

目 次

北疆白砂岩特殊物理力学性质试验研究	邓铭江, 蔡正银, 郭万里, 黄英豪, 张 晨 (1)
用于土体宏观力学特性测试的微型三轴仪研制	蒋明镜, 李光帅, 曹 培, 吴晓峰 (6)
砂质黄土土-水特征曲线的试验研究	蔡国庆, 韩博文, 杨 雨, 刘 玮, 赵成刚 (11)
黏粒含量对细粒尾矿物物理力学性质的影响	胡再强, 郭 婧, 梁志超, 王 凯, 冯 哲, 陈振鹏 (16)
主应力轴变化下各向异性钙质砂的定轴剪切特性	沈 扬, 梁 晖, 葛华阳, 俞演名, 沈 雪 (22)
复合桶型风电基础姿态监测与模拟	关云飞, 韩 迅, 曹永勇, 刘永刚, 唐 译, 朱 洵, 张 晨, 李鹏飞 (27)
工程泥浆自重固结及低位真空加载过程的大型模型试验研究	詹良通, 江文豪, 王顺玉, 杨 策, 庄 涛 (32)
基于旁压试验获得计算参数的非线性沉降计算方法	张玉成, 胡海英, 杨光华, 钟志辉, 刘 琼, 刘翔宇 (38)
交通荷载作用下 K_0 固结硬黏土动力特性研究	刘旭明, 潘 坤, 杨仲轩, 蔡袁强 (45)
基于离心模型试验的降雨诱发滑坡宏观机理研究	杜 强, 周 健 (50)
应力洛德角旋转路径下粗粒土的力学行为	周跃峰, 潘家军, 程展林, 左永振 (55)
珊瑚砂最大剪切模量和阻尼比的共振柱试验研究	李小梅, 王 芳, 韩 林, 关云飞, 占鑫杰 (60)
海水侵蚀环境对钙质砂水泥土强度影响及微观结构研究	万志辉, 戴国亮, 龚维明, 竺明星, 高鲁超 (65)
水平受荷桩桩身响应的线性方程解及应用分析	李 炆, 吴曙光, 张四平, 高倩德, 黄 磊 (70)
筑坝堆石料力学特性试验等效密度确定方法研究	卢一为, 程展林, 潘家军, 江泊洵, 徐 晗 (75)
基于 Akima 插值理论的水平试桩数据处理方法研究	竺明星, 尹 倩, 龚维明, 戴国亮, 卢红前 (80)
复合地基离心模型试验桩土应力分布测试分析	姜彦彬, 何 宁, 何 斌, 汪璋淳, 张中流, 朱 锐 (85)
旋挖扩孔灌注桩抗拔机理模型试验	陈立宏, 刘 丽, 张志鹏 (90)
干湿循环作用下粉煤灰改良黄土路基的动强度试验研究	钟秀梅, 王 谦, 刘钊钊, 白 兰, 马金莲, 刘富强, 李 娜, 王 峻 (95)
砾石土心墙料的强度与变形特性试验研究	左永振, 赵 娜, 周跃峰 (100)
基于 NHRI 离心机机械手的港池开挖模拟研究	任国峰, 蔡正银, 顾行文, 徐光明 (105)
不同雨强条件下黄土边坡降雨入渗特性模型试验研究	曾昌禄, 李荣建, 关晓迪, 张世斌, 白维仕 (111)
静动荷载作用下海洋软黏土刚度弱化特性研究	陆素洁, 童俊豪, 潘 坤, 袁宗浩, 潘晓东, 史 吏, 何 奔 (116)
一种低液限黏土的分散性试验研究	彭文明, 李 建, 张延亿, 罗启迅 (121)
基于自然应变损伤模型的膨胀土冻融损伤分析	赵顺利, 邓伟杰, 路新景, 方旭东, 李雪统 (127)
抗滑短桩加固土坡模型试验及数值分析	曾红艳, 韩利彪, 周 成, 刘 伟, 谭昌明 (132)
无侧限抗压强度异常值处理新方法的研究	刘鸿飞, 刘俊芳, 苏跃宏, 金 言 (137)
新型透明黏土的配制及其基本特性研究	吴跃东, 陈明建, 周云峰, 刘 坚 (141)
磁悬浮列车运行引起的环境微振动实测分析	余宽原, 顾晓强, 黄茂松, 马险峰, 李 宁 (146)
P 波波速与孔隙水压力系数 B 值关系的弯曲元试验研究	顾晓强, 左康乐, 高广运 (151)
振冲桩法碎石原料与实际成桩体抗剪强度差异试验研究	江泊洵, 王小华, 饶锡保, 丁高俊, 张雪杨, 黄 帅 (156)
堆石料变形特性尺度效应的理论基础及应用验证	魏 然, 吴帅峰, 汪小刚, 蔡 红 (161)
沥青混凝土心墙坝抗震加固离心机振动台试验研究	焦 阳, 任国峰, 彭卫军, 顾行文, 王年香 (167)
改性土-阻隔土阻隔屏障化学渗透膜效应研究	傅贤雷, 张 润, 万 勇, 杜延军, 杨玉玲, 毕钰璋 (172)
组合根系加固坡土的直剪试验及数值模拟	王一冰, 吴美苏, 周 成 (177)
基于最小二乘和修正 Kumar 法的动模量计算方法	沈吉荣, 陈少林 (183)
原状软黏土空心圆柱试样制备技术改进及应用	丁 智, 虞健刚, 孙苗苗, 叶 科, 陆 钊 (188)
