



ISSN 1673-5005
CN 37-1441/TE

中国石油大学

JOURNAL OF CHINA UNIVERSITY OF PETROLEUM

学报

自然科学版

美国《工程索引》(EI) 收录期刊
全国百强科技期刊
中国国际影响力优秀学术期刊
《中文核心期刊要目总览》期刊
《中国科学引文数据库》来源期刊
中国科技核心期刊(中国科技论文统计源期刊)
RCCSE 中国权威学术期刊(A⁺)

2021.1

第45卷 第1期 总第243期

Vol.45 No.1 Sum.243

ZHONGGUO SHIYOU DAXUE XUEBAO

主办单位：中国石油大学(华东)

万方数据

目 次

· 石油地质与勘查工程 ·

东营凹陷草桥潜山岩溶储层胶结物特征及其储层成因

…………… 程 鑫, 操应长, 远光辉, 王艳忠, 咎念民(1)

珠江口盆地番禺 4 洼珠江组层序地层及其约束下砂体发育模式

…… 戴 宗, 张青青, 衡立群, 孙润平, 刘可禹, 王 健, 罗东红, 王亚会(12)

X 射线衍射残余应力测试技术在纤维状方解石脉体现今应力状态分析中的应用

…………… 马存飞, 董春梅, 王 倩, 孙 钰, 封 猛, 刘振阳, 杨国杰, 于大川, 郭爱铭, 袁 月(23)

乌石凹陷流沙港组烃源岩地球化学特征

…… 李福来, 吕 琳, 马文宽, 刁 浩, 徐志尧, 白云明, 杨建磊, 刘红艳(31)

基于成像算子优化的微震逆时定位方法

…………… 唐 杰, 李 聪, 孙成禹, 陈学国(41)

仅利用磁场幅度信息进行井间电磁反演成像的方法及可行性研究

…………… 魏宝君, 谷靖雯, 任臣, 党 峰, 刘 健(50)

随钻电磁波测井响应函数理论及探测特性

…… 林发武, 田超国, 耿学杰, 司兆伟, 刘得芳, 庄东志(60)

基于双向长短期记忆网络的流体高精度识别新方法

…………… 周雪晴, 张占松, 朱林奇, 张超谟(69)

· 石油钻采工程 ·

页岩油水平井多段压裂裂缝高度扩展试验

…… 张士诚, 李四海, 邹雨时, 李建民, 马新仿, 张啸寰, 王卓飞, 吴 珊(77)

基于直接测量的水合物储层颗粒间作用力测试系统与测试方法

…………… 于彦江, 罗 强, 宁伏龙, 陆红锋, 刘志辉, 彭 力, 王冬冬, 史浩贤, 刘志超, 段隆臣(87)

水驱油田采收率与注入孔隙体积的定量关系

..... 王增林, 张贵才, 靳彦欣, 裴海华, 史树彬, 蒋 平(94)

基于均匀化理论的页岩基质流固耦合尺度升级

..... 严 侠, 王东英, 樊伟鹏, 刘丕养, 樊冬艳, 姚 军(101)

白云岩储层酸岩反应控制模式界限

..... 赫安乐, 齐 宁, 崔明月, 潘 林, 晏 军, 李艺恬(110)

二氧化碳在地层水中的溶解度测定及预测模型

..... 林元华, 邓宽海, 宁华中, 石云升, 曾德智, 刘婉颖(117)

不同驱动力条件下改性淀粉、羧甲基纤维素钠和黄原胶对水合物形成的影响

..... 王 韧, 孙金声, 孙慧翠, 张 凌, 史晓梅, 王金堂, 郭东东, 张 洁(127)

氢键型自愈合树脂稳砂体系

..... 李建达, 张贵才, 葛际江, 蒋 平, 裴海华, 乔文丽(137)

发泡剂静态泡沫性能综合定量表征参数的构建及应用

..... 刘宏生(144)

· 石油机械工程 ·

Bernoulli-Euler 微梁振动特性的尺寸效应

..... 周 博, 王志勇, 赵 飞, 周世琛, 薛世峰, 林英松(151)

基于红外热成像与 CNN 的压裂装备故障精准识别及预警

..... 刘慧舟, 胡瑾秋, 张来斌, 张 彪(158)

插拔式变比例均匀取样器及气液两相流量计量

..... 梁法春, 陈 婧, 陈俊文, 何振楠, 孟 佳(167)

喷雾冷却沸腾传热强化试验

..... 张 伟, 张亚东, 杨 韬, 杨 勇(175)

被动轮式推进器设计..... 贾 朋, 房 军, 吴 烁(183)

本期责任编辑
本期英文编审
修荣荣
李志芬

微机排版
技术编辑
杨 丽
韩国良

JOURNAL OF CHINA UNIVERSITY OF PETROLEUM

(Edition of Natural Science)

