



ISSN 1004-0609  
CODEN ZYJXFK

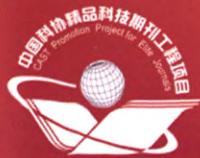
# 中国有色金属学报

The Chinese Journal of Nonferrous Metals

Volume 22 Number 3

March 2012

纪念陈国达先生诞辰100周年特刊



中国有色金属学会 主办  
科学出版社 出版

## 纪念陈国达先生诞辰100周年特刊

## 目 次

## 基础地质

- 宝山花岗闪长斑岩的岩石成因：地球化学、锆石 U-Pb 年代学和 Hf 同位素制约 ..... 全铁军, 孔 华, 费利东, 王 高, 李 欢, 吴城明(611)  
 青海赛什塘铜矿区侵入岩体地球化学及锆石 LA-ICPMS U-Pb 年代学 ..... 刘建平, 赖健清, 谷湘平, 王雄军, 毛 寅, 宋文彬(622)  
 印度尼西亚塔里亚布岛花岗岩的 Rb-Sr 年代学、地球化学及地质意义 ..... 丁 俊, 张术根, 韩世礼, 徐忠发, 秦新龙(633)  
 青海赛什塘矿区变质岩特征及其形成构造环境 ..... 毛 寅, 赖健清, 王雄军, 安江华(642)  
 安徽月山岩体成岩机制 ..... 刘忠法, 邵拥军, 疏志明, 张 宇(652)  
 哀牢山带大皮甲岩体的地质地球化学特征及形成构造环境 ..... 刘继顺, 吴自成, 董 新, 刘文恒(660)  
 滇西南澜沧带晚三叠世富钾火山岩地球化学特征及成因 ..... 张彩华, 刘继顺, 张洪培, 刘卫明, 吴自成(669)  
 山东原瞳金矿区煌斑岩的地球化学特征及其地质意义 ..... 陈松岭, 杨 柳, 邹海洋, 杨 牧(680)  
 老挝纳勐铜多金属矿区花岗岩地质地球化学特征及成因 ..... 张文山, 郭 昊(686)  
 塔河油田 S75 井区石炭系卡拉沙依组层序地层格架内的砂体展布 ..... 崔金栋, 郭建华, 刘一仓, 李 群, 焦 鹏(694)

## 矿床学与地球化学

- 广西大厂锡多金属矿床中铟的富集规律 ..... 戴塔根, 杜高峰, 张德贤, 王明艳(703)  
 青海三色沟铅锌矿流体包裹体特征及矿床成因 ..... 宋泽友, 赖健清, 王雄军, 张建东, 宋文彬(715)  
 胶东金翅岭金矿成矿流体特征及地质意义 ..... 杨 柳, 邹海洋, 杨 牧, 柯朝晖(726)  
 青海省卡尔却卡铜多金属矿床流体包裹体特征及成矿流体 ..... 宋文彬, 赖健清, 黄 敏, 杨自安, 张普斌, 欧阳华平(733)  
 胶西北大尹格庄金矿岩石学与成矿作用 ..... 刘庚寅, 杨 斌, 彭省临, 刘海刚, 陈 艳, 梁琴琴,  
     陈 燕, 刘贤红, 李守生, 王 慧, 窦源东, 杨玉泉(743)  
 广西大厂矿田大福楼锡多金属矿床地质与地球化学特征 ..... 成永生, 胡瑞忠, 伍永田(751)  
 青海德合龙洼铜(金)矿成矿物质来源 ..... 曹勇华, 赖健清, 康亚龙, 樊俊昌(761)  
 青海虎头崖—肯德可克矿区地球化学特征及其喷流成矿作用 ..... 李 欢, 奚小双(772)  
 稀土元素地球化学在成矿系统厘定及矿床成因分析中的应用——以印度尼西亚塔里亚布岛铁多金属矿田为例 ..... 韩世礼, 张术根, 丁 俊, 徐忠发, 秦新龙(784)  
 马岭油田南部原油地球化学特征及其成藏模式 ..... 李 群, 肖晓光, 刘军峰, 侯林惠(795)  
 河北武安矿山村矿田铁矿的稀土元素特征及其地质意义 ..... 杜高峰, 戴塔根, 邹海洋, 李文斌, 胡援越(802)

福建梅仙丁家山铅锌矿成矿系统分析	石得凤, 张术根, 韩世礼, 艾国梁(809)
河南嵩县安沟钼多金属矿床的地质特征与成因	叶震超, 高光明, 彭光雄(819)
安徽贵池铜山铜矿成矿地质条件及矿床成因	赵晓霞, 戴塔根, 张宇, 李品杰, 刘忠法(827)
从前侏罗纪古地貌的角度论鄂尔多斯盆地靖边—鄂托克前旗地区油气成藏模式	旷理雄, 梁力文, 敬小军, 史德锋, 黄文俊(837)

