学版)

2020年第2期

第42卷第2期

(总第156期)

## 目 次

### 矿冶工程

- 含水煤升温氧化实验装置设计 ..... 张九零,王勇胜,孙清清,等(1)
- 球团矿矿相结构特征及其对冶金性能的影响 ..... 赵 喆,韩秀丽,刘 磊,等(7)
- 连铸机高拉速下钢液卷渣控制措施..... 薛月凯,田宝生,王杰文,等(14)
- 基于 AdaBoost 算法的高炉铁水含钒预测模型 ..... 李振铠,刘小杰,郝良元,等(20)
- 基于灰色关联度分析法的合金成本最优化..... 常锦才,马义茹,李菁月,等(29)
- 压缩式热泵安全运行模糊评判..... 王洪利,刘 楠(42)

### 材料、化工

- 金属材料凝固相转变规律测定装置 ..... 许建飞,王利双,麻永林(47)
- Fe-0.3C-6Mn 中锰钢热变形行为及热加工图研究 ..... 陈连生,闫博伟,李红斌,等(56)

### 建筑、环境

- 装配式建筑施工阶段绿色度评价 ..... 郑吉星,田杰芳,张 靖(67)
- 钢筋混凝土连续梁高温下的抗剪性能..... 齐建全,白胤领,杨志年,等(73)
- 城市抗震防灾能力评价指标体系和评价方法..... 韩 冰,倪国葳(80)
- HAZOP 分析在废气回收及二硫化碳罐区的应用 ..... 李建民,董宪伟,肖海娇,等(87)

### 机械、电子

- 小型光伏的风险评估方法与模型..... 石 磊,张福生,石军显,等(94)

基于 MATLAB 车网系统高频谐振分析 ..... 刘晓悦,王泰达(101)

数理科学、计算机

江苏省智慧旅游产业建设水平实证分析 ..... 张伟,刘慧香,杨世超,等(111)

基于 GIS 的学前教育资源均等化服务评价模型的应用分析——以唐山市区为例 ..... 任永强,李 婷(117)

唐山市休闲农业均衡性和聚集度演变情况研究 ..... 王奉林,郭力娜,叶 林(124)

企业在线文档管理系统设计与实现 ..... 周志成,柳 纲,杨宇峰,等(133)

---

期刊基本参数:CN13-1419/N \* 1979 \* q \* A4 \* 144 \* zh \* P \* ¥10.00 \* 600 \* 18 \* 2020-04

**JOURNAL OF NORTH CHINA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**(Natural Science Edition)**

No. 2 ,2020

No. 2 Vol. 42

(Sum ,156)

---

**CONTENTS**

**Mining Engineering and Metallurgical Engineering**

- Temperature-rise Oxidation Experimental Equipment Design For Water-bearing Coal .....  
..... ZHANG Jiu-ling , WANG Yong-sheng , SUN Qing-qing , etc (1)
- Structure of Pellet and Its Influence on Metallurgical Properties .....  
..... ZHAO Zhe , HAN Xiu-li , LIU Lei , etc (7)
- Control Measures of Slag Entrapment of Molten Steel at High Casting Speed .....  
..... XUE Yue-kai , TIAN Bao-sheng , WANG Jie-wen , etc (14)
- Prediction Model of Vanadium Containing Molten Iron in Blast Furnace Based on AdaBoost Algorithm  
..... LI Zhen-kai , LIU Xiao-jie , HAO Liang-yuan , etc (20)
- Alloy Cost Optimization Based on Grey Correlation Analysis .....  
..... CHANG Jin-cai , MA Yi-ru , LI Jing-yue , etc (29)
- Safe Operation of Solar Compression Heat Pump ..... WANG Hong-li , LIU Nan (42)

**Material and Chemical Engineering**

- Experimental Device for Measuring Solidification Phase Transformation Law of Metal Material .....  
..... XU Jian-fei , WANG Li-shuang , MA Yong-lin (47)
- Research on Hot Deformation Behavior of Fe-0.3C-6Mn Medium Manganese Steel .....  
..... CHEN Lian-sheng , YAN Bo-wei , LI Hong-bin , etc (56)

**Architectural Science and Environmental Science**

- Construction Stage of Prefabricated Buildings ..... ZHENG Ji-xing , TIAN Jie-fang , ZHANG Jing (67)
- Shear Behavior of Reinforced Concrete Continuous Beams under High Temperature .....  
..... QI Jian-quan , BAI Yin-ling , YANG Zhi-nian , etc (73)
- Evaluation Index System and Method of Urban Earthquake Resistance and Disaster Prevention Capacity  
..... HAN Bing , NI Guo-wei (80)

Application of HAZOP Analysis in Waste Gas Recovery and Carbon Disulfide Tank Area .....  
..... LI Jian-min, DONG Xian-wei ,XIAO Hai-jiao , etc(87)

### **Machinery and Electronics**

Risk Assessment Method and Model for Small Photovoltaics .....  
..... SHI Lei , ZHANG Fu-sheng ,SHI Jun-xian , etc (94)

Vehicle Network System High-Frequency Resonance Analysis Based on MATLAB .....  
..... LIU Xiao-yue,WANG Tai-da (101)

### **Mathematical Science and Computer**

Empirical Analysis on Construction Level of Intelligent Tourism Industry in Jiangsu Province .....  
..... ZHANG Wei , LIU Hui-xiang , YANG Shi-chao , etc (111)

Application Analysis of Preschool Education Resource Equalization Service Evaluation Model Based on GIS-Taking Tangshan City as Example ..... REN Yong-qiang , LI Ting (117)

Study on Evolution of Balance and Aggregation Degree of Leisure Agriculture in Tangshan City .....  
..... WANG Feng-lin , GUO Li-na ,YE Lin (124)

Design and Implementation of Enterprise Online Document Management System .....  
..... ZHOU Zhi-cheng , LIU Gang , YANG Yu-feng , etc (133)