



孙建伟 硕士生导师

职 称：副教授

研究方向：土木工程材料

通信地址：青岛市黄岛区嘉陵江东路 777 号

联系方式：jianwei_68@126.com



个人简介

工学博士，清华大学博士后，直聘副教授，硕士生导师。长期致力于土木工程材料的研究，包括固废在建材领域的资源化利用、碱激发胶凝材料、高性能混凝土材料等。主持国家自然科学基金、山东省自然科学基金青年基金等课题 6 项，发表高水平学术论文 30 余篇，申请国内外发明专利 4 项，参编行业或团体标准 2 部。担任《Cement and Concrete Composites》、《Journal of Cleaner Production》、《Construction and Building Materials》、《建筑材料学报》、《复合材料学报》等本领域权威期刊的审稿专家，中国硅酸盐学会固废与生态材料分会青年委员会委员、冶金渣委员会委员和碱激发胶凝材料委员会委员等。欢迎土木水利、材料学等相关专业的优秀学生报考。

学习经历

- 2010.09-2014.07，山东农业大学，道路桥梁与渡河工程，工学学士
- 2014.09-2019.07，中国矿业大学（北京），结构工程，工学博士（硕博连读）
- 2014.09-2019.07，清华大学，土木工程系建筑材料研究所，研究生（联合培养）

工作经历

- 2019.07-2021.07，清华大学，土木工程系，博士后
- 2021.07-至今，青岛理工大学，土木工程学院，副教授

学术兼职

- 2021.09-至今，中国硅酸盐学会 会员
- 2021.09-至今，中国硅酸盐学会固废与生态材料分会青委会 委员
- 2021.12-至今，中国硅酸盐学会固废与生态材料分会碱激发胶凝材料委员会 委员

教科研项目

- 2025.01-2027.12, 国家自然科学基金青年项目, 主持
- 2024.01-2026.12, 山东省自然科学基金青年项目, 主持
- 2024.08-2026.07, 中建安装集团有限公司工程课题, 主持
- 2023.11-2024.12, 海洋环境混凝土技术教育部工程研究中心开放课题, 主持
- 2024.11-2026.10, 滨海人居环境学术创新中心开放课题, 主持

学术成果

代表性著作、论文:

- [1] **Jianwei Sun**, Yuehao Guo, Yan Meng, et al. Effects of silicate modulus and GBFS content on shrinkage of alkali-activated steel slag cementitious material[J]. *Journal of CO₂ Utilization*, 2025.
- [2] **Jianwei Sun**, Yuehao Guo, Yan Meng, et al. Effect of mix proportion parameters on hydration and microstructure of steel slag-GBFS-phosphogypsum clinker-free composites. *Construction and Building Materials*, 2025.
- [3] **Jianwei Sun**, Shaoyun Hou, Yuehao Guo, et al. Effects of high-temperature curing on hydration and microstructure of alkali-activated typical steel slag cementitious material. *Developments in the Built Environment*, 2024.
- [4] **Jianwei Sun**, Shaoyun Hou, Yuehao Guo, et al. Sustainable utilization of alkali-activated steel slag material: Effects of silicate modulus and GBFS on fresh, mechanical and pore structure properties. *Developments in the Built Environment*, 2024.
- [5] **Jianwei Sun**, Shaoyun Hou, Yuehao Guo, et al. Feasibility of preparing steel slag-GBFS cementitious materials: Synergistic hydration, fresh and hardened properties. *Buildings*, 2024.
- [6] **Jianwei Sun**, Peng Zhang. Effects of different composite mineral admixtures on the early hydration and long-term properties of cement-based materials: A comparative study. *Construction and Building Materials*, 2021.
- [7] **Jianwei Sun**, Zengqi Zhang*, Guihua Hou. Utilization of fly ash microsphere powder as a mineral admixture of cement: Effects on early hydration and microstructure at different curing temperatures.

Powder Technology, 2020.

- [8] **Jianwei Sun**, Zengqi Zhang*, Shiyu Zhuang, et al. Hydration properties and microstructure characteristics of alkali-activated steel slag. Construction and Building Materials, 2020.
- [9] Shiyu Zhuang, **Jianwei Sun***. The feasibility of properly raising temperature for preparing high-volume fly ash or slag steam-cured concrete: An evaluation on DEF, 4-year strength and durability. Construction and Building Materials, 2020.
- [10] Ce Sun, **Jianwei Sun***, Dongmin Wang. Effect of tartaric acid on the early hydration of NaOH-activated slag paste. Journal of Thermal Analysis and Calorimetry, 2020.
- [11] Yuqi Zhou, **Jianwei Sun***, Yanwu Liao. Influence of ground granulated blast furnace slag on the early hydration and microstructure of alkali-activated converter steel slag binder. Journal of Thermal Analysis and Calorimetry, 2020.
- [12] **Jianwei Sun***, Zhonghui Chen. Effect of silicate modulus of water glass on the hydration of alkaliactivated converter steel slag. Journal of Thermal Analysis and Calorimetry, 2019.
- [13] **Jianwei Sun**, Jingjing Feng*, Zhonghui Chen. Effect of ferronickel slag as fine aggregate on properties of concrete. Construction and Building Materials, 2019.
- [14] **Jianwei Sun**, Zhonghui Chen. Influences of limestone powder on the resistance of concretes to the chloride ion penetration and sulfate attack. Powder Technology, 2018.
- [15] **Jianwei Sun**, Zhe Wang, Zhonghui Chen. Hydration mechanism of composite binders containing blast furnace ferronickel slag at different curing temperatures. Journal of Thermal Analysis and Calorimetry, 2018.

代表性专利:

- [1] 孙建伟, 国越皓, 张鹏, 等. 一种纳米改性全固废型矿井充填材料及其制备方法和应用: CN202410717041.6.
- [2] 孙建伟, 国越皓, 张鹏, 等. 一种免烧结环保型重金属污染土固化稳定化材料和应用: CN202410755275.X.

代表性标准:

- [1] 中国建筑学会标准, 《纯化磷石膏》(T/ASC 6003-2022), 2022-06-01 发布.