

第 43 卷 第 9 期 2024 年 9 月

目 次

· 水泥混凝土 ·

水泥浆拌和固化二氧化碳对水泥性能的影响 王亚丽,赵馨宇,蒙万友,王梦璐,张 萌(3109)

聚丙烯酰胺与减水剂对水泥水化的影响 殷 俊,钱 雄,胡传林(3118)

合成过程中聚羧酸共聚物用量对纳米 C-S-H 晶核成核及其早强作用的影响
..... 唐芮枫,崔素萍,杨飞华,王肇嘉,王子明(3128)

抗收缩 ECC 单轴拉压力学性能及损伤本构模型 陈 宇,宋学伟,吴佳梁(3137)

含 MgO 膨胀剂的水泥砂浆在恒温 and 变温养护制度下的限制膨胀率
..... 段劲松,崔 勇,付勇攀,宋奇达,于 晓,王 涛,凌研方,房奎圳(3149)

负载不同引气剂的 SiO₂ 复合材料的制备及其在水泥基材料中的应用
..... 沈 斐,乔 敏,单广程,吴庆勇(3157)

骨料种类对超高性能混凝土性能影响机理研究 吴晓刚,杨健辉,袁冬冬,田道坡,李志超,王庭辉(3164)

C-S-H 凝胶无定型纳米孔隙中 NaCl 蒸发结晶分子动力学分析 赵国庆,杨进波,尹 航(3173)

高温后风积沙混凝土力学性能与微观结构试验研究 赵燕茹,龙思睿,白建文,刘 明(3182)

基于响应面法的地聚物混凝土力学性能试验研究
..... 张震洋,张 璐,伊海赫,郑 润,马克顺,张 琳,任梦琪,王春光(3192)

低温作用下钢纤维地聚合物混凝土力学性能研究 王萧萧,董培森,杨鑫瑞,张 菊,闫长旺,董宇飞(3203)

减水剂与钢纤维对超高性能混凝土流变及力学性能的影响
..... 黄 斌,龚明子,潘阿馨,饶先鹏,王 涛,陈 晨,黄 伟(3214)

钢筋混凝土水池壁板水平施工缝抗渗性能试验研究 李晓帆,张 爽,周仲煜,周 知,黄 维(3224)

盐碱环境下氯化物侵蚀对混凝土桥梁耐久性的影响 蔺鹏臻,任锦波(3235)

· 资源综合利用 ·

火成岩质矿物材料对混凝土性能的影响 王 浩,谭盐宾,刘 星,杨 鲁,元 强,谢斌福,刘 博(3244)

煤矸石集料的加速风化制度研究 龚天天,陈 潇,张彦君,陈志军,王文军,周明凯(3252)

低温环境下硅灰改性煤矸石混凝土孔隙结构演变
..... 李少平,单俊伟,刘小芹,郭美蓉,张雪宁,景宏君,高 萌,陈少杰(3262)

低温环境下硅灰对掺无碱速凝剂水泥砂浆抗压强度和抗渗性的影响
..... 刘亚炜,胡 阳,罗 琦,鲁刘磊,裴大田,李斌斌,马 俊,汪峻峰(3273)

青稞秸秆灰改性氯氧镁水泥砂浆防护钢筋混凝土的损伤特性

- 崔丽君,乔宏霞,曹 锋,舒修远,盛程辉(3282)
- 提钛尾渣基硅酸钙板的制备及性能研究 安心宇,李 林,张 兰,姜 涛(3294)
- 可溶性磷对大掺量磷石膏胶凝材料水化过程的影响 康雪儿,黄 赟,刘 刚,何明皓,万惠文(3303)
- 碱激发矿渣-粉煤灰胶凝材料力学性能影响因素分析 孙开强,刘 琳,郑蕙陈(3313)
- 硅灰-聚丙烯纤维双掺混凝土的动静态力学性能 李艳艳,杜晓丽,王浩伟,徐 锴(3320)
- 基于 CART 模型的高铁灰渣玻璃形成能力研究 王 伟,方 广,陈 祎,张乾生,徐 凯(3330)
- 玻璃粉和生物炭对砂浆塑性收缩及开裂行为的影响 罗浩然,刘 惠,周一一,Amardeep Singh,刘 琼(3337)
- 可完全循环水泥砂浆配料制备贝利特水泥熟料的性能研究 崔莹莹,何健辉,吕民望,杨 露,刘云鹏(3348)
- 双掺石墨烯-氧化石墨烯再生粗骨料混凝土力学性能和抗冻耐久性研究
..... 刘宏波,贾小静,张博洋,孙 岩,李 泳,常 璞,孙 婧(3359)
- 预湿再生砂与膨胀剂协同作用对再生砂混凝土收缩性能的影响 李北星,郭裕鑫,易 浩,金德川(3368)

