

地 球 科 学

2021年11月 第46卷 第11期

目 次

·矿物学·岩石学·矿床学·

- 富碲化物金矿床中碲的成矿作用研究进展 胡新露,姚书振,何谋眷,俎 波,曾丽平,丁振举 (3807)
金属矿床勘查与开发定量生态评估体系初探 张纪伟,陈华勇 (3818)
造山带铜镍硫化物矿床的岩浆起源:以东天山黄山南铜镍矿床为例 王 旋,曹 俊,张盖之 (3829)
海南岛西北部早古生代安山岩的识别及其大地构造意义 周 云,赵永山,杜宇晶,蔡永丰,冯佐海,刘希军,宋宏星 (3850)
滇西漕涧地区崇山变质杂岩中崇山岩群的时代与构造属性 黄 亮,王冬兵,王晓林,刘小春,丛 峰,朱勋早,方 雄 (3861)
西藏东南缘早二叠世长英质凝灰岩锆石U-Pb年龄和Hf同位素特征 麦源君,朱利东,杨文光,解 龙,童 霞,郝金月,钟 摆 (3880)
华北克拉通中部带云中山石榴斜长角闪岩变质演化及其构造意义 郭敏洁,钱加慧,尹常青,张 健,卢成森 (3892)
老挝西北部二叠纪砂岩碎屑锆石U-Pb年代学、地球化学特征及其构造意义 邱 曜,王岳军,钱 鑫,张玉芝,Vongpaseuth Seneboultalath (3910)
特提斯喜马拉雅中东部桑秀组酸性火山岩岩石成因:东冈瓦纳大陆裂解的响应? 田京京,丁 枫,郝盛蓝,裴向军,李天涛,孙 瑶,谢显刚 (3926)
甘蒙北山后红泉地区海相玄武岩地球化学、年代学特征及成因 郭小刚,陈守余,苟 瑞,刘 鑫,王 秦,蒲强林 (3945)
华南桂东南地区加里东期I型花岗岩类的岩石成因及构造意义 刘明辉,时 舜,唐远兰,赵增霞,刘希军,高爱洋,黄椿文 (3965)
甘肃北山野马大泉志留纪花岗岩的成因和构造意义 黄博涛,王国强,卜 涛,过 磊,董增产,王居里,贺振宇 (3993)
北京房山岩体黑云母矿物化学特征及其对岩石成因的指示意义 邵 航,王军鹏,肖 登 (4006)

·构造地质学与油气地质学·

- 桂北地区三门韧性剪切带的厘定及其构造意义 秦 亚,冯佐海,黄靖哲,白玉明,吴 杰,张桂林,万 磊 (4017)
顺层岩质滑坡渐进破坏进入加速的能量学判据 唐朝晖,余小龙,柴 波,张淑杞,孙晓鑫 (4033)
珠江口盆地惠州凹陷转换体控沉-控储特性及其油气地质意义 田立新 (4043)

·古生物学·

- 鄂东伍家冲剖面乐平世牙形石生物地层及大隆组的时代 郝少波,陈 瓣,黄 攀,陈寒超,江海水 (4057)
华北克拉通南缘古元古代晚期汝阳群微体化石及其古环境意义:来自微细构造和生物标志化合物的证据 李 猛,王钊飞,姚志亮 (4072)

·海洋地质学·

- 海南岛东南海域碎屑锆石年代学物源示踪及构造指示意义 刘松峰,李 顺,聂 鑫,邹佩琦,蔡观强 (4084)
海洋沉积物的锌同位素地球化学及其应用 瞿媛汝,吕逸文,刘盛遨 (4097)

·环境地质学与水文地质学·

- 三沙湾亚硝酸氮、氨氮、磷酸盐的异常、机制及影响 林沐东,于俊杰,刘晓强,牛淑杰,同 萌,郭慧婷,李茂田 (4107)
基于碎石屏障的土壤盐渍化改良技术及机理研究 陶彦臻,苏春利,谢先军,曾邯斌,潘洪捷,闫福贵 (4118)
湖南水口山多金属矿区废石堆重金属污染评价及赋存形态分析 陈佳木,吴志华,刘文浩,张晓军,张晓平,王琳玲,周 森,齐宇彤,吴云辉 (4127)
长江中游沿岸地下水中有有机质分子组成特征及其对碘富集的指示 薛江凯,邓娅敏,杜 羯,罗义鹏,程一涵 (4140)
含水层非均质性不同刻画方法对地下水流和溶质运移预测的影响 蒋立群,孙蓉琳,梁 杏 (4150)
西昆仑地区苦水湖富锂盐湖水化学特征及成盐元素来源 李玉龙,苗卫良,张西营,贺茂勇,唐启亮,杨凯源,李永寿,韩继龙,赵 雪 (4161)
安宁地热田浅部热储水化学特征及补给通道位置 徐梓矿,徐世光,张世涛 (4175)
库车盆地早始新世成盐期卤水温度及其意义 徐 洋,曹养同,刘成林 (4188)

