个人简历

个人信息

- **姓名:** 郭奥飞
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研究方向

- 木质纤维素生物质水泥基材料研究
- 混凝土内养护研究
- 高性能磷酸镁水泥基材料研究

教育经历

- **2016 年 8 月-2020 年 12 月** 土木工程, University of Louisville, 博士
- **2013 年 9 月-2016 年 6 月** 土木工程, 湖南大学, 硕士
- **2009 年 9 月-2013 年 6 月** 建筑环境与设备工程, 河南工业大学, 本科

工作经历

- **2021 年 7 月-至今** 郑州大学 博士后
- **2021 年 5 月-至今** 郑州大学 直聘副研究员

学术成就

- **已发表论文**

1. Feng, H., Liang, J., **Guo, A.***, Lv, L., Sun, Z., Sheikh, M. N., & Liu, F. (2023). Development and design of ultra-high ductile magnesium phosphate cement-based composite using fly ash and silica fume. Cement and Concrete Composites, 137, 104923.
2. **Aofei Guo**, Zhihui Sun, Hu Feng*, Hong Shang, & Noppadon Sathitsuksanoh (2023). State-of-the-art review on the use of lignocellulosic biomass in cementitious materials. Sustainable Structures, Vol.3, No.1, 2023.
3. Chang, H., Feng, H., Guo, Z., **Guo, A.***, & Wang, Y. (2022). Bond Properties of Magnesium Phosphate Cement-Based Engineered Cementitious Composite with Ordinary Concrete. Materials, *15*(14), 4851.
4. Feng, H., Nie, S., **Guo, A.***, Lv, L., & Yu, J. (2022). Evaluation on the performance of magnesium phosphate cement-based engineered cementitious composites (MPC-ECC) with blended fly ash/silica fume. Construction and Building Materials, *341*, 127861.
5. Feng, H., Nie, S., **Guo, A.***, Lv, L., Chu, L., & Yu, J. (2022). Fresh properties and compressive strength of MPC-based materials with blended mineral admixtures. Case Studies in Construction Materials, e01201.
6. Zhang, S., Zhu, Y., Feng, H.*, **Guo, A.**, Shaukat, A. J., & Liu, G. (2022). Workability and Mechanical Properties of Tensile Strain–Hardening PVA Fiber-Reinforced Magnesium Phosphate Cement Composites. Journal of Materials in Civil Engineering, 34(7), 04022138.
7. Feng, H., Zhu, P., **Guo, A.*,** Cheng, Z., Zhao, X., & Gao, D. (2022). Assessment of the mechanical properties and water stability of nano-Al_2O_3 modified high ductility

magnesium potassium phosphate cement-based composites. Materials Today Communications, 103179.

8. Yan, H., Gao, D.*, **Guo, A.,** Gu, Z., Ji, D., & Zhang, Y. (2022). Monotonic and cyclic bond responses of steel bar with steel-polypropylene hybrid fiber reinforced recycled aggregate concrete. Construction and Building Materials, 327, 127031.
9. **Guo, A.,** Zhou, F.*, Du, Y., & Li, C. (2021). Flexural Behavior of Layered PVA Fiber/Steel Fiber Reinforced Cementitious Composite Plates. KSCE Journal of Civil Engineering, 1-11.
10. Feng, H., Nie, S., **Guo, A.***, Shen, S., Gao, D., & Chen, G. (2021). Flexural behavior of high ductility MPC-based composites under low-temperature curing. Construction and Building Materials, 300, 124231.
11. **Guo, A.**, Zhou, F.*, Du, Y., & Yan, R. (2021). Dynamic Compressive Behavior of CTRC and ECC Layered Concrete under Impact Load. KSCE Journal of Civil Engineering, 1-12.
12. Feng, H., Wang, Y., **Guo, A.***, & Zhao, X. (2021). Mechanical Properties and Water Stability of High Ductility Magnesium Phosphate Cement-Based Composites (HDMC). Materials, 14(12), 3169.
13. **Guo, A*.**, Sun, Z., & Satyavolu, J. (2021). Experimental and finite element analysis on flexural behavior of mortar beams with chemically modified kenaf fibers. Construction and Building Materials, 292, 123449.
14. Shi, J., Liu, B.*, Zhou, F., Shen, S., **Guo, A.***, & Xie, Y. (2021). Effect of steam curing regimes on temperature and humidity gradient, permeability and microstructure of concrete. Construction and Building Materials, 281, 122562.
15. **Guo, A.**, Sun, Z., Sathitsuksanoh, N., & Feng, H.* (2020). A Review on the Application of Nanocellulose in Cementitious Materials. Nanomaterials, 10(12), 2476.
16. **Guo, A.***, Sun, Z., & Satyavolu, J. (2020). Impact of modified kenaf fibers on shrinkage and cracking of cement pastes. Construction and Building Materials, 264, 120230.
17. **Guo, A.***, Sun, Z., Qi, C., & Sathitsuksanoh, N. (2020). Hydration of Portland Cement Pastes Containing Untreated and Treated Hemp Powders. Journal of Materials in Civil Engineering, 32(6), 04020148.
18. **Guo, A.**, Sun, Z., & Satyavolu, J.* (2019). Impact of chemical treatment on the physiochemical and mechanical properties of kenaf fibers. Industrial Crops and Products, 141, 111726.
19. **Guo, A.***, Aamiri, O. B., Satyavolu, J., & Sun, Z.* (2019). Impact of thermally modified wood on mechanical properties of mortar. Construction and Building Materials, 208, 413-420.
20. 周芬*, **郭奥飞**, 杜运兴. (2016). 边坡稳定可靠度分析的新型四阶矩法. 湖南大学学报, 43(5).

- **发明专利**

1. 周芬, **郭奥飞**, 杜运兴. 一种具有抗折性能的无粘结预应力土工格栅: 中国, ZL 2014 1 0282599.2[P]. 2015-12-02.

科研项目

- **国家自然科学基金青年项目**，改性纤维素纳米晶体改善低水灰比水泥浆体水化和自收缩性能机制（批准号：52208295），2023.01-2025.12，**主持**
- **中国博士后科学基金项目**，聚乙二醇化纤维素纳米晶体分散性及其影响水泥水化机理（编号：2021M702954），2021.09-2023.07，**主持**
- **河南省自然科学基金青年项目**，纤维素纳米晶体聚乙二醇化及其影响水泥水化机理（编号：222300420314），2022.01-2023.12，**主持**

学术兼职

- Sustainable Structures 期刊青年编委