

Jin Zhu

Project Engineer

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Jin is a Project Engineer at the UNSW Water Research Laboratory. She has expertise in drinking water quality, river restoration, green remediation of soil and groundwater.

Jin has 9 years of experience in water engineering, having worked on river remediation, soil and groundwater remediation, and biogenic taste and odour in drinking water supply. Before joining WRL projects team in May 2024, she completed a PhD at the Water Research Centre, School of Civil and Environmental Engineering at UNSW Sydney. Jin has been closely working with Australian industry collaborators from WaterNSW, Sydney Water and Melbourne Water. She is inspired to solve the real-world water problems by engaging with internal and external collaborators in water sectors.

Qualifications and awards

PhD in Environmental Engineering, UNSW, 2024
M.Eng. in Environmental Engineering, East China
Normal University, CN, 2018
B

Environmental