· 陶 瓷 ·

$Mg_{0.27}Al_{2.58}O_{3.73}N_{0.27}$ 透明陶瓷的热压/热等静压烧结制备与性能

- 陈 浩,杨静潇,徐 勇,靖正阳,涂兵田,王 皓(3378)
- 不同熔剂体系制备的陶瓷岩板及其性能 赵存河,聂光临,刘一军,左 飞,庞伟科,汪庆刚,包亦望(3386)
- 高熵烧绿石($La_{1/6}Pr_{1/6}Nd_{1/6}Sm_{1/6}Eu_{1/6}Gd_{1/6}$)₂Zr₂O₇ 固化铀系核素的结构和化学稳定性研究
..... 杜瞻远,朱永昌,崔 竹,焦云杰,董炫疆,王东宇,杨德博,王 华(3399)
- 吉州窑绿釉的无铅化复现与呈色调控 温梦涛,张效华,岳振星(3407)
- 一步烧结制备锂镧钛氧直孔陶瓷及其固态电池性能研究 辛文凯,马晓君,杨尚运,毛东旭,李加杰(3417)
- 碳化硅多孔介质内渗硅过程的仿真研究
..... 张栩熙,张 舸,包建勋,崔聪聪,郭聪慧,李 伟,张 巍,朱万利,徐传享,曹 琪,董斌超,周立勋,李易霖(3424)

· 玻 璃 ·

- 高折射率光学玻璃的研究进展 王衍行,刘家宇,李现梓,杨鹏慧,竹含真,韩 韬(3438)
- ZnO 对尖晶石微晶玻璃的析晶和性能影响 陈考翔,王明忠,饶 宇,崔佳琳,陶海征,陆 平(3446)
- 两点弯曲下柔性玻璃变形和疲劳行为研究 魏韶山,饶美娟,刘小根,曹大可,万德田,郑德志(3455)
- 甲烷-烟气流量比对全氧燃烧玻璃窑炉热化学重整过程的影响
..... 曾红杰,周文彩,官 敏,沈中杰,何贵楠,陈淑勇,陈家睿,李红强,左泽方(3462)

· 新型功能材料 ·

- 室温挤出 3D 打印 HA/ β -TCP/DCPA 骨支架的复合浆料研究 韩 峥,汪 涛,刘治伟,聂云鹏,王雪婷(3472)

· 道路材料 ·

- 纤维改性水泥基材料研究进展:水泥稳定基层 陈 峰,仪 珂,王朝辉,党武娟,屈希峰(3479)

· 评述广角 ·

- 基于产教融合的无机非金属材料工程专业实践教学体系改革与探索 饶美娟,王发洲,杨 露(3494)

BULLETIN OF THE CHINESE CERAMIC SOCIETY

Vol. 43 No. 9 September 2024 (Series No. 336)