## 找矿预测

矿山深部隐伏矿定位预测关键技术新突破	
新疆西准噶尔哈图—萨尔托海金矿带控矿构造特征及找矿前景分析	吴延之(854)
红透山铜矿外围隐伏矿体三维定量预测	张宝一, 吴湘滨, 王丽芳, 刘文玉, 杜方(863)
招平断裂带大尹格庄—后仓段深部矿体定位预测	杨斌, 高星, 彭省临, 席振铢, 张道军,
刘庚寅, 陈燕, 刘贤红, 李守生, 王慧, 窦源东, 杨玉泉(872)	
铜陵天马山及其外围地区矿床空间信息找矿模型	疏志明, 杨斌, 王雄军, 叶珂, 梁恩云, 刘庚寅(880)

## 方法与技术

无人机影像的快速拼接及其误差	刘庆元, 刘有, 邹磊, 易柳城(889)
基于独立分量分析的铝土矿蚀变信息遥感提取方法	彭光雄, 王明艳, 陈锋锐, 潘彤, 叶震超(895)
西藏措勤盆地油气遥感解译	刘辰生, 郭建华, 尹琼, 邓吉秋(903)
瞬变电磁法三分量联合处理与解释	谭劭聪, 王鹤, 席振铢, 周胜(909)
不同幅度噪声和缺失数据对大地电磁正则化反演的影响	李爱勇, 曹创华, 柳建新, 郭荣文, 童孝忠, 柳卓(915)
音频大地电磁磁场传感器的研制	陈兴朋, 宋刚, 周胜, 席振铢, 王鹤(922)
采用音频大地电磁法间接探测深埋富集铁矿床	席振铢, 朱伟国, 张道军, 张良六, 冯万杰, 邓志刚(928)
物探数据三角网逆生长网格化方法	李瑞雪, 张道军, 黄龙, 席振铢, 王鹤, 冯万杰(934)
信息不对称条件下的成矿信息集成方法	樊俊昌, 毛先成, 邹品娟, 曹芳, 胡超, 张宝一(940)
线性EIV模型的TLS估计及其典型应用	周拥军, 邓才华(948)
应用REST技术的GML数据管理	张山山, 吴宝佑, 隋宁宁, 秦瑞(954)
基于JPEG压缩的数字化地质资料篡改探测方法及应用	刘助龙, 赵于前, 廖苗, 张竣凯, 戴塔根(961)
坑道直流聚焦超前探测电阻率法有限元数值模拟	柳建新, 邓小康, 郭荣文, 刘海飞, 童孝忠, 柳卓(970)
改进BISQ模型地震波场数值模拟中的边界处理	周竹生, 王红(976)
管幕预筑法竖井开挖与顶管施工过程数值模拟分析	张可能, 彭环云, 许庆伟, 黎永索, 杨仙(985)

责任编辑: 李艳红, 龙怀中, 陈卫萍, 何学锋

# The Chinese Journal of Nonferrous Metals

## (ZHONGGUO YOUSE JINSHU XUEBAO)

Vol.22 No.3

(Sum 156)

March 2012

A special issue dedicated to The 100th Birthday of Professor CHEN Guo-da

## CONTENTS

### Basic Geology

- Petrogenesis of granodiorite porphyry in Baoshan deposit: Constraints from geochemistry, zircon U-Pb chronology and Hf isotopes ..... QUAN Tie-jun, KONG Hua, FEI Li-dong, WANG Gao, LI Huan, WU Cheng-ming(611)  
Geochemistry and zircon LA-ICPMS U-Pb geochronology of intrusive body in Saishitang copper deposit, Qinghai Province, China ..... LIU Jian-ping, LAI Jian-qing, GU Xiang-ping, WANG Xiong-jun, MAO Yin, SONG Wen-bin(622)  
Rb-Sr geochronology, geochemistry and geological implications of granite from Taliabu Island, Indonesia ..... DING Jun, ZHANG Shu-gen, HAN Shi-li, XU Zhong-fa, QIN Xin-long(633)  
Characteristics of metamorphic rocks and tectonic setting in Saishitang mining area, Qinghai Province, China ..... MAO Yin, LAI Jian-qing, WANG Xiong-jun, AN Jiang-hua(642)  
Rock-forming mechanism of Yueshan intrusion, Tongling, Anhui Province, China ..... LIU Zhong-fa, SHAO Yong-jun, SHU Zhi-ming, ZHANG Yu(652)  
Geological, geochemical characteristics and tectonic setting of Dapijia rockbody in Ailaoshan zone ..... LIU Ji-shun, WU Zi-cheng, DONG Xin, LIU Wen-heng(660)  
Geochemistry characteristics of late Triassic potash-rich volcanic rocks and their origins in southern Lancangjiang belt, western Yunnan Province, China ..... ZHANG Cai-hua, LIU Ji-shun, ZHANG Hong-pei, LIU Wei-ming, WU Zi-cheng(669)  
Geochemical characteristics and genesis of lamprophyres in Yuantuan gold ore district, Shandong Province, China ..... CHEN Song-ling, YANG Liu, ZOU Hai-yang, YANG Mu(680)  
Geological and geochemical characteristics and petrogenesis of granites in NaMeung copper polymetallic deposit, Laos ..... ZHANG Wen-shan, GUO Min(686)  
Sandstone bodies distribution in sequence stratigraphic framework of Carboniferous Kalashayi Formation in S75 well area, Tahe Oilfield ..... CUI Jin-dong, GUO Jian-hua, LIU Yi-cang, LI Qun, JIAO Peng(694)

