

导师简介

姓名	王翠霞	性别	女	出生年月	1987.12	
职称	副教授	民族	汉	籍贯	河南鹤壁	
电子邮箱	cuixia.wang@outlook.com			最终学位	工学博士	
研究方向	高聚物材料的物理力学性能、改性和应用，水输运微观形态和机理，纳米材料的动力学特性和纳米器件等					
学术头衔/兼职	中国岩石力学与工程学会极地岩土力学与工程专业委员会委员、中国土工合成材料工程协会青年工作委员会委员、大坝工程学会混凝土与岩石断裂力学专委会委员、中国水利学会会员、中国土木工程学会会员等					
主要学习、科研和工作经历	2004.09-2008.06 西北农林科技大学 水利与建筑工程学院 城市规划 工学学士 2008.09-2011.06 西北农林科技大学 水利与建筑工程学院 结构工程 工学硕士 2012.05-2018.06 德国魏玛包豪斯大学 结构力学研究所 结构工程 工学博士 2018.06-2019.08 德国魏玛包豪斯大学 助理研究员 2019.09-2021.06 郑州大学水利科学与工程学院讲师 2021.07 至今 郑州大学水利与交通学院、黄河实验室（郑州大学）副教授					
代表性科研成果	一、科研项目 [1] 国家自然科学基金：非水反应类高聚物注浆材料抗渗性能的多尺度试验与理论计算研究，主持； [2] 中国博士后特别资助项目：高水压和超高水压环境下高聚物注浆材料渗透抑制机理及其多尺度理论与试验研究，主持； [3] 河南省高等学校重点科研项目：发泡高聚物注浆材料阻水性能研究，主持； [4] 水利部旱区生态水文与水安全重点实验室开放基金：旱区水利工程渗漏高聚物注浆修复机理研究，主持； [5] 国家自然科学基金面上项目：多因素耦合作用下混凝土排水管道紫外光固化修复材料与结构的全过程工作性态研究，参与； [6] 河南省重点研发专项课题：极端低温天气地下管道灾变机理及复合修复材料理论研究与技术，参与； [7] 河南省自然科学基金重点项目：紫外光固化复合材料性能提升及其修复排水管道理论与技术研究，参与；					

[8] 河南省科技厅科技攻关项目：高聚物注浆材料成型稳定性的试验与模拟研究，参与；

[9] 中铁七局集团有限公司：复杂工况下冻结暗挖清障辅助盾构下穿既有结构及接收关键技术研究与应用, 参与。

二、奖励

[1] 河南省教育厅科技成果奖优秀科技论文奖一等奖；

[2] 华维杯第二届全国大学生农业水利工程及相关专业创新设计大赛一等奖；

[3] 国家级大学生创新创业项目立项；

[4] MathorCup 高校数学建模挑战赛二等奖

[5] 亚太地区大学生数学建模竞赛（APMCM）二等奖；

[6] Interdisciplinary Contest In Modeling Honorable Mention。

三、论文论著（部分）

[1] Yongshen Wu, **Cuixia Wang***, Caihong Zhang, Yongbo Wang, Chao Zhang*, Pengjia Zhu, Hongyuan Fang. Redefining surface dynamics: Advanced insights into nanoindentation and morphological variability of foamed polyurethane. *Surfaces and Interfaces*, 2025

[2] **Cuixia Wang**, Shi Qiao, Chao Zhang*, Yangyang Xia, Yongshen Wu. Novel negative Poisson's ratio structure for pipelines' local trenchless rehabilitation: Experimental and simulation study. *Engineering Structures*, 2025, 326, 119531.

[3] **王翠霞**, 武永深*, 袁灵修, 张超, 方宏远, 朱朋佳. 含水环境高聚物注浆材料交联过程与微观结构演变的分子动力学模拟. *同济大学学报（自然科学版）*, 2025

[4] Chao Zhang, Yi Li, Yongshen Wu, **Cuixia Wang***, Jian Liang, Zihan Xu, Peng Zhao, Jing Wang. Key Role of Cross-Linking Homogeneity in Polyurethane Mechanical Properties: Insights from Molecular Dynamics, *The Journal of Physical Chemistry B*, 2024, 128, 12612-12627

[5] Jie Wen, Chao Zhang*, Yangyang Xia, **Cuixia Wang***, Xinxin Sang, Hongyuan Fang, Niannian Wang. UV/thermal dual-cured MWCNTs composites for pipeline rehabilitation: Mechanical properties and damage analysis. *Construction and Building Materials*, 2024, 450, 138602

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- [7] **Cuixia Wang**, Zihan Xu, Yangyang Xia, Chao Zhang*, Hongyuan Fang*, Kangyan Sun. Water transport mechanism and performance evaluation in polyurethane materials: A state-of-the-art review. Polymer Testing, 2024, 108554
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- [9] Chao Zhang, Shiming Liu, Yangyang Xia, **Cuixia Wang***, Shi Qiao, Hongyuan Fang. Experimental and numerical investigations of an auxetic support structure used for local repair of buried pipelines. Construction and Building Materials, 2024, 438, 137127.
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- [12] Chao Zhang, Zheng Li, Yongshen Wu, **Cuixia Wang***, Hongyuan Fang, Chongchong He, Chaojie Duan. Micromechanical properties of polymer-bentonite interface: A molecular dynamics study. Construction and Building Materials, 2024
- [13] **Cuixia Wang**, Longwei Guo, Yangyang Xia, Chao Zhang*, Xinxin Sang, Chuanwen Xu, Gang Zhu, Haibo Ji, Peng Zhao, Hongyuan Fang*, Zhuwei Peng,

Xiaoguang Zhang. Flexural performance and damage evolution of multiple fiberglass-reinforced UV-CIPP composite materials-- a view from mechanics and energy release. *Journal of Materials Research and Technology*, 2024, 29, 3317 - 3339.

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四、专利（部分）

- [1] **王翠霞**, 王亚菲, 靳心瑶, 王明军, 张超, 孙斌, 张金萍, 张广毅. 一种具有联动转动结构的地下防堵塞装置[P]. 202122927514.X
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注: 可加页