·其他·

- 祝贺!《地球科学》两位编委当选中国科学院院士 (3925)
《地球科学》2021年12月第46卷第12期要目预告 (3992)

主编 赖旭龙 责任编辑 散飞雪

期刊基本参数: CN 42—1874/P * 1957 * m * A4 * 390 * zh * P * ¥50.00 * 1200 * 28 * 2021—11

封面照片: 北山造山带马鬃山镇以西龙蛇头地区出露的早泥盆世糜棱岩化花岗闪长岩,发育韧性剪切作用形成的糜棱面理(黄博涛提供)。

EARTH SCIENCE
Vol.46 No.11 Nov. 2021

CONTENTS

•Mineralogy•Petrology•Mineral Deposits•

- An Overview of Advances in Tellurium Mineralization in Telluride-Rich Gold Deposits *Hu Xinlu, Yao Shuzhen, He Mouchun, Zu Bo, Zeng Liping, Ding Zhenju* (3807)
Preliminary Study on Quantitative Ecological Evaluation of Exploration and Development of Ore Deposits: A Case Study of Luoboling Porphyry Copper Molybdenum Deposit, Fujian Province *Zhang Jiwei, Chen Huayong* (3818)
Origin of Ore-Forming Magmas Associated with Ni-Cu Sulfide Deposits in Orogenic Belts: Case Study of Permian Huangshannan Magmatic Ni-Cu Sulfide Deposit, East Tianshan, NW China *Wang Xuan, Cao Jun, Zhang Gaizhi* (3829)
Identification of Early Paleozoic Andesite in Northwestern Hainan Island and Its Geotectonic Significances *Zhou Yun, Zhao Yongshan, Du Yujing, Cai Yongfeng, Feng Zuohai, Liu Xijun, Song Hongxing* (3850)
Age and Tectonic Attributes of Chongshan Group in Chongshan Metamorphic Complex in Caojian Area, West Yunnan *Huang Liang, Wang Dongbing, Wang Xiaolin, Liu Xiaochun, Cong Feng, Zhu Xunzao, Fang Xiong* (3861)
Zircon U-Pb and Hf Isotopic Composition of Permian Felsic Tuffs in Southeastern Margin of Lhasa, Tibet *Mai Yuanjun, Zhu Lidong, Yang Wenguang, Xie Long, Tong Xia, Hao Jinyue, Zhong Yao* (3880)
Metamorphic Evolution and Tectonic Implications of Garnet Amphibolite from Yunzhongshan Terrane in Central North China Craton *Guo Minjie, Qian Jiahui, Yin Changqing, Zhang Jian, Lu Chengsen* (3892)
Detrital Zircon U-Pb Geochronology and Geochemical Characteristics of Permian Sandstones in NW Laos and Its Tectonic Implications *Qiu Xi, Wang Yuejun, Qian Xin, Zhang Yuzhi, Seneboultalath* (3910)
Petrogenesis of Acidic Volcanic Rocks in Sangxiu Formation, East-Central Segment of Tethyan-Himalaya: Response to Break-up of Eastern Gondwana Continent? *Tian Jingjing, Ding Feng, Hao Shenglan, Pei Xiangjun, Li Tiantao, Sun Yao, Xie Xiangang* (3926)
Geochemistry, Chronology and Genesis of Marine Basalts in Houhongquan Area, Beishan, Gansu and Inner Mongolia *Guo Xiaogang, Chen Shouyu, Gou Rui, Liu Xin, Wang Qin, Pu Qianglin* (3945)
Petrogenesis and Tectonic Significance of Caledonian I-Type Granitoids in Southeast Guangxi, South China *Liu Minghui, Shi Yu, Tang Yuanlan, Zhao Zengxia, Liu Xijun, Gao Aiyang, Huang Chunwen* (3965)
Petrogenesis and Tectonic Significance of Silurian Granites in Yemadaquan Area, Beishan, Gansu Province *Huang Botao, Wang Guoqiang, Bu Tao, Guo Lei, Dong Zhengchan, Wang Juli, He Zhenyu* (3993)
Mineral Chemistry of Biotite and Its Petrogenesis Implications in Fangshan Granite, Beijing *Shao Hang, Wang Junpeng, Xiao Deng* (4006)