### Ore Geology and Geochemistry

- Indium distribution in Dachang tin-polymetallic deposit of Guangxi Province ..... DAI Ta-gen, DU Gao-feng, ZHANG De-xian, WANG Ming-yan(703)  
Characteristics of fluid inclusions and ore genesis of Sansegou Pb-Zn deposit in Qinghai Province, China ..... SONG Ze-you, LAI Jian-qing, WANG Xiong-jun, ZHANG Jian-dong, SONG Wen-bin(715)  
Ore-forming fluid characteristics and genesis of Jinchiling gold deposit in Jiaodong ..... YANG Liu, ZOU Hai-yang, YANG Mu, KE Zhao-hui(726)  
Characteristics of fluid inclusions and origin of Kaerqueka copper polymetallic deposit, Qinghai Province ..... SONG Wen-bin, LAI Jian-qing, HUANG Min, YANG Zi-an, ZHANG Pu-bin, GUYANG Hua-ping(733)  
Petrogeochemistry and metallization in Dayingezhuang gold deposit, northwest Jiaodong peninsula ..... LIU Geng-yin, YANG Bin, PENG Sheng-lin, LIU Hai-gang, CHEN Yan, LIANG Qin-qin, CHEN Yan, LIU Xian-hong, LI Shou-sheng, WANG Hui, DOU Yuan-dong, YANG Yu-quan(743)  
Geology and geochemistry of Dafulou tin-polymetallic ore deposit in Dachang ore field, Guangxi, China ..... CHENG Yong-sheng, HU Rui-zhong, WU Yong-tian(751)  
Sources of ore-forming materials of Dehelongwa copper(gold) deposit in Qinghai Province, China ..... CAO Yong-hua, LAI Jian-qing, KANG Ya-long, FAN Jun-chang(761)  
Geochemistry and sedimentary exhalative mineralization in Hutouya—Kendekeke field, Qinghai Province, China ..... LI Huan, XI Xiao-shuang(772)  
REE geochemistry application in discrimination of metallogenic system and ore genesis: An example from iron polymetallic orefield in Taliabu Island, Indonesia ..... HAN Shi-li, ZHANG Shu-gen, DING Jun, XU Zhong-fa, QIN Xin-long(784)  
Geochemical characteristic and reservoir forming model of southern Maling oilfield ..... LI Qun, XIAO Xiao-guang, LIU Jun-feng, HOU Lin-hui(795)

- Rare earth elements characteristics and geological significance of iron deposit in Kuangshancun ore field of Wu'an County, Hebei Province, China ..... DU Gao-feng, DAI Ta-gen, ZOU Hai-yang, LI Wen-bin, HU Yuan-yue(802)
- Metallogenetic system analysis of Dingjiashan Pb-Zn ore district in Meixian, Fujian Province ..... SHI De-feng, ZHANG Shu-gen, HAN Shi-li, AI Guo-liang(809)
- Geological characteristics and genesis of Angou molybdenum polymetallic deposit, Songxian, Henan Province, China ..... YE Zhen-chao, GAO Guang-ming, PENG Guang-xiong(819)
- Ore-forming geological conditions and deposit genesis of Tongshan copper deposit in Guichi, Anhui Province, China ..... ZHAO Xiao-xia, DAI Ta-gen, ZHANG Yu, LI Pin-jie, LIU Zhong-fa(827)
- Accumulation model of Jingbian—Etuoqianqi area in Ordos Basin from angle of pre-Jurassic palaeogeomorphology ..... KUANG Li-xiong, LIANG Li-wen, JING Xiao-jun, SHI De-feng, HUANG Wen-jun(837)

