

# 海洋地质与 第四纪地质

HAIYANG DIZHI YU  
DISIJI DIZHI

(双月刊)

1981年9月15日创刊

第44卷 第6期

(总212期)

2024年12月28日

中文核心期刊

中国科技核心期刊

中国科学引文数据库核心期刊

Elsevier Scopus 数据库源期刊

美国化学文摘(CA)源期刊

日本JST数据库源期刊

特邀主编: 蔡峰

责任编辑: 张现荣

周立君

文凤英

英文编辑: 虞子冶

封面设计: 张现荣

封面图片: 纪云开

## 高富集水合物成藏特征研究专栏

### 目次

#### ●高富集水合物成藏特征

琼东南盆地渗漏型天然气水合物识别与差异成藏特征

…………… 谢莹峰, 任金锋, 邓炜, 陆敬安, 匡增桂, 康冬菊, 曲长伟(1)

琼东南海域冷泉微地震响应特征初探——以“海马”冷泉为例

…………… 胡广, 黄建宇, 杨胜雄, 李沅衡, 田冬梅, 曹荆亚, 周军明, 邓雨恬(12)

南海天然气水合物智能识别方法与应用

…………… 田冬梅, 杨胜雄, 刘鑫, 李沅衡, 胡广, 曹荆亚, 周军明, 邓雨恬(25)

电火花震源高分辨率地震勘探技术及其在海域天然气水合物识别中的应用

…………… 骆迪, 蔡峰, 闫桂京, 李清, 孙运宝, 董刚, 李昂(34)

高分辨率小道距处理技术及属性分析在水合物识别中的应用

…………… 颜中辉, 杨睿, 刘欣欣, 刘鸿, 王小杰, 姜春涛(46)

天然气水合物地层剪切模量参数岩石物理计算及叠前反演

…………… 刘欣欣, 王小杰, 徐华宁, 杨睿, 刘鸿, 陈江欣(60)

盐度影响下松散沉积物中甲烷水合物生成特征研究

…………… 纪云开, 王佳贤, 邱晓倩, 孟庆国, 张永超, 胡高伟, 蔡峰, 刘昌岭(71)

#### ●沉积与环境

海洋沉积体系甲烷生物地球化学循环的微量元素地球化学示踪研究进展

…………… 王旭东, 庄光超, 冯东(82)

流体渗漏强度变化对烟囱状冷泉碳酸盐岩中铁和磷循环的影响

…………… 高宇, 刘春阳, 胡钰, 陈琳莹, 梁前勇, 冯东, 陈多福(96)

海马冷泉区沉积物的地球化学特征: 对于甲烷渗漏和沉积物来源的指示

…………… 龙恒又, 席世川, 杨慧良, 赵俐红, 李金洋, 栾振东(105)

近9 ka以来泰国湾高分辨的生物硅记录及其古生产力意义

…………… 刘璇, 陈敏, 戚洪帅, Apitida Wasuwatcharapong,

Apichai Kanchanapant, 王承涛, 许亚(121)

莱州湾南岸入海河流重矿物特征及其物源意义

…………… 王庆同, 王海根, 燕同祥, 毛方松, 陈梁, 王孟瑶(130)

风场在渤海表层悬浮体多年变化中的作用

…………… 李新如, 乔璐璐, 刘兴民, 张思晨(140)

#### ●古海洋与年代地质

细菌藓四醇异构体 BHT-x: 海洋水体缺氧的新型代用指标 … 朱森, 董良(152)

胶州湾基底新元古代变花岗岩的发现与地质意义

…………… 董杰, 朱晓青, 窦衍光, 宋维宇, 薛碧颖, 邹亮(163)

#### ●油气与矿产

东海盆地西湖凹陷南部花港组上段浅水曲流河三角洲发育特征

…………… 陈春峰, 陈忠云, 万延周, 陈建文, 徐东浩, 冯桢鸣, 俞伟哲, 姜雪(175)

#### ●第四纪地质

广东北江上游河流阶地与岩溶洞穴堆积物光释光年代及其地貌意义

…………… 黄孝波, 赵心宇, 李宏卫, 田若楠, 胡昆, 李燕文, 涂华, 赖忠平(186)

#### ●技术方法

基于地震融合属性的砂体连通性判断方法——以渤中凹陷中浅层砂体为例

…………… 张罗成, 刘怀山, 张志军, 谭辉煌, 赵明鑫, 杨宸(195)

海洋 CSEM 法探测海底淡水资源可行性初探——以长江口嵎泗古河道为例

…………… 吴晓婷, 李子国, 段双敏(204)

#### ●其他

《海洋地质与第四纪地质》征稿简则 …… 本刊(216)



# MARINE GEOLOGY AND QUATERNARY GEOLOGY

(Bimonthly)

Vol 44, No. 6, Dec. 2024, (Sum. 212)

