

第 45 卷 第 4 期 2026 年 4 月

目 次

· 水泥混凝土 ·

镍铁渣初始粒径对水泥砂浆碱骨料反应的影响王 伟,叶 子,于 淇,张亚梅(1109)

疏水改性煅烧硅藻土砂浆的制备及性能王海皓,甘元初,侯庆振,陈振富,金 丹,付新博(1122)

自然风化作用下碳化养护水泥基材料的力学性能劣化机制杨雪滢,王开元,王耀城,占宝剑,邢 锋(1132)

不同结构形式玄武岩纤维织物增强水泥基复合材料弯曲性能研究
.....闫 飞,翁玉宽,崔哲琪,陈政康,邓子意,贾明皓(1142)

海水珊瑚砂粉工程水泥基复合材料高温暴露后的性能研究
.....洪川海,梁瑞庆,梁振升,张伯涛,唐雪梅,阮国威,林嘉祥(1151)

环氧-水泥基渗透结晶型复合涂层对混凝土氯盐冻融防护性能的影响
.....付 涛,耿 琳,任宪富,李 燕,杨 波,李伟华(1160)

纤维素醚对衬砌混凝土力学与工作性能的影响王解放,许德金,李 胜,任万里,陈佩圆(1175)

促凝早强剂对喷射混凝土性能的影响李顺凯,陈荣辉,董 勋,窦华康,孙凤品(1184)

振动搅拌对粉煤灰混凝土性能与碳排放的影响朱世栋,陈纩年,李忠慧,张 宇,张云升,李王鑫(1193)

复掺缓凝剂对 3D 打印混凝土建造性能的影响吴 捷,唐振中,邓 恺,姚 勇(1208)

混凝土裂缝用地聚物注浆修复材料的性能优化及应用研究
.....魏舒鹏,崔晨晨,王德辉,罗正东,罗 进,王亚军,陈英豪(1220)

· 资源综合利用 ·

含氟污泥处置现状及玻璃固化研究进展周泽云,陈金淼,彭彩茹,田英良,于广才,何 峰,赵志永,吴玉锋(1231)

浅水海砂骨料矿物特征及物理力学性能研究林明智,陈 畅,陈 波(1240)

黄河细砂对泡沫轻质土性能的影响.....韩 磊,曹红星,任家芳,郭志翔,宋普涛,王 晶,冷发光(1248)

粉煤灰与水库淤泥制备烧砖结及性能研究张世瑜,周 阳,李志强,陈雨闲,周树斌,楚永焱,沈鹏程(1256)

煤矸石混合砂混凝土宏观力学性能及微观机理研究邹仁华,胡小龙,冯泽平,牛高辉,邱继生(1266)

Mg²⁺-SO₄²⁻-Cl⁻ 侵蚀粉煤灰-偏高岭土复掺再生混凝土离子传输与物相组成演化研究
.....刘东明,杨关飞,朱辉国,王家滨,韩会阳(1282)

硅灰-玻璃纤维全再生粗骨料混凝土力学性能研究郭阳光,秦拥军,罗 玲,湛君诚,李 琦,程 昊(1296)

硅灰-聚甲醛纤维再生水工混凝土力学和耐水性能研究湛君诚,罗 玲,秦拥军,郭阳光,李 琦,程 昊(1304)

碱当量对磷石膏-碱矿渣泡沫混凝土性能的影响陈子涵,郭煜东,吕钦飞,梁咏宁,季 韬(1315)

· 陶 瓷 ·

- 热压烧结 SiCN 陶瓷的介电和吸波性能刘宏瑞,马登浩,陈 科,程业红,王洪磊,余金山,周新贵(1324)
- 红色油滴釉的制备及析晶动力学表征陈冬丽,吴廖兴,王海波(1335)
- TEOS 掺杂浓度对 $Tb_3Al_5O_{12}$ 陶瓷显微结构的影响段萍萍,万 众,王银珍,甯杰妮(1346)
- 玻璃粉体粒径对 $CaO-B_2O_3-La_2O_3/Al_2O_3$ LTCC 复合材料烧结致密化及性能的影响
.....吕子彬,曹 禹,何 坤,那 华,吕金玉,海 韵,徐 博,韩 滨,王衍行,祖成奎(1354)
- 陶瓷行业低碳技术多维度评价研究——基于熵权-TOPSIS 模型
.....倪亚玲,金子豪,聂 卿,何 捷,邸 杨,崔敬轩(1368)

· 玻 璃 ·

- 模拟高放废液玻璃固化体析晶率的测定韩 蔚,郭子健,崔 竹,李昕阳,蔡寒梅,焦云杰,王晓云,郭中宝(1378)
- 基于对比试验确定复合玻璃等效厚度的方法曹大可,刘小根,艾 湘,杨 喆,尹 睿,张傲楠(1386)
- 基于界面强化的磷酸盐玻璃与铜可靠封接技术研究兰 杨,王衍行,殷先印,廖其龙,王 辅,竹舍真(1398)