CONTENTS

• Cement and Concrete •

- Effect of Cement Paste Mix Sequestration Carbon Dioxide on Cement Properties
..... WANG Yali, ZHAO Xinyu, MENG Wanyou, WANG Menglu, ZHANG Meng(3109)
- Effects of Polyacrylamide and Water Reducer on Hydration of Cement YIN Jun, QIAN Xiong, HU Chuanlin(3118)
- Effect of Dosage of Polycarboxylate Copolymer Used in Synthesis Process on Nucleation and Early Strength of Nano C-S-H Seeds TANG Rui Feng, CUI Suping, YANG Feihua, WANG Zhaojia, WANG Ziming(3128)
- Uniaxial Tensile and Compressive Mechanical Properties of Shrinkage-Resistant ECC and Damage Constitutive Model CHEN Yu, SONG Xuewei, WU Jialiang(3137)
- Restricted Expansion Rate of Cement Mortar Containing MgO Expansive Agent under Constant and Variable Temperature Curing Conditions
..... DUAN Jinsong, CUI Yong, FU Yongpan, SONG Qida, YU Xiao, WANG Tao, LING Yanfang, FANG Kuizhen(3149)
- Preparation of SiO₂ Composite Materials Loaded with Different Air-Entraining Agents and Their Application in Cement-Based Materials SHEN Fei, QIAO Min, SHAN Guangcheng, WU Qingyong(3157)
- Mechanism of Aggregate Type Influence on Properties of Ultra-High Performance Concrete
..... WU Xiaogang, YANG Jianhui, YUAN Dongdong, TIAN Daopo, LI Zhichao, WANG Tinghui(3164)
- Molecular Dynamics of NaCl Evaporation Crystallization in C-S-H Gel Amorphous Nanopores
..... ZHAO Guoqing, YANG Jinbo, YIN Hang(3173)
- Experimental Study on Mechanical Properties and Microstructure of Aeolian Sand Concrete after High Temperature
..... ZHAO Yanru, LONG Sirui, BAI Jianwen, LIU Ming(3182)
- Mechanical Properties of Geopolymer Concrete Based on Response Surface Method
..... ZHANG Zhenyang, ZHANG Lu, YI Haihe, ZHENG Run, MA Keshun, ZHANG Lin, REN Mengqi, WANG Chunguang(3192)
- Mechanical Properties of Steel Fiber Geopolymer Concrete under Low Temperature
..... WANG Xiaoxiao, DONG Peisen, YANG Xinrui, ZHANG Ju, YAN Changwang, DONG Yufei(3203)
- Influences of Water Reducing Agent and Steel Fiber on Rheological and Mechanical Properties of Ultra-High Performance Concrete HUANG Bin, GONG Mingzi, PAN Axin, RAO Xianpeng, WANG Tao, CHEN Chen, HUANG Wei(3214)
- Impermeability of Reinforced Concrete Tank Wall with Horizontal Construction Joints
..... LI Xiaofan, ZHANG Shuang, ZHOU Zhongyu, ZHOU Zhi, HUANG Wei(3224)
- Effect of Chloride Erosion on Durability of Concrete Bridges in Saline Alkali Environments
..... LIN Pengzhen, REN Jinbo(3235)

• Solid Waste and Eco-Materials •

- Influences of Igneous Rock Mineral Materials on Properties of Concrete
..... WANG Hao, TAN Yanbin, LIU Xing, YANG Lu, YUAN Qiang, XIE Binfu, LIU Bo(3244)
- Study on Accelerated Weathering System of Coal Gangue Aggregate
..... GONG Tiantian, CHEN Xiao, ZHANG Yanjun, CHEN Zhijun, WANG Wenjun, ZHOU Mingkai(3252)
- Evolution of Pore Structure in Silica Fume Modified Coal Gangue Concrete under Low Temperature Environment
..... LI Shaoping, SHAN Junwei, LIU Xiaoqin, GUO Meirong, ZHANG Xuening, JING Hongjun, GAO Meng, CHEN Shaojie(3262)
- Influence of Silica Fume on Compressive Strength and Impermeability of Cement Mortar with Alkali-Free Accelerator at Low Temperatures LIU Yawei, HU Yang, LUO Qi, LU Liulei, PEI Datian, LI Binbin, MA Jun, WANG Junfeng(3273)
- Damage Characteristics of Highland Barley Straw Ash Modified Magnesium Oxychloride Cement Mortar Protected Reinforced Concrete CUI Lijun, QIAO Hongxia, CAO Feng, SHU Xiuyuan, SHENG Chenghui(3282)
- Preparation and Performance of Calcium Silicate Board Based on Titanium Tailing Slag
..... AN Xinyu, LI Lin, ZHANG Lan, JIANG Tao(3294)