### Ore Prediction

- New breakthrough in key technologies of location prediction about deep concealed ore bodies of mine ..... PENG Sheng-lin, FAN Jun-chang, SHAO Yong-jun, MAO Xian-cheng, LAI Jian-qing, CHEN Jin, WANG Ying, WANG Xiong-jun, ZHANG Jian-dong(844)
- Characteristics of ore-controlling structures and prospective analysis of Hatu—Saertuhai gold belt in Western Junggar, Xinjiang ..... WU Yan-zhi(854)
- 3D quantitative prediction of concealed ore-body in surrounding areas of Hongtoushan copper deposit ..... ZHANG Bao-yi, WU Xiang-bin, WANG Li-fang, LIU Wen-yu, DU Fang(863)
- Oriental prognosis of deep orebodies in Dayingezhuang—Houcang mining area of Zhaoping fault zone ..... YANG Bin, GAO Xing, PENG Sheng-lin, XI Zhen-zhu, ZHANG Dao-jun, LIU Geng-yin, CHEN Yan, LIU Xian-hong, LI Shou-sheng, WANG Hui, DOU Yuan-dong, YANG Yu-quan(872)
- Ore prediction model for spatial information of deposits in Tianmashan and its periphery area, Tongling ..... SHU Zhi-ming, YANG Bin, WANG Xiong-jun, YE Ke, LIANG En-yun, LIU Geng-yin(880)

### Methods and Technology

- UAV's image quick mosaic and its errors ..... LIU Qing-yuan, LIU You, ZOU Lei, YI Liu-cheng(889)
- Extraction of bauxite alteration information from remote sensing data based on independent component analysis ..... PENG Guang-xiong, WANG Ming-yan, CHEN Feng-rui, PAN Tong, YE Zhen-chao(895)
- Petroleum interpretation with remote sensing in Cuoqin basin, Tibet ..... LIU Chen-sheng, GUO Jian-hua, YIN Qiong, DENG Ji-qiu(903)
- Joint-processing and interpretations of three-components in transient electromagnetic method ..... TAN Shao-cong, WANG He, XI Zhen-zhu, ZHOU Sheng(909)
- Effects of different amplitudes of noise and missing data on regular inversion of magnetotelluric response ..... LI Ai-yong, CAO Chuang-hua, LIU Jian-xin, GUO Rong-wen, TONG Xiao-zhong, LIU Zhuo(915)
- Development of magnetic sensor in audio-frequency magnetotelluric sounding ..... CHEN Xing-peng, SONG Gang, ZHOU Sheng, XI Zhen-zhu, WANG He(922)
- Indirectly exploit buried deposits of rich iron by audio-frequency magnetotelluric method ..... XI Zhen-zhu, ZHU Wei-guo, ZHANG Dao-jun, ZHANG Liang-liu, FENG Wan-jie, DENG Zhi-gang(928)
- Inverse growth algorithm for creating triangular mesh of geophysical data ..... LI Rui-xue, ZHANG Dao-jun, HUANG Long, XI Zhen-zhu, WANG He, FENG Wan-jie(934)
- Integration method for metallogenetic information under condition of metallogenetic information asymmetry ..... FAN Jun-chang, MAO Xian-cheng, ZOU Pin-juan, CAO Fang, HU Chao, ZHANG Bao-yi(940)
- Extended total least squares problems for linear errors-in-variables model and its typical applications ..... ZHOU Yong-jun, DENG Cai-hua(948)
- GML data management using REST ..... ZHANG Shan-shan, WU Bao-you, SUI Ning-ning, QIN Rui(954)
- Forgery detection and application of digital geological images based on JPEG compression techniques ..... LIU Zhu-long, ZHAO Yu-qian, LIAO Miao, ZHANG Jun-kai, DAI Ta-gen(961)
- Numerical simulation of advanced detection with DC focus resistivity in tunnel by finite element method ..... LIU Jian-xin, DENG Xiao-kang, GUO Rong-wen, LIU Hai-fei, TONG Xiao-zhong, LIU Zhuo(970)
- Boundary treatment for numerical simulation of seismic waves based on reformulated BISQ model ..... ZHOU Zhu-sheng, WANG Hong(976)
- Numerical simulation on construction process of working well and pipe jacking by pipe-roof pre-construction method ..... ZHANG Ke-neng, PENG Huan-yun, XU Qin-wei, LI Yong-suo, YANG Xian(985)

(Managing Editors: LI Yan-hong, LONG Huai-zhong, CHEN Wei-ping, HE Xue-feng)