水平荷载作用下压力型扩大头锚杆承载特性试验研究	王 哲, 陆柯颖, 王乔坎, 崔涵晟, 任 康, 马少俊, 许四法 (193)
基于改进 SSRT 测试方法的砂土颗粒侵蚀特性试验	袁 野, 王 琛, 梁发云 (198)
潮位变化对江底大直径盾构管片受力影响现场测试研究	阳军生, 戴 勇, 房中玉, 章 怡, 龚方浩 (203)
非接触测试技术在模型沉桩试验中的应用	姜 贇, 陆 烨, 唐侨楚, 王校勇 (208)
适用于显微 CT 扫描的微型动三轴仪研制与试验验证	蒋明镜, 吕 雷, 石安宁, 曹 培, 吴晓峰 (214)
离岸多隔舱钢桶基础下沉和顶升原位试验	曹永勇 (219)
山岭隧道收敛变形无线感知及预测方法	王天宁, 王利宁, 薛亚东, 张 越, 张东明, 黄宏伟 (224)
北疆白砂岩与泥岩的土水特征曲线及渗透曲线实验研究	谭志翔, 王正中, 葛建锐, 江浩源, 刘铨鸿, 孟晓栋 (229)
湿干冻融耦合作用下膨胀土裂隙发育方向性研究	张 晨, 朱 洵, 黄英豪, 郭万里, 韩 迅 (234)
赤泥基土壤聚合物固化重金属的机理研究	周 显, 胡 波, 童 军, 侯浩波, 张 婷, 万 沙, 耿军军 (239)
压实度和含水率对非饱和土导热系数的影响	徐 洁, 胡海涛, 郑 植 (244)
基于 MICP 技术的淤泥质土固化试验研究	蔡 红, 肖建章, 王子文, 李 洁 (249)
微生物诱导矿化风沙土的紫外侵蚀微观试验研究	高 瑜, 姚 德, 韩宏伟, 李 驰 (254)

CONTENTS

Experimental study on special physical and mechanical properties of white sandstone in North Xinjiang	
.....	DENG Ming-jiang, CAI Zheng-yin, GUO Wan-li, HUANG Ying-hao, ZHANG Chen (1)
Development of miniature triaxial apparatus for testing of macro- and micro-mechanical behaviors of soils	
.....	JIANG Ming-jing, LI Guang-shuai, CAO Pei, WU Xiao-feng (6)
Experimental study on soil-water characteristic curves of sandy loess	
.....	CAI Guo-qing, HAN Bo-wen, YANG Yu, LIU Yi, ZHAO Cheng-gang (11)
Effects of clay content on physical and mechanical properties of fine tailings	
.....	HU Zai-qiang, GUO Jing, LIANG Zhi-chao, WANG Kai, FENG Zhe, CHEN Zhen-peng (16)
Fixed-axis shear characteristics of anisotropic calcareous sand under variation of principal stress axes	
.....	SHEN Yang, LIANG Hui, GE Hua-yang, YU Yan-ming, SHEN Xue (22)
Attitude monitoring and simulation of composite bucket foundation of wind turbine	
.....	GUAN Yun-fei, HAN Xun, CAO Yong-yong, LIU Yong-gang, TANG Yi, ZHU Xun, ZHANG Chen, LI Peng-fei (27)
Large-scale model test investigation on self-weight consolidation and low vacuum loading process of construction waste slurry ...	
