

ISSN 1672-7169  
CN 11-5188/N

# 华北科技大学

学报

JOURNAL OF NORTH CHINA INSTITUTE OF  
SCIENCE AND TECHNOLOGY

第18卷 第1期  
Vol. 18 No. 1

中国期刊网(CNKI)全文收录期刊  
中国学术期刊综合评价数据库来源期刊  
万方数据——数字化期刊群入网期刊  
中国核心期刊(遴选)数据库期刊

万方数据

2021 1  
北京东燕郊

**JOURNAL OF NORTH CHINA INSTITUTE  
OF SCIENCE AND TECHNOLOGY**

**Feb. 2021**

**Vol. 18 No. 1**

**(Feb. No. 89)**

- Preparation of sodium aluminate from the leaching solution of high alumina fly ash by hydrothermal method ..... YANG Quancheng, DU Zhengyu, ZHANG Kaiyong, et al. (1)
- Research on hydraulic fracturing pressure relief technology of hard coal and rock mass in Ningdong mining area ..... LV Zhaozhai, HUANG Haipeng, YANG Haobo, et al. (9)
- Research on optical fiber communication control system based on mine electrical equipment ..... ZHANG Quanzhu, GUO Haibing, DENG Yonghong(15)
- Study on the relationship between microseismic monitoring data and water inflow of working face in Tingnan coal mine ..... YANG Yi, MENG Lu(22)
- First-principles study on optical properties and electronic structure of doped CeO<sub>2</sub> ..... LI Xu, SHEN Jiaxin, ZHENG Haoran(30)
- Research on the first-level standardization construction method of mine ventilation major ..... MA Chenyang, XU Jingde(35)
- Research on comprehensive evaluation of reliability of in service propane spherical tanks in petrochemical enterprises ..... TANG Jialin(40)
- Analysis of ultimate bearing capacity of purely clay foundation based on random field theory ..... ZHAO Shaofei, HU Xinyu, XING Mingyuan, BAO Junwen(48)
- Construction technology application of the tunnel form buildings in Oran house construction project ..... ZHANG Qiang(53)
- Numerical simulation analysis of the mechanical performance of cable-stayed bridges with crossing pipes ..... FAN Zisheng, PAN Yu(58)
- Finite element analysis of slope reliability based on LHS sampling ..... CAO Wei, LI Wenjing, YI Haiyang, et al. (66)
- Construction technology of super large "Y" curved surface fair faced concrete column ..... NI Xiuquan, CHEN Dongdong(73)
- Analysis of knowledge map of coal mine safety risk identification based on CiteSpace ..... JIANG Tingting, SHENG Wu(81)
- Research on the effect of elevator parking floor on safety evacuation of high-rise buildings under dual channel ..... MA Hui, FAN Huili(91)
- Design and implementation of intelligent traffic system based on internet of things ..... XU Huafen, YUAN Jiangting, MENG Guangxue(96)
- Research on the promoting path of the safe production legal system from the perspective of the overall security concept ..... BU Su(101)
- Analysis on the talents cultivation mode of emergency science and technology in all disaster emergency era ..... SI Junhong, WANG Yiqiao(109)
- Organization and operation mechanism of "safety lecture hall": a case study of tobacco industry ..... LIU Guoyu, CHEN Zhihui, ZHANG Jinggang, et al. (114)
- Research on current situation and development of countermeasures of dual control mechanism construction in local universities ..... JIANG Shuping, ZHAO Liyan, WANG Erqing, CUI Xingkai(119)

## 目 次

高铝粉煤灰水热法提铝浸出液制备铝酸钠

研究 ..... 杨权成, 杜振毓, 张开永, 石常省, 夏煜琪, 孙 贺(1)

宁东矿区坚硬煤岩体顶板水力压裂卸压技术

研究 ..... 吕兆海, 黄海鹏, 杨皓博, 魏启明, 苑振山, 辛广伟, 岳晓军(9)

基于矿用电气装备的光纤通信控制系统研究 ..... 张全柱, 郭海兵, 邓永红(15)

亭南煤矿微震监测数据与工作面涌水量关系研究 ..... 杨 艺, 孟 璐(22)

掺杂 CeO<sub>2</sub> 光学性质和电子结构的第一性原理研究 ..... 李 旭, 申家欣, 郑浩然(30)

矿井通风专业一级标准化建设方法研究 ..... 马晨阳, 徐景德(35)

石油化工企业在役丙烷球罐可靠性综合评估研究 ..... 唐佳林(40)

基于随机场理论的纯黏土地基极限承载力

分析 ..... 赵少飞, 胡欣宇, 邢明源, 鲍俊文(48)

奥兰房建项目中隧道模板施工技术应用 ..... 张 强(53)

过桥管道的斜拉桥全桥受力性能数值模拟分析 ..... 范自盛, 潘 瑜(58)

基于 LHS 抽样的边坡可靠度有限元

分析 ..... 曹 伟, 李文静, 易海洋, 王野驰, 张红芬(66)

超大“Y”型曲面清水混凝土柱施工工艺 ..... 倪修全,陈东东(73)

基于 CiteSpace 的煤矿安全风险识别知识图谱分析 ..... 江婷婷,盛 武(81)

双通道下电梯停靠层对高层建筑安全疏散影响研究 ..... 马 辉,樊慧丽(91)

基于物联网的智能交通系统设计与实现 ..... 徐花芬,袁江婷,孟广学(96)

总体国家安全观视域下安全生产法律体系的推进路径研究 ..... 卜 素(101)

全灾种大应急时代背景下应急科技人才培养模式探析 ..... 司俊鸿,王乙桥(109)

“安全大讲堂”组织及运行机制：

烟草行业为例 ..... 刘国愈,陈志辉,张景钢,赵淑枫,郭婷婷(114)

地方高校双控机制建设现状与发展对策

研究 ..... 江书平,赵连云,王二青,崔兴凯(119)