- Effect of Soluble Phosphorus on Hydration Process of High Content Phosphogypsum Cementitious Materials
 KANG Xueer, HUANG Yun, LIU Gang, HE Minghao, WAN Huiwen(3303)
- Analysis of Influencing Factors on Mechanical Properties of Alkali-Activated Slag-Fly Ash Binder Materials
 SUN Kaiqiang, LIU Lin, ZHENG Hongchen(3313)
- Dynamic and Static Mechanical Properties of Silica Fume-Polypropylene Fiber Double Doped Concrete
 LI Yanyan, DU Xiaoli, WANG Haowei, XU Kai(3320)
- Investigation of Glass-Forming Ability of High-Fe Ash Based on CART Model
 WANG Wei, FANG Guang, CHEN Yi, ZHANG Qiansheng, XU Kai(3330)
- Effects of Glass Powder and Biochar on Plastic Shrinkage and Cracking Behavior of Mortar
 LUO Haoran, LIU Hui, ZHOU Yiyi, AMARDEEP Singh, LIU Qiong(3337)
- Performance of Belite Cement Clinker from Completely Recyclable Cement Mortars
 CUI Yingying, HE Jianhui, LYU Minwang, YANG Lu, LIU Yunpeng(3348)
- Mechanical Properties and Frost Resistance Durability of Recycled Coarse Aggregate Concrete Dual Doping Graphene and Oxide-Graphene LIU Hongbo, JIA Xiaojing, ZHANG Boyang, SUN Yan, LI Yong, CHANG Pu, SUN Jing(3359)
- Effects of Synergistic Action of Pre-Wetting Recycled Sand and Expansion Agents on Shrinkage Properties of Recycled Sand Concrete LI Beixing, GUO Yuxin, YI Hao, JIN Dechuan(3368)

• **Ceramics** •

- Preparation and Properties of $Mg_{0.27}Al_{2.58}O_{3.73}N_{0.27}$ Transparent Ceramics by Hot Pressing and Hot Isostatic Pressing Sintering CHEN Hao, YANG Jingxiao, XU Yong, JING Zhengyang, TU Bingtian, WANG Hao(3378)
- Ceramic Slabs Prepared Using Different Flux System and Its Properties
 ZHAO Cunhe, NIE Guanglin, LIU Yijun, ZUO Fei, PANG Weike, WANG Qinggang, BAO Yiwang(3386)
- Structure and Chemical Durability of Actinide Nuclides Solidified by High-Entropy Pyrochlore $(La_{1/6}Pr_{1/6}Nd_{1/6}Sm_{1/6}Eu_{1/6}Gd_{1/6})_2Zr_2O_7$
 DU Zhanyuan, ZHU Yongchang, CUI Zhu, JIAO Yunjie, DONG Xuanjiang, WANG Dongyu, YANG Debo, WANG Hua(3399)
- Lead-Free Reproduction and Color Regulation of Green Glazes From Jizhou Kiln
 WEN Mengtao, ZHANG Xiaohua, YUE Zhenxing(3407)
- One-Step Sintering Preparation of Lithium Lanthanum Titanium Oxide Straight-Hole Ceramics and Solid-State Battery Performance XIN Wenkai, MA Xiaojun, YANG Shangyun, MAO Dongxu, LI Jiajie(3417)
- Simulation Studies on Silicon Infiltration Process in Porous Silicon Carbide Media
 ZHANG Xuxi, ZHANG Ge, BAO Jianxun, CUI Congcong, GUO Conghui, LI Wei, ZHANG Wei, ZHU Wanli, XU Chuanxiang, CAO Qi, DONG Binchao, ZHOU Lixun, LI Yilin(3424)

• **Glass** •

- Research Progress on High Refractive Index Optical Glass
 WANG Yanhang, LIU Jiayu, LI Xianzi, YANG Penghui, ZHU Hanzhen, HAN Tao(3438)
- Effect of ZnO on Crystallization and Properties of Spinel Glass-Ceramics
 CHEN Kaoxiang, WANG Mingzhong, RAO Yu, CUI Jialin, TAO Haizheng, LU Ping(3446)
- Deformation and Fatigue Behavior of Flexible Glass under Two-Point Bending
 WEI Shaoshan, RAO Meijuan, LIU Xiaogen, CAO Dake, WAN Detian, ZHENG Dezhi(3455)
- Effect of Methane to Flue Gas Flow Ratio on Thermochemical Reforming Process of Oxy-Fuel Combustion Glass Furnaces
 ZENG Hongjie, ZHOU Wencai, GUAN Min, SHEN Zhongjie, HE Guinan, CHEN Shuyong, CHEN Jiarui, LI Hongqiang, ZUO Zefang(3462)

• **New Functional Materials** •

- Composite Slurry for Room-Temperature Extrusion 3D Printing HA/ β -TCP/DCPA Bone Scaffold
 HAN Zheng, WANG Tao, LIU Zhiwei, NIE Yunpeng, WANG Xueting(3472)

• **Road Materials** •

- Research Progress of Fiber Modified Cement-Based Materials; Cement Stabilized Base
 CHEN Feng, YI Ke, WANG Chaohui, DANG Wujuan, QU Xifeng(3479)