

工程科学学报

第 46 卷

第 1 期

总第 357 期

2024 年 1 月

目 次

矿业工程

- 考虑岩体性质空间变异的岩爆倾向性概率评估 刘加柱, 高永涛, 吴顺川, 吴忠广, 李光全, 李在利(1)
脉冲泵压环境膏体水分迁移转化与流变行为数值推演 夏志远, 程海勇, 吴顺川, 姜关照, 刘津, 孙伟, 刘泽民(11)
激光诱导击穿光谱技术在提高矿冶分析准确度的研究进展 毛小晶, 史烨弘, 蒿丽君, 李华昌, 刘杰民(23)

冶金工程·材料科学与工程

- 锌冶炼副产物制备硫化锌吸附剂脱除气态汞的研究 阮泽晟, 王齐涛, 韩先翔, 陈志康, 张志恒, 王瑞祥, 张忠堂, 徐志峰, 刘志楼(33)
WO₃水合物在光催化领域的应用与研究进展 张方圆, 韩伟光, 张雪, 孙彦东, 张子琪, 郭盛祺(44)
可充放锌空电池用过渡金属氧化物双功能催化剂研究进展 刘渐芳, 赵勇智, 王永, 刘莺, 刘思佳, 秦运璞, 吴昊阳, 张德印, 贾宝瑞, 曲选辉, 秦明礼(56)
锂离子电池隔膜物理及电化学性能评价及对比 杨润杰, 卢婷婷, 张家靓, 吴泽港, 于国庆, 刘风琴, 胡韬, 赵洪亮(73)
锂离子电池负极材料 ZnSnO₃/C 复合物的制备与性能 岳红伟, 邢若冰, 耿壮壮, 铁伟伟, 朱聪旭, 谢文合, 陈淑君(81)

- PAM 基复合水凝胶电解质的制备及其在 Zn-MnO₂ 电池中的应用 季善果, 袁鲁宁, 徐加虎, 秦硕, 胡媛媛, 于鸿达, 杨凯(89)

- 废旧锂电池电极材料浮选行为及表面性质 赵光金, 谷昆泓, 夏大伟, 胡玉霞, 陈玲玲, 覃文庆, 韩俊伟(97)

信息工程·控制科学与工程

- 合同文本置标语言 CTML: 一种面向智能法律合约的法律信息规范化提取方法 范雨晴, 王迪, 林鸿杰, 陈娥, 何啸, 朱岩(109)
机器学习在金属材料服役性能预测中的应用 李丰范, 匡健隆, 季佳浩, 商春磊, 吴宏辉, 汪水泽, 毛新平(120)
DFA-ODENets: 面向周期多阶段复杂系统的预测仿真框架 李潇睿, 宁春宇, 袁兆麟, 班晓娟(137)
基于 6D 位姿识别面向任意物体的智能人-机协同递送 张树忠, 朱祺, 张弓, 陈旭飞, 杨根, 吴月玉, 齐春雨, 邸思(148)
基于障碍函数内点法的防御武器配系部署建模与智能优化 宋晓程, 李陟, 陈鹏飞, 张坤, 邹尧, 贺威(157)

能源工程·环境工程

- Gappy POD 算法重构储能电池组核心温度及与 BP 神经网络预测能力对比 苑清扬, 薛珂, 张博, 兰天(166)
基于 FCM-LSTM 的光热发电出力短期预测 刘振路, 郭军红, 李薇, 贾宏涛, 陈卓(178)

CHINESE JOURNAL OF ENGINEERING

Vol. 46 No. 1 Sum 357 January 2024

CONTENTS

Mine Engineering

- Probability evaluation of rockburst tendency considering the spatial variation in rock mass properties LIU Jiazhui, GAO Yongtao, WU Shunchuan, WU Zhongguang, LI Guangquan, LI Zaili(1)
Migration and transformation of water in paste and numerical deduction of its rheological behavior under pulse pumping environment XIA Zhiyuan, CHENG Haiyong, WU Shunchuan, JIANG Guanzhao, LIU Jin, SUN Wei, LIU Zemin(11)
Research progress on laser-induced breakdown spectroscopy for improving the accuracy of mining and metallurgical analysis MAO Xiaojing, SHI Yehong, KUAI Lijun, LI Huachang, LIU Jiemin(23)

Metallurgical Engineering, Materials Science and Engineering

- Removal of gaseous mercury by ZnS adsorbent prepared from zinc smelter byproducts RUAN Zesheng, WANG Qitao, HAN Xianxiang, CHEN Zhikang, ZHANG Zhiheng, WANG Ruixiang, ZHANG Zhongtang, XU Zhifeng, LIU Zhilou(33)
Application and research progress of WO_3 hydrate in the field of photocatalysis ZHANG Fangyuan, HAN Weiguang, ZHANG Xue, SUN Yandong, ZHANG Ziqi, GUO Shengqi(44)
Advancements in the study of transition metal oxide bifunctional catalysts for rechargeable zinc-air batteries LIU Jianfang, ZHAO Yongzhi, WANG Yong, LIU Luan, LIU Sijia, QIN Yunpu, WU Haoyang, ZHANG Deyin, JIA Baorui, QU Xuanhui, QIN Mingli(56)
Evaluation and comparison of the physical and electrochemical properties of lithium-ion battery separators YANG Runjie, LU Tingting, ZHANG Jialiang, WU Zegang, YU Guoqing, LIU Fengqin, HU Tao, ZHAO Hongliang(73)
Synthesis and performance of ZnSnO_3/C composites as anode for lithium-ion battery YUE Hongwei, XING Ruobing, GENG Zhuangzhuang, TIE Weiwei, ZHU Congxu, XIE Wenhe, CHEN Shujun(81)
Preparation and application of PAM-based composite hydrogel electrolyte in $\text{Zn}-\text{MnO}_2$ battery JI Shanguo, YUAN Luning, XU Jiahua, QIN Shuo, HU Yuanyuan, YU Hongda, YANG Kai(89)
Flotation behavior and surface properties of spent lithium-ion battery electrode materials ZHAO Guangjin, GU Kunhong, XIA Dawei, HU Yuxia, CHEN Lingling, QIN Wenqing, HAN Junwei(97)

Information Engineering, Control Science and Engineering

- Contract text markup language: A regularization method for extracting legal elements towards smart contracts FAN Yuqing, WANG Di, LIN Hongjie, CHEN E, HE Xiao, ZHU Yan(109)
Application of machine learning for predicting the service performance of metallic materials LI Fengfan, KUANG Jianlong, JI Jiahao, SHANG Chunlei, WU Honghui, WANG Shuize, MAO Xinping(120)
DFA-ODENets: Research on predictive simulation framework for periodic multistage complex systems LI Xiaorui, NING Chunyu, YUAN Zhaolin, BAN Xiaojuan(137)
Intelligent human–robot collaborative handover system for arbitrary objects based on 6D pose recognition ZHANG Shuzhong, ZHU Qi, ZHANG Gong, CHEN Xufei, YANG Gen, WU Yueyu, QI Chunyu, DI Si(148)
Modeling and intelligent optimization of the deployment system of defensive weapons based on the interior point method with barrier functions SONG Xiaocheng, LI Zhi, CHEN Pengfei, ZHANG Kun, ZOU Yao, HE Wei(157)

Energy Engineering, and Environmental Engineering

- Gappy POD algorithm for reconstructing the core temperature of energy-storage battery packs and its comparison with BP neural network prediction ability YUAN Qingyang, XUE Ke, ZHANG Bo, LAN Tian(166)
Short-term prediction of concentrating solar power based on FCM–LSTM LIU Zhenlu, GUO Junhong, LI Wei, JIA Hongtao, CHEN Zhuo(178)