•Structural Geology and Petroleum, Natural Gas Geology•

- Discovery of Sammen Ductile Shear Zone in North Guangxi and Its Tectonic Significances *Qin Ya, Feng Zuohai, Huang Jingzhe, Bai Yuming, Wu Jie, Zhang Guilin, Wan Lei* (4017)
Energetic Criterion of Entering Acceleration in Progressive Failure Process of Bedding Rockslide: A Case Study for Shanshucao Landslide *Tang Zhaohui, Yu Xiaolong, Chai Bo, Zhang Shuqi, Sun Xiaoxin* (4033)
Sedimentary-Reservoir Characteristics under Control of Transfer Model and Implications for Hydrocarbon Exploration in Huizhou Depression, Pearl River Mouth Basin *Tian Lixin* (4043)

•Paleontology•

- Lopingian Conodont Biostratigraphy and Age of Dalong Formation at Wujiachong Section, East Hubei Province *Hao Shaobo, Chen Yan, Huang Pan, Chen Hanchao, Jiang Haishui* (4057)
Microfossils and Paleoenvironmental Significance of Late Paleoproterozoic Ruyang Group in South Margin of North China Craton: Evidence from Microstructure and Biomarker *Li Meng, Wang Zhaofei, Yao Zhiliang* (4072)

•Marine Geology•

- Detrital Zircon Geochronology from Southeastern Sea of Hainan Island: Provenance Tracing and Tectonic Implications *Liu Songfeng, Li Shun, Nie Xin, Zou Lili, Cai Guanqiang* (4084)
Zinc Isotope Geochemistry of Marine Sediments and Its Applications: A Review *Qu Yuanru, Lü Yiwen, Liu Sheng'ao* (4097)

•Environmental Geology and Hydrogeology•

- Abnormalities, Mechanisms and Effects of Nitrite Nitrogen, Ammonia Nitrogen and Phosphate in Sansha Bay *Lin Mudong, Yu Junjie, Liu Xiaoqiang, Niu Shujie, Tong Meng, Guo Huiting, Li Maotian* (4107)
Technology and Mechanism of Soil Salinization Using Gravel Barrier *Tao Yanzhen, Su Chunli, Xie Xianjun, Zeng Hanbin, Pan Hongjie, Yan Fugui* (4118)
Heavy Metal Pollution Evaluation and Species Analysis of Waste Rock Piles in Shuikoushan, Hunan Province *Chen Jiamu, Wu Zhihua, Liu Wenhai, Zhang Xiaojun, Zhang Xiaoping, Wang Linling, Zhou Miao, Qi Yutong, Wu Yunhui* (4127)
Molecular Characterization of Dissolved Organic Matter (DOM) in Shallow Aquifer along Middle Reach of Yangtze River and Its Implications for Iodine Enrichment *Xue Jiangkai, Deng Yamin, Du Yao, Luo Yipeng, Cheng Yihan* (4140)
Predicting Groundwater Flow and Transport in Heterogeneous Aquifer Sandbox Using Different Parameter Estimation Methods *Jiang Liqun, Sun Ronglin, Liang Xing* (4150)
Hydrochemical Characteristics and Salt-Formation Elements Sources of Li-Rich Brines in Kushui Lake, West Kunlun *Li Yulong, Miao Weiliang, Zhang Xiyi, He Maoyong, Tang Qiliang, Yang Kaiyuan, Li Yongshou, Han Jilong, Zhao Xue* (4161)
Hydro-Geochemistry of Anning Geothermal Field and Flow Channels Inferring of Upper Geothermal Reservoir *Xu Zikuang, Xu Shiguang, Zhang Shitao* (4175)
Brine Temperature of Early Eocene Salt Formation Period in Kuqa Basin and Its Significance *Xu Yang, Cao Yangtong, Liu Chenglin* (4188)