· 功能材料 ·

- 超疏水涂层材料的研究进展:从设计原理到应用霍明达,杨 洋,曲灏洋,任俊波,孙晓红,肖凯业(1408)
- 逆温结晶法生长 $CsPbBr_3$ 单晶研究进展胡嘉宁,卜恒勇(1423)
- 分散剂对溶胶-凝胶法制备 $La(TiMnCoNiCu)O_3$ 高熵氧化物可见光催化活性的影响
.....祁志宏,李 恪,沈宏芳,马聪聪,马 慧(1433)

· 道路材料 ·

- 电石渣改良膨胀土工程特性与微观机理研究苑晓青,赵祥铭,牛岑岑,刘田田,勾乙林(1445)
- 节段预制 UHPC 大键齿胶接缝直剪性能陈伟忠,李明阳,麦 鹏,周 旋,刘旭聪(1459)
- 基于磨损特性及矿物组成的粗集料耐磨性研究陈 庚,李晓龙,侯建伟,贾敬鹏(1471)

BULLETIN OF THE CHINESE CERAMIC SOCIETY

Vol. 45 No. 4 April 2026 (Series No. 355)

CONTENTS

• Cement and Concrete •

- Influence of Initial Particle Size of Ferronickel Slag on Alkali-Silica Reaction in Cement Mortar
.....WANG Wei, YE Zi, YU Qi, ZHANG Yamei(1109)
- Preparation and Performance of Hydrophobic-Modified Calcined Diatomite Mortar
.....WANG Haihao, GAN Yuanchu, HOU Qingzhen, CHEN Zhenfu, JIN Dan, FU Xinbo(1122)
- Mechanisms of Mechanical Property Degradation of Carbonation Curing Cement-Based Materials under Natural Weathering
.....YANG Xueying, WANG Kaiyuan, WANG Yaocheng, ZHAN Baojian, XING Feng(1132)
- Bending Properties of Basalt Fiber Fabric Reinforced Cement-Based Composite Materials with Different Structural Forms
.....YAN Fei, WENG Yukuan, CUI Zheqi, CHEN Zhengkang, DENG Ziyi, JIA Minghao(1142)
- Properties of Seawater Coral Sand Powder Engineered Cementitious Composites after High-Temperature Exposure
.....HONG Chuanhai, LIANG Ruiqing, LIANG Zhensheng, ZHANG Botao, TANG Xuemei, RUAN Guowei, LIN Jiayang(1151)
- Effect of Epoxy-Cement-Based Permeable Crystalline Composite Coating on Chloride Salt Freeze-Thaw Protection Performance of Concrete
.....FU Tao, GENG Lin, REN Xianfu, LI Yan, YANG Bo, LI Weihua(1160)
- Influence of Cellulose Ether on Mechanical and Workability Properties of Lining Concrete
.....WANG Jiefang, XU Dejin, LI Sheng, REN Wanli, CHEN Peiyuan(1175)
- Effect of Accelerator and Early Strength Agent on Properties of Shotcrete
.....LI Shunkai, CHEN Ronghui, DONG Xun, DOU Huakang, SUN Fengpin(1184)
- Effect of Vibration Mixing on Performance and Carbon Emissions of Fly Ash Concrete
.....ZHU Shidong, CHEN Wannian, LI Zhonghui, ZHANG Yu, ZHANG Yunsheng, LI Wangxin(1193)
- Influence of Composite Retarder on Construction Performance of 3D Printing Concrete
.....WU Jie, TANG Zhenzhong, DEI Kai, YAO Yong(1208)
- Performance Optimization and Application of Geopolymer Grouting Repairing Material for Concrete Crack
.....WEI Shupeng, CUI Chenchen, WANG Dehui, LUO Zhengdong, LUO Jin, WANG Yajun, CHEN Yinghao(1220)

