



ISSN 1000-1964
CODEN ZKDXER

中国矿业大学

JOURNAL OF
CHINA UNIVERSITY OF
MINING & TECHNOLOGY

学报

2017年9月 第5期 第46卷

5
2017

百种中国杰出学术期刊
国家新闻出版广电总局“百强报刊”
中国国际影响力优秀学术期刊
中国高校杰出科技期刊
万方数据

ZHONGGUO KUANGYE DAXUE XUEBAO

中国矿业大学学报
2017年第46卷第5期

目次

煤嵌布结构模型理论 (939) 秦志宏
切顶卸压沿空留巷围岩结构控制及其工程应用 (959) 何满潮, 陈上元, 郭志飏, 杨军, 高玉兵
深部巷道围岩控制的关键技术研究 (970) 侯朝炯
煤炭自然发火的介尺度现象分析及建模 (979) 梁运涛, 王树刚, 林琦, 宋双林, 申宝宏, 田富超
煤矿工作面先验约束加奇点模型 CT 重构方法研究 (988) 杨真, 武祥, 姚文理, 郭昌放
矿井火区封闭进程中瓦斯爆炸危险性的数值模拟分析 (997) 时国庆, 周涛, 刘茂喜, 王雁鸣
冲击破坏过程微震波形多重分形及其时变响应特征 (1007) 李楠, 李保林, 陈栋, 孙炜辰
综掘面径向分风与压风配比对风幕阻尘的影响 (1014) 程卫民, 王昊, 孙彪, 马有营
围岩孔裂隙充水承压爆破过程分析 (1024) 杨敬轩, 刘长友, 于斌
柱状煤芯瓦斯扩散模型与扩散特征实验研究 (1033) 李志强, 成墙, 刘彦伟, 段正鹏, 宋党育
平煤超千米深井采动应力特征及裂隙演化规律研究 (1041) 张建国
三轴加-卸载下分层充填体能耗及损伤特性 (1050) 宋卫东, 汪杰, 谭玉叶, 曹帅
承压颗粒煤逐级加载下渗透特性实验研究 (1058) 褚廷湘, 姜德义, 余明高
考虑冻融效应的岩石损伤统计强度准则研究 (1066) 张慧梅, 彭川, 杨更社, 叶万军, 申艳军, 刘慧
含一组贯通节理岩体强度的各向异性分析 (1073) 韩智铭, 乔春生, 涂洪亮
储层成岩数值模拟研究现状及进展 (1084) 林承焰, 王文广, 董春梅, 张宪国, 任丽华, 史祥锋
古近系湖相碳酸盐岩储集特征与含油性分析 (1102) 黄成刚, 王建功, 吴丽荣, 倪祥龙, 杨森, 吴梁宇
青东凹陷油气成藏条件再认识 (1116) 王永诗, 杨贵丽, 张顺
疏松砂岩稠油层油水赋存特征及识别 (1126) 耿斌, 蔡进功, 王端平, 闫建平, 周德志, 程紫燕, 酆绍献
巫溪地区五峰组-龙马溪组页岩有机质沉积模式 (1134) 邱振, 江增光, 董大忠, 施振生, 卢斌, 谈昕, 周杰, 雷丹凤, 梁萍萍, 韦恒叶
鄂东致密气水下分流河道复合体储层构型布井技术 (1144) 刘群明, 唐海发, 吕志凯, 李雪峰, 董海超
附加约束的三维基准转换的高斯-赫尔默特模型 (1152) 林鹏, 刘超, 高井祥, 姚一飞
基于 D-InSAR LOS 向变形的开采沉陷预计参数反演方法研究 (1159) 王磊, 张鲜妮, 陈元非, 查剑锋
微震监测中最优一致性时间同步算法研究 (1166) 赵小虎, 胡东平, 李治, 有鹏
基于烟花算法的煤矿工作面 VLC 光源高度优化 (1174) 游春霞, 张申, 张然, 马勇, 胡青松