.....	ZHAN Liang-tong, JIANG Wen-hao, WANG Shun-yu, YANG Ce, ZHUANG Tao (32)
Non-linear settlement calculation method based on soil parameters obtained from pressuremeter tests	
.....	ZHANG Yu-cheng, HU Hai-ying, YANG Guang-hua, ZHONG Zhi-hui, LIU Qiong, LIU Xiang-yu (38)
Cyclic response of K_0 -consolidated stiff clay under traffic loading	
.....	LIU Xu-ming, PAN Kun, YANG Zhong-xuan, CAI Yuan-qiang (45)
Centrifugal model tests on slope failure induced by rainfall	DU Qiang, ZHOU Jian (50)
Behaviour of coarse grained soil with rotation path of stress Lode's angle	
.....	ZHOU Yue-feng, PAN Jia-jun, CHENG Zhan-lin, ZUO Yong-zhen (55)
Resonant column tests on maximum shear modulus and damping ratio of coral sand	
.....	LI Xiao-mei, WANG Fang, HAN Lin, GUAN Yun-fei, ZHAN Xin-jie (60)
Strength and microstructure of calcareous sand-cemented soil under seawater erosion environment	
.....	WAN Zhi-hui, DAI Guo-liang, GONG Wei-ming, ZHU Ming-xing, GAO Lu-chao (65)
Linear equation solution of horizontally loaded piles and its application	
.....	LI Yang, WU Shu-guang, ZHANG Si-ping, GAO Qian-de, HUANG Lei (70)
Equivalent density determination method for dam rockfill materials in mechanical tests	
.....	LU Yi-wei, CHENG Zhan-lin, PAN Jia-jun, JIANG Ji-wei, XU Han (65)
Data processing method for laterally loaded trial piles based on Akima interpolation theory	
.....	ZHU Ming-xing, YIN Qian, GONG Wei-ming, DAI Guo-liang, LU Hong-qian (80)
Distribution of pile-soil stress in centrifugal modelling of composite foundation	
.....	JIANG Yan-bin, HE Ning, HE Bin, WANG Zhang-chun, ZHANG Zhong-liu, ZHU Rui (85)
Model tests on pull-out mechanism of rotary excavation squeezed cast-in-place piles ...	CHEN Li-hong, LIU Li, ZHANG Zhi-peng (90)
Dynamic strength of fly ash-modified loess subgrade under influences of drying-wetting cycle	
.....	ZHONG Xiu-mei, WANG Qian, LIU Zhao-zhao, BAI Lan, MA Jin-lian, LIU Fu-qiang, LI Na, WANG Jun (95)
Experimental study on strength and deformation characteristics of gravelly soil core materials	
.....	ZUO Yong-zhen, ZHAO Na, ZHOU Yue-feng (100)
Basin excavation using robotic manipulator of geo-centrifuge at NHRI	
.....	REN Guo-feng, CAI Zheng-yin, GU Xing-wen, XU Guang-ming (105)
Experimental study on rainfall infiltration characteristics of loess slopes under different rainfall intensities	
.....	ZENG Chang-lu, LI Rong-jian, GUAN Xiao-di, ZHANG Shi-bin, BAI Wei-shi (111)
Stiffness degradation of marine soft clay under monotonic and cyclic loadings	
.....	LU Su-jie, TONG Jun-hao, PAN Kun, YUAN Zong-hao, PAN Xiao-dong, SHI Li, HE Ben (116)

Experimental study on dispersion of one kind of low liquid limit clay	···	PENG Wen-ming, LI Jian, ZHANG Yan-yi, LUO Qi-xun	(121)
Freeze-thaw damage analysis of expansive soils based on natural strain damage model	·····	ZHAO Shun-li, DENG Wei-jie, LU Xin-jing, FANG Xu-dong, LI Xue-tong	(127)
Model tests and numerical analysis of slopes reinforced by short anti-sliding piles	·····	ZENG Hong-yan, HAN Li-biao, ZHOU Cheng, LIU Wei, TAN Chang-ming	(132)
New method for dealing with unconfined compressive strength outliers	··	LIU Hong-fei, LIU Jun-fang, SU Yue-hong, JIN Yan	(137)
Distribution and basic characteristics of new transparent clay	·····	WU Yue-dong, CHEN Ming-jian, ZHOU Yun-feng, LIU Jian	(141)
Measurement and analysis of environmental vibration caused by maglev train	·····	YU Kuan-yuan, GU Xiao-qiang, HUANG Mao-song, MA Xian-feng, LI Ning	(146)
