

矿冶工程

KUANGYE GONGCHENG

双月刊 公开发行 1981年创刊
第38卷 第2期(总第180期)

主管单位: 长沙矿冶研究院有限责任公司
主办单位: 长沙矿冶研究院有限责任公司
中国金属学会
协办单位: 国家金属矿产资源整合
利用工程技术研究中心
编辑出版: 矿冶工程杂志(长沙)有限公司

《矿冶工程》杂志编委会

编委主任: 李茂林

国内编委: (按姓氏笔画排序)

习小明	干勇	毛桂庭	王天义
冯夏庭	古德生	左铁镛	刘宝琛
刘炯天	孙传尧	孙伟	朴东鹤
阳宁	何发钰	何继善	余永富
吴冲许	张覃	张一敏	张国旺
张新明	李茂林	杜维吾	杨斌
杨应亮	肖可颂	邱冠周	陈雯
周廉	周克崧	金展鹏	桂卫华
翁宇庆	盛忠杰	黄白云	黄健柏
黄晓燕	曾维勇	蒋开喜	覃事彪
谢建国	雷平喜	薛生晖	

国际编委: (按姓名字母排序)

Andy Fourie(澳大利亚)
Dongke Zhang(澳大利亚)
Jan Dean Miller(美国)
Ugur Ozbay(美国)
Zhanghe Xu(徐政和)(加拿大)

《矿冶工程》杂志编辑部

主 编: 曾维勇
副 主 编: 刘洪萍
编 辑: 黄小芳 周 杨

地址: 湖南省长沙市麓山南路966号
电话: (0731)88657070, 88657176, 88657173
传真: (0731)88657186
邮编: 410012
网址: <http://www.kygc.net>
E-mail: kuangyegongchengzz@163.com

印刷者: 湖南竭诚印务有限公司
国内发行: 湖南省长沙市报刊发行局
国内订购: 全国各地邮局
国外发行: 中国国际图书贸易总公司
(北京399信箱)

国内邮发代号: 42—58

国外邮发代号: Q4212

刊 号: ISSN 0253-6099
CN43-1104/TD

出版日期: 2018年4月

广告经营许可证: 长广发登第007号

国内定价: 20.00元

万方数据

目 次

采 矿

超细粒级浸出渣絮凝沉降特性试验研究

..... 史秀志, 陈 飞, 卢二伟, 杨 超, 周 健(1)

基于集对分析的公路隧道施工安全风险评价 何忠明, 刘 可, 付宏渊(6)

深海采矿系统软管段输送阻力损失研究 姚妮均, 曹 斌, 夏建新(10)

爆破振动主振频带随传播距离的变化规律研究 陈 冠, 李启月, 李 易(15)

基于正交设计的类铀矿岩相似材料配合比试验研究

..... 蒋复量, 张 帅, 李向阳, 洪昌寿, 黎 明, 杨文超(20)

地下矿山采场结构参数的核主成分分析法优化

..... 胡建华, 任启帆, 黄仁东, 习智琴(25)

金属矿山深部出水巷道收敛变形处理实践 郑 璐, 竭宏亮, 钱国媛(30)

选 矿

油酸钠作用下磁铁矿与硫化矿物间异相聚团研究

..... 欧阳超, 卢毅屏, 冯其明, 石 晴(34)

某高砷含碳低品位难选金矿浮选试验研究

..... 姚兰星, 王毓华, 何建璋, 马永义, 卢东方(38)

黔西南某微细浸染型金矿浮选提金探索研究 谢虹忆, 黄小芬, 程 伟(43)

十二胺反浮选胶磷矿的消泡机理研究 纪 斌, 孙 伟, 王若林(47)

国外某褐铁矿预洗矿-磁化焙烧-弱磁选工艺研究 解 琳(51)

钢厂粉煤灰中回收碳和铁的试验研究

..... 杨大兵, 王 帅, 甘 杰, 邹 冲, 杨开陆(55)

内蒙古某磁选铁精矿浮选脱硫试验研究

..... 赵 璐, 葛英勇, 余 俊, 刘 鹏, 朱国庆(58)

2,3-二羟丙基二硫代碳酸钠在西藏柯月铜铅锌矿的浮选应用研究

..... 丁大森(61)

从某氰化尾渣中回收金的研究 喻明军, 焦 芬(66)

冶 金

地球化学软件 PHREEQC 在湿法冶金计算热力学中的应用 黄少波(70)

新型胺类萃取剂 N1633 萃取钨的研究

..... 李嘉豪, 曹佐英, 李 嘉, 张贵清, 肖连生, 李青刚(74)