Vol. 45 No. 1 Sum. No. 243 Feb. 2021

CONTENTS

PETROLEUM GEOLOGY AND GEOPHYSICAL EXPLORATION ENGINEERING

Characteristics of cements and origin of karsted reservoirs in Caoqiao buried hill in Dongying Sag	
.....	CHENG Xin, CAO Yingchang, YUAN Guanghui, WANG Yanzhong, ZAN Nianmin(1)
Sequence stratigraphy and sand body development model of Zhujiang Formation in Panyu 4 Subsag,	
Pearl River Mouth Basin	DAI Zong, ZHANG Qingqing, HENG Liquan, SUN Rumping, LIU Keyu, WANG Jian, LUO Donghong , WANG Yahui(12)
Application of X-ray diffraction residual stress testing technology in the analysis of present stress state of fibrous	
calcite vein	MA Cunfei, DONG Chunmei, WANG Qian, SUN Yu, FENG Meng, LIU Zhenyang, YANG Guojie, YU Dachuan, GUO Aiming, YUAN Yue(23)
Geochemical characteristics of source rocks in Liushagang Formation of Wushi Sag	
.....	LI Fulai, LÜ Lin, MA Wenkuan, DIAO Hao, XU Zhiyao, BAI Yunming, YANG Jianlei, LIU Hongyan(31)
Micro-seismic reverse time location based on imaging operator optimization	
.....	TANG Jie, LI Cong, SUN Chengyu, CHEN Xueguo(41)
Method and feasibility of cross-hole electromagnetic inversion and imaging by only using magnetic field's amplitude	
information	WEI Baojun, GU Jingwen, REN Chen, DANG Feng, LIU Jian(50)
Theory of response function and analysis of detecting characteristic of electromagnetic logging while drilling	
.....	LIN Fawu, TIAN Chaoguo, GENG Xuejie, SI Zhaowei, LIU Defang, ZHUANG Dongzhi(60)
A new method for high-precision fluid identification in bidirectional long short-term memory network	
.....	ZHOU Xueqing, ZHANG Zhansong, ZHU Linqi, ZHANG Chaomo(69)

PETROLEUM DRILLING AND PRODUCTION ENGINEERING

Experimental study on fracture height propagation during multi-stage fracturing of horizontal wells in shale oil reservoirs	
.....	万方数据 ZHANG Shicheng, LI Sihai, ZOU Yushi, LI Jianmin, MA Xinfang, ZHANG Xiaohuan, WANG Zhuofei, WU Shan(77)

Direct measurement of the interaction forces between sediment particles in gas hydrate reservoirs

..... YU Yanjiang, LUO Qiang, NING Fulong, LU Hongfeng, LIU Zhihui, PENG Li, WANG Dongdong, SHI Haoxian, LIU Zhichao, DUAN Longchen(87)

Quantitative characterization of oil recovery and pore volume of water injected in water flooding

..... WANG Zenglin, ZHANG Guicai, JIN Yanxin, PEI Haihua, SHI Shubin, JIANG Ping(94)

Upscaling of hydro-mechanical coupling in shale matrix based on homogenization theory

..... YAN Xia, WANG Dongying, FAN Weipeng, LIU Piyang, FAN Dongyan, YAO Jun(101)

Limitation on acid-rock reaction and its control mode in dolomite formation

..... HE Anle, QI Ning, CUI Mingyue, PAN Lin, YAN Jun, LI Yitian(110)

CO₂ solubility test in formation water and prediction model

..... LIN Yuanhua, DENG Kuanhai, NING Huazhong, SHI Yunsheng, ZENG Dezhi, LIU Wanying(117)

Effects of modified starch, CMC and XC on hydrate formation under different driving forces

..... WANG Ren, SUN Jinsheng, SUN Huicui, ZHANG Ling, SHI Xiaomei, WANG Jintang, GUO Dongdong, ZHANG Jie(127)

Sand consolidation system based on hydrogen-bonding self-healing resin

..... LI Jianda, ZHANG Guicai, GE Jijiang, JIANG Ping, PEI Haihua, QIAO Wenli(137)

Construction and application of comprehensive quantitative characterization parameters for static foaming

properties of foaming agents LIU Hongsheng(144)

PETROLEUM MECHANICAL ENGINEERING

Size effect of vibration characteristics of Bernoulli-Euler microbeam

..... ZHOU Bo, WANG Zhiyong, ZHAO Fei, ZHOU Shichen, XUE Shifeng, LIN Yingsong(151)

Accurate identification and early-warning of faults of fracturing equipments based on infrared thermal

imaging and convolutional neural network LIU Huizhou, HU Jinqiu, ZHANG Laibin, ZHANG Biao(158)

Equal sampling at various extraction ratios with plug type sampler and its application in gas-liquid two-phase

flow rate metering LIANG Fachun, CHEN Jing, CHEN Junwen, HE Zhennan, MENG Jia(167)

Spray cooling boiling heat transfer enhancement test

..... ZHANG Wei, ZHANG Yadong, YANG Tao, YANG Yong(175)

Design of 百万数据 wheeled thruster JIA Peng, FANG Jun, WU Shuo(183)