Investigation on relationship between P-wave velocity and <i>B</i> -value by bender element tests	·····	GU Xiao-qiang, ZUO Kang-le, GAO Guang-yun	(151)
Experimental study on difference of shear strength between gravel materials and actual vibroflotation piles	·····	JIANG Ji-wei, WANG Xiao-hua, RAO Xi-bao, DING Gao-jun, ZHANG Xue-yang, HUANG Shuai	(156)
Theoretical basis and application verification of scale effects of deformation characteristics of rockfill	·····	WEI Ran, WU Shuai-feng, WANG Xiao-gang, CAI Hong	(161)
Aseismic measures for asphalt concrete core dams by dynamic centrifuge modelling tests	·····	JIAO Yang, REN Guo-feng, PENG Wei-jun, GU Xing-wen, WANG Nian-xiang	(167)
Chemico-osmotic membrane behaviors of amended soil-bentonite vertical barrier	·····	FU Xian-lei, ZHANG Run, WAN Yong, DU Yan-jun, YANG Yu-ling, BI Yu-zhang	(172)
Direct shear tests and numerical simulation on slope soils reinforced by composite roots	·····	WANG Yi-bing, WU Mei-su, ZHOU Cheng	(177)
Method for dynamic modulus based on least square and modified Kumar methods	·····	SHEN Ji-rong, CHEN Shao-lin	(183)
Improvement and application of preparing technique for hollow cylinder samples of undisturbed soft clay	·····	DING Zhi, YU Jian-gang, SUN Miao-miao, YE Ke, LU Zhao	(188)
Experimental study on failure characteristics of pressured under-reamed anchors under horizontal loads	·····	WANG Zhe, LU Ke-ying, WANG Qiao-kan, CUI Han-sheng, REN Kang, MA Shao-jun, XU Si-fa	(193)
Erosion resistance of sand particles based on improved device in simplified scour resistance test	·····	YUAN Ye, WANG Chen, LIANG Fa-yun	(198)
Field tests on effects of changes of tidal level on stress of large-diameter shield segments under rivers	·····	YANG Jun-sheng, DAI Yong, FANG Zhong-yu, ZHANG Yi, GONG Fang-hao	(203)
Application of non-contact testing technology in model tests on press-in piles	·····	JIANG Yun, LU Ye, TANG Qiao-chu, WANG Xiao-yong	(208)
Development of miniature dynamic triaxial apparatus for micro-CT scanning and its experimental verification	·····	JIANG Ming-jing, LÜ Lei, SHI An-ning, CAO Pei, WU Xiao-feng	(214)
In-situ tests on sinking and lifting on offshore steel-bucket foundation with multi-bay	·····	CAO Yong-yong	(219)
Wireless sensing and prediction method for convergence deformation of mountain tunnels	·····	WANG Tian-ning, WANG Li-ning, XUE Ya-dong, ZHANG Yue, ZHANG Dong-ming, HUANG Hong-wei	(224)
Experimental study on soil-water characteristic curve and permeability curve of white sandstone and mudstone in northern Xinjiang	·····	TAN Zhi-xiang, WANG Zheng-zhong, GE Jian-rui, JIANG Hao-yuan, LIU Quan-hong, MENG Xiao-dong	(229)
Directionality of fissures in expansive soils under cyclic action of coupling wetting-drying and freeze-thaw	·····	ZHANG Chen, ZHU Xun, HUANG Ying-hao, GUO Wan-li, HAN Xun	(234)
Mechanism of heavy metal stabilization by red mud-based geopolymer	·····	ZHOU Xian, HU Bo, TONG Jun, HOU Hao-bo, ZHANG Ting, WAN Sha, GENG Jun-jun	(239)
Effects of compaction and water content on thermal conductivity of unsaturated soils	·····	XU Jie, HU Hai-tao, ZHENG Zhi	(244)
Experimental study on solidification of soft clay based on MICP	·····	CAI Hong, XIAO Jian-zhang, WANG Zi-wen, LI Jie	(249)
Micro-experiment on MICP-treated Aeolian sandy soil under ultraviolet erosion environment	·····	GAO Yu, YAO De, HAN Hong-wei, LI Chi	(254)