半焦作为烧结燃料的特性实验研究

..... 杨双平, 王 琛, 杨 波, 魏起书, 王玖宏(79)

电解锰渣碱浸提硅工艺及动力学研究 邹 琴, 刘海燕, 谢华磊(83)

选择性沉淀法从粗硫酸镍溶液中回收铜

..... 郭建辉, 董 波, 张献鹏, 叶逢春, 王红军, 纪宏巍, 邱士伟(88)

山东某硫铁矿烧渣非氰浸金-浸渣磁选回收铁工艺研究

..... 傅开彬, 徐 信, 汤鹏成, 秦天邦, 焦 宇(91)

南非钒钛磁铁矿流化床直接还原实验研究 彭 宁, 邱朝阳(95)

从铅冰铜中高效选择性提取铜的工艺研究

..... 蒋朝金, 谢兆凤, 蒋兆慧, 黄前军, 覃小龙, 谭代娣, 李家元(99)

铜渣球团还原-熔分工艺试验研究 孙志杰, 魏 国, 刘占华, 曹志成(103)

100 m³/h 重金属废水处理系统的提质改造设计与实践 宾婵婵(107)

材 料

机械合金化+热压制备 Laves 相 TaCr₂ 合金的物相演变及热力学分析

..... 姚 敬, 鲁世强, 肖 璇, 邓莉萍(110)

负载脂肪酸基相变材料硅藻土的热性能研究

..... 戴 磊, 许向阳, 刘天豪, 魏珊珊(114)

Cl⁻对铜在压延铜箔上的电结晶行为及其组织形貌的影响

..... 朱思哲, 谭澄宇, 刘 晨, 王芝秀(119)

LaB₆@SiO₂/Ag 纳米材料的制备及光催化性能 汤洪波, 周 健, 苏玉长(124)

热处理温度对 Al₂O₃ 表面修饰 LiNi_{0.9}Co_{0.1}O₂ 正极材料电化学性能的影响

..... 李伟伟(128)

MINING AND METALLURGICAL ENGINEERING

(Bimonthly, Started in 1981)

Vol.38 No2 (Sum 180) April 2018

Responsible by

Changsha Research Institute of
Mining and Metallurgy Co Ltd

Sponsored by

Changsha Research Institute of
Mining and Metallurgy Co Ltd,
The Chinese Society for Metals

Assisted by

National Engineering Technology
Research Centre for
Multipurpose Utilization of
Metallic Mineral Resources

Edited and Published by

Mining & Metallurgical Engineering
Journal Publication (Changsha) Co Ltd

Chief Editor: ZENG Wei-yong

Deputy Editor: LIU Hong-ping

Editor: HUANG Xiao-fang, ZHOU Yang

Address: No966, Lushan South Road,

Changsha 410012, Hunan, PRC

Tel: (0731)88657070, 88657176, 88657173

Fax: (0731)88657186

Website: www.kygc.net

E-mail: kuangyegongchengzz@163.com

Distributed by China International

Book Trading Corporation

(P.O.Box 399, Beijing, PRC)

International Distribution Code: Q4212

Publication Code: ISSN 0253-6099
CN43-1104/TD

万方数据

CONTENTS

MINING

- Experimental Study on Sedimentation Characteristics of Ultrafine Leach Residue after Flocculation
..... SHI Xiu-zhi, CHEN Fei, LU Er-wei, YANG Chao, ZHOU Jian(1)
- Safety Risk Assessment for Highway Tunnel Construction Based on Set Pair Analysis
..... HE Zhong-ming, LIU Ke, FU Hong-yuan(6)
- Pressure Loss of Flexible Hose in Deep-sea Mining System ... YAO Ni-jun, CAO Bin, XIA Jian-xin(10)
- Rule for Dominant Frequency Band of Blasting Vibration Varying with Propagation Distance
..... CHEN Guan, LI Qi-yue, LI Yi(15)
- Experimental Study on Materials Blending Proportion for Preparation of Simulated Uranium Ore Based on Orthogonal Design
... JIANG Fu-liang, ZHANG Shuai, LI Xiang-yang, HONG Chang-shou, LI Ming, YANG Wen-chao(20)
- Optimization of Structural Parameters of Stope in Underground Mine with Kernel Principal Component Analysis
..... HU Jian-hua, REN Qi-fan, HUANG Ren-dong, XI Zhi-qin(25)
- Practice of Convergent Deformation Treatment for Deep Water Tunnel in Metal Mine
..... ZHENG Lu, JIE Hong-liang, QIAN Guo-yuan(30)