## CONTENTS

### ● RESEVOIR CHARACTERISTICS OF HIGH ENRICHMENT GAS HYDRATE

- Identification and the differential accumulation of leakage-typed gas hydrate in the Qiongdongnan Basin, northern South China Sea  
..... XIE Yingfeng, REN Jinfeng, DENG Wei, LU Jing'an, KUANG Zenggui, KANG Dongju, QU Changwei (1)
- Preliminary study on microseismic response characteristics of cold seep in Qiongdongnan sea area: A case study of "Haima" cold seep  
..... HU Guang, HUANG Jianyu, YANG Shengxiong, LI Yuanheng, TIAN Dongmei, CAO Jingya, ZHOU Junming, DENG Yutian (12)
- Intelligent identification and application of gas hydrate in South China Sea  
..... TIAN Dongmei, YANG Shengxiong, LIU Xin, LI Yuanheng, HU Guang, CAO Jingya, ZHOU Junming, DENG Yutian (25)
- High-resolution seismic exploration technology with spark source and its application in identification of natural gas hydrates in marine areas  
..... LUO Di, CAI Feng, YAN Guijing, LI Qing, SUN Yunbao, DONG Gang, LI Ang (34)
- Application of high-resolution small group interval processing technology and attribute analysis in hydrate identification  
..... YAN Zhonghui, YANG Rui, LIU Xinxin, LIU Hong, WANG Xiaojie, JIANG Chuntao (46)
- Rock physics calculation and pre-stack inversion of shear modulus parameters for natural gas hydrate-bearing sediments  
..... LIU Xinxin, WANG Xiaojie, XU Huaning, YANG Rui, LIU Hong, CHEN Jiangxin (60)
- Effect of salinity on the formation of methane hydrate in unconsolidated sediments  
... JI Yunkai, WANG Jiaxian, QIU Xiaoqian, MENG Qingguo, ZHANG Yongchao, HU Gaowei, CAI Feng, LIU Changling (71)

### ● SEDIMENTATION AND ENVIRONMENT

- Advancements in studying the biogeochemistry of methane in marine depositional systems through trace element geochemistry  
..... WANG Xudong, ZHUANG Guangchao, FENG Dong (82)
- The impact of change in fluid seepage intensity on iron and phosphorus cycling in chimney-like seep carbonates  
..... GAO Yu, LIU Chunyang, HU Yu, CHEN Linying, LIANG Qianyong, FENG Dong, CHEN Duofu (96)
- Geochemical characteristics of sediments in the Haima Cold Seep area: indication for methane seepage and sediment source  
..... LONG Hengcha, XI Shichuan, YANG Huiliang, ZHAO Lihong, LI Jinyang, LUAN Zhendong (105)
- High-resolution record of biogenic silica and its paleoproductivity implication in the Chanthaburi coast, Gulf of Thailand over the last 9000 aBP  
..... LIU Xuan, CHEN Min, QI Hongshuai, Apitida Wasuwatcharapong, Apichai Kanchanapant, WANG Chengtao, XU Ya (121)
- Characteristics of heavy minerals in rivers entering the sea from the south bank of Laizhou Bay and their provenance significance  
..... WANG Qingtong, WANG Haigen, YAN Tongxiang, MAO Fangsong, CHEN Liang, WANG Mengyao (130)
- The role of wind in the multi-year variations of surface suspended sediment in the Bohai Sea  
..... LI Xinru, QIAO Lulu, LIU Xingmin, ZHANG Sichen (140)

### ● PALEOCEANOGRAPHY AND GEOCHRONOLOGY

- The application progress of BHT-x as biomarker to marine hypoxia  
..... ZHU Ben, DONG Liang (152)
- Discovery and geological implications of Neoproterozoic metagranite in Jiaozhou Bay  
..... DONG Jie, ZHU Xiaoqing, DOU Yanguang, SONG Weiyu, XUE Biying, ZOU Liang (163)

### ● PETROLEUM AND MINERAL RESOURCES

- Shallow meandering river delta in the Huagang Formation in the southern Xihu Sag, East China Sea Basin  
..... CHEN Chunfeng, CHEN Zhongyun, WAN Yanzhou, CHEN Jianwen, XU Donghao, FENG Zhenming, YU Weizhe, JIANG Xue (175)

### ● QUATERNARY GEOLOGY

- Luminescence dating of fluvial terrace and karst cave deposits in the Upper Beijiang River, Guangdong Province, and its geomorphological implications  
..... HUANG Xiaobo, ZHAO Xinyu, LI Hongwei, TIAN Ruonan, HU Kun, LI Yanwen, TU Hua, LAI Zhongping (186)

### ● GEOTECHNOLOGY

- A method for judging sand body connectivity based on seismic fusion attributes: A case of the Bozhong Sag  
..... ZHANG Luocheng, LIU Huaishan, ZHANG Zhijun, TAN Huihuang, ZHAO Mingxin, YANG Chen (195)
- The feasibility of marine CSEM method for detecting offshore freshened groundwater reservoirs  
..... WU Xiaoting, LI Yuguo, DUAN Shuangmin (204)