• Solid Waste and Eco-Materials •

- Current Status of Fluorine-Containing Sludge Disposal and Research Progress in Glass Solidification
.....ZHOU Zeyun, CHEN Jinmiao, PENG Cairu, TIAN Yingliang, YU Guangcai, HE Feng, ZHAO Zhiyong, WU Yufeng(1231)
- Mineral Characteristics, Physical and Mechanical Properties of Shallow Marine Sand Aggregates
.....LIN Mingzhi, CHEN Yang, CHEN Bo(1240)
- Influence of Yellow River Fine Sand on Performance of Foamed Lightweight Soil
.....HAN Lei, CAO Hongxing, REN Jiafang, GUO Zhixiang, SONG Putao, WANG Jing, LENG Faguang(1248)
- Fabrication and Performance of Sintered Bricks from Fly Ash and Reservoir Sediment
.....ZHANG Shiyu, ZHOU Yang, LI Zhiqiang, CHEN Yuxian, ZHOU Shubin, CHU Yongyan, SHEN Pengcheng(1256)
- Macro-Mechanical Properties and Microscopic-Mechanism of Coal Gangue Mixed Sand Concrete
.....ZOU Renhua, HU Xiaolong, FENG Zeping, NIU Gaohui, QIU Jisheng(1266)
- Ion Transport and Mineral Phases Composition Evolution in Recycled Aggregate Concrete with Fly Ash-Metakaolin Exposed to Mg^{2+} - SO_4^{2-} - Cl^- Solution
.....LIU Dongming, YANG Guanfei, ZHU Huiguo, WANG Jiabin, HAN Huiyang(1282)
- Mechanical Properties of Silica Fume and Glass Fiber Fully Recycled Coarse Aggregate Concrete
.....GUO Yangguang, QIN Yongjun, LUO Ling, CHEN Juncheng, LI Qi, CHENG Hao(1296)

Mechanical Properties and Water Resistance of Recycled Hydraulic Concrete with Silica Fume and Polyoxymethylene FiberCHEN Juncheng, LUO Ling, QIN Yongjun, GUO Yangguang, LI Qi, CHENG Hao(1304)

Effect of Alkali Equivalent on Properties of Phosphogypsum-Alkali-Activated Slag Foam ConcreteCHEN Zihan, GUO Yudong, LYU Qinfei, LIANG Yongning, JI Tao(1315)

• **Ceramics** •

Dielectric Property and Microwave Absorption Performance of Hot-Pressing Sintering SiCN CeramicsLIU Hongrui, MA Denghao, CHEN Ke, CHENG Yehong, WANG Honglei, YU Jinshan, ZHOU Xingui(1324)

Preparation and Crystallization Kinetics Characterization of Red Oil Droplet GlazeCHEN Dongli, WU Liaoxing, WANG Haibo(1335)

Effect of TEOS Doping Concentration on Microstructure of $Tb_3Al_5O_{12}$ CeramicsDUAN Pingping, WAN Zhong, WANG Yinzhen, NING Jieni(1346)

Influence of Particle Size of Glass Powder on Densification Behavior and Properties of $CaO-B_2O_3-La_2O_3/Al_2O_3$ LTCC Composite Material ...LYU Zibin, CAO Yu, HE Kun, NA Hua, LYU Jinyu, HAI Yun, XU Bo, HAN Bin, WANG Yanhang, ZU Chengkui(1354)

Multi-Dimensional Evaluation of Low-Carbon Technologies in Ceramic Industry—Based on Entropy Weight-TOPSIS Model.....NI Yaling, JIN Zihao, NIE Qing, HE Jie, DI Yang, CUI Jingxuan(1368)

• **Glass** •

Determination of Crystallization Rate in Simulated High Level Radioactive Waste GlassHAN Wei, GUO Zijian, CUI Zhu, LI Xinyang, CAI Hanmei, JIAO Yunjie, WANG Xiaoyun, GUO Zhongbao(1378)

Comparative Method for Determining Effective Thickness of Composite Glass Based on Comparative TestCAO Dake, LIU Xiaogen, AI Xiang, YANG Zhe, YIN Rui, ZHANG Aonan(1386)

Reliable Sealing Technology for Phosphate Glass and Copper Based on Interface ReinforcementLAN Yang, WANG Yanhang, YIN Xianyin, LIAO Qilong, WANG Fu, ZHU Hanzhen(1398)

• **Functional Materials** •

Research Progress on Superhydrophobic Coatings Materials: from Design Principles to ApplicationsHUO Mingda, YANG Yang, QU Haoyang, REN Junbo, SUN Xiaohong, XIAO Kaiye(1408)

Research Progress on Growth of $CsPbBr_3$ Single Crystals by Inverse Temperature CrystallizationHU Jianing, BU Hengyong(1423)

Effects of Dispersants on Visible-Light Photocatalytic Activity of Sol-Gel-Derived $La(TiMnCoNiCu)O_3$ High-Entropy OxidesQI Zhihong, LI Ke, SHEN Hongfang, MA Congcong, MA Hui(1433)

• **Road Materials** •

Engineering Characteristics and Microscopic Mechanism of Expansive Soil Improved by Carbide SlagYUAN Xiaoqing, ZHAO Xiangming, NIU Cencen, LIU Tiantian, GOU Yilin(1445)

Direct Shear Behavior of Segment Precast UHPC Big Shear Key Epoxy JointsCHEN Weizhong, LI Mingyang, MAI Peng, ZHOU Xuan, LIU Xucong(1459)

Wear Resistance of Coarse Aggregate Based on Abrasion Characteristics and Mineral CompositionCHEN Geng, LI Xiaolong, HOU Jianwei, JIA Jingpeng(1471)