MINERAL PROCESSING

- Sodium Oleate Induced Heterogeneous Agglomeration of Magnetite and Sulfide Minerals
..... OUYANG Chao, LU Yi-ping, FENG Qi-ming, SHI Qing(34)
- Flotation of Lean Refractory Gold Ore with High Content of Arsenic and Carbon
..... YAO Lan-xing, WANG Yu-hua, HE Jian-zhang, MA Yong-yi, LU Dong-fang(38)
- An Exploration in Flotation of Fine Disseminated Gold Ores in Southwestern Guizhou
..... XIE Hong-yi, HUANG Xiao-fen, CHENG Wei(43)
- Defoaming Mechanism in Reverse Flotation of Collophanite Using Dodecyl Amine
..... JI Bin, SUN Wei, WANG Ruo-lin(47)
- Beneficiation of Limonite Ore from Abroad Using Prewashing-Magnetic Roasting-LIMS Flowsheet
..... XIE Lin(51)
- Experimental Study on Recovery of Carbon and Iron from Fly Ash of Steel Mills
..... YANG Da-bing, WANG Shuai, GAN Jie, ZOU Chong, YANG Kai-lu(55)
- Flotation for Desulfurization of Iron Concentrate from Magnetic Separation Operation of a Concentrator in Inner Mongolia ZHAO Lu, GE Ying-yong, YU Jun, LIU Peng, ZHU Guo-qing(58)
- Application of Sodium 2,3-dihydroxypropyl Dithiocarbonate in Flotation of Keyue Copper-lead-zinc Ore
..... DING Da-sen(61)
- Experimental Research on Recycling Gold from Cyanide Residue YU Ming-jun, JIAO Fen(66)

METALLURGY

- Application of Geochemical Software PHREEQC in Computation of Thermodynamics in Hydrometallurgy
..... HUANG Shao-bo(70)
- Extraction of Tungsten by A New Amine Extractant N1633
..... LI Jia-hao, CAO Zuo-ying, LI Jia, ZHANG Gui-qing, XIAO Lian-sheng, LI Qing-gang(74)
- Experimental Research on Characteristics of Semi-coke as Sintering Fuel
..... YANG Shuang-ping, WANG Chen, YANG Bo, WEI Qi-shu, WANG Jiu-hong(79)
- Leaching Process of Electrolytic Manganese Slag by Alkali Solution and Its Kinetics
..... ZOU Qin, LIU Hai-yan, XIE Hua-lei(83)
- Selective Precipitation of Copper from Crude Nickel Sulphate Solution
... WU Jian-hui, DONG Bo, ZHANG Xian-peng, YE Feng-chun, WANG Hong-jun, JI Hong-wei, QIU Shi-wei(88)
- Process of Non-cyanide Gold-leaching and Magnetic Separation for a Pyrite Cinder from Shandong Province
..... FU Kai-bin, XU Xin, TANG Peng-cheng, QIN Tian-bang, JIAO Yu(91)
- Experimental Research on Direct Reduction of Vanadium-bearing Titanomagnetite from South Africa in Fluidized Bed PENG Ning, QIU Chao-yang(95)
- Technique for Selective Extraction of Copper from Lead Matte
... JIANG Chao-jin, XIE Zhao-feng, JIANG Zhao-hui, HUANG Qian-jun, QIN Xiao-long, TAN Dai-di, LI Jia-yuan(99)
- Experimental Study on Reduction-Melting Process for Pellets of Copper Slag
..... SUN Zhi-jie, WEI Guo, LIU Zhan-hua, CAO Zhi-cheng(103)
- Renovation Design and Practice of a 100 m³/h Heavy Metal Wastewater Treatment System
..... BIN Chan-chan(107)

MATERIALS

- Phase Evolution and Thermodynamic Analysis of Laves Phase TaCr₂ Alloy Prepared by Mechanical Alloying Followed by Hot Pressing YAO Jing, LU Shi-qiang, XIAO Xuan, DENG Li-ping(110)
- Thermal Properties of Diatomite Loaded with Fatty Acid-based Phase Change Materials
..... DAI Lei, XU Xiang-yang, LIU Tian-hao, WEI Shan-shan(114)
- Influences of Chlorine Ions on Electro-crystallization Behavior, Microstructure and Morphology of Copper on Rolled Copper Foil ZHU Si-zhe, TAN Cheng-yu, LIU Chen, WANG Zhi-xiu(119)
- Preparation and Photocatalytic Properties of LaB₆@SiO₂/Ag Nano Materials
..... TANG Hong-bo, ZHOU Jian, SU Yu-chang(124)
- Effects of Heat Treatment Temperature on Electrochemical Properties of Cathode Material LiNi_{0.9}Co_{0.1}O₂ with Surface Modified by Al₂O₃ LI Wei-wei(128)