Contents

Theory of coal embedded structure model	QIN Zhihong	(939)
Control of surrounding rock structure for gob-side entry retaining by cutting roof to release pressure and its engineering application	HE Manchao, CHEN Shangyuan, GUO Zhibiao, YANG Jun, GAO Yubing	(959)
Key technologies for surrounding rock control in deep roadway	HOU Chaojiong	(970)
Analysis and modeling of mesoscale phenomenon on coal spontaneous combustion	LIANG Yuntao, WANG Shugang, LIN Qi, SONG Shuanglin, SHEN Baohong, TIAN Fuchao	(979)
Research on CT inversion adopting prior constraints and singularity model for a longwall panel	YANG Zhen, WU Xiang, YAO Wenli, GUO Changfang	(988)
Numerical analysis on methane explosion hazard during the process of fire zone sealing in coal mine	SHI Guoqing, ZHOU Tao, LIU Maoxi, WANG Yanming	(997)
Multi-fractal and time-varying response characteristics of microseismic waves during the rockburst process	LI Nan, LI Baolin, CHEN Dong, SUN Weichen	(1007)
Effects of ratio of radial partial air volume to pressure air volume on air curtain dust control at fully mechanized working face	CHENG Weimin, WANG Hao, SUN Biao, MA Youying	(1014)
Blasting process analysis of confined water filled in surrounding rock pores and fissures	YANG Jingxuan, LIU Changyou, YU Bin	(1024)
Research on gas diffusion model and experimental diffusion characteristic of cylindrical coal	LI Zhiqiang, CHENG Qiang, LIU Yanwei, DUAN Zhengpeng, SONG Dangyu	(1033)
Mining-induced stress characteristics and fracture evolution law of over one kilometer deep Pingdingshan coal mine	ZHANG Jianguo	(1041)
Energy consumption and damage characteristics of stratified backfill under triaxial loading and unloading	SONG Weidong, WANG Jie, TAN Yuye, CAO Shuai	(1050)
Experimental study of the seepage properties of the compacted particle coal under gradual loading	CHU Tingxiang, JIANG Deyi, YU Minggao	(1058)
Study of damage statistical strength criterion of rock considering the effect of freezing and thawing	ZHANG Huimei, PENG Chuan, YANG Gengshe, YE Wanjun, SHENG Yanjun, LIU Hui	(1066)
Analysis of strength anisotropy of rock mass with a set of persistent joints	HAN Zhiming, QIAO Chunsheng, TU Hongliang	(1073)
State quo of reservoir diagenetic numerical simulation and its advancement	LIN Chengyan, WANG Wenguang, DONG Chunmei, ZHANG Xianguo, REN Lihua, SHI Xiangfeng	(1084)
Characteristics of Paleogene lacustrine carbonate reservoirs and oil-bearing property analysis: A case study of the Yingxi area of western Qaidam basin	HUANG Chenggang, WANG Jiangong, WU Lirong, NI Xianglong, YANG Sen, WU Liangyu	(1102)
Further recognition of the oil and gas accumulation conditions of Qingdong sag	WANG Yongshi, YANG Guili, ZHANG Shun	(1116)
Characteristics and recognition of existing states of oil and water in unconsolidated sandstone heavy oil layer: A case study of the heavy oil reservoir of Guantao formation in Zhanhua sag of Jiyang depression	GENG Bin, CAI Jingong, WANG Duanping, YAN Jianping, ZHOU Dezhi, CHENG Ziyang, BING Shaoxian	(1126)
Organic matter enrichment model of the shale in Wufeng-Longmachi formation of Wuxi area	QIU Zhen, JIANG Zengguang, DONG Dazhong, SHI Zhensheng, LU Bin, TAN Xin, ZHOU Jie, LEI Danfeng, LIANG Pingping, WEI Hengye	(1134)
Well deployment technique for composite subwater distributary channel sand body reservoir architecture of Edong tight gas	LIU Qunming, TANG Haifa, LÜ Zhikai, LI Xuefeng, DONG Haichao	(1144)
Three-dimensional datum transformation based on Gauss-Helmet model with constraints	LIN Peng, LIU Chao, GAO Jingxiang, YAO Yifei	(1152)
Method of mining subsidence prediction parameters inversion based on D-InSAR LOS deformation	WANG Lei, ZHANG Xianni, CHEN Yuanfei, ZHA Jianfeng	(1159)
Optimized consensus time synchronization for microseismic monitoring	ZHAO Xiaohu, HU Dongping, LI Zhi, YOU Peng	(1166)
Light source altitude optimization in coalface visible light communications based on the fireworks algorithm	YOU Chunxia, ZHANG Shen, ZHANG Ran, MA Yong, HU Qingsong	(1174)

校名题字 邓小平

本刊为

中文核心期刊

《中国科学引文数据库》(CSCD) 源刊

中国科技论文统计源期刊(CSTPCD)

《工程索引》(Ei Compendex) 收录期刊

俄罗斯《文摘杂志》(AJ) 收录期刊

美国《化学文摘》(CA)、《剑桥科学文摘》(CSA) 收录期刊

英国《煤文摘》(Coal Abstracts)、《煤文精选》(CH) 收录期刊

中国矿业大学
学报

ZHONGGUO KUANGYE DAXUE XUEBAO

(双月刊, 1955年创刊)

第46卷 第5期 (总第218期) 2017年9月

Journal of China University of
Mining & Technology

(Bimonthly, Started in 1955)

Vol.46 No.5(Series No.218) Sep.2017

主管单位 中华人民共和国教育部

主办单位 中国矿业大学

编辑出版 中国矿业大学学报编辑部
(江苏徐州 221008)

主 编 骆振福

印 刷 中矿大印发科技有限公司

订 阅 全国邮局 邮发代号 28-73

国外发行 中国出版对外贸易总公司
(北京 782 信箱)

Administrated by Ministry of Education, P.R.China

Sponsored by China University of Mining & Technology

Edited and Published by Editorial Board of Journal of CUMT
(Xuzhou, Jiangsu 221008)

Editor in Chief LUO Zhenfu

Distributed by China Publication Foreign Trading
Corporation (P.O.Box 782, Beijing, China)



中国标准连续出版物号: ISSN 1000-1964
CN 32-1152/TD

定价: 30.00元

<http://zgkd.chinajournal.net.cn>
<http://xb.cumt.edu.cn>
E-mail: journal@cumt.edu.cn

ISSN 1000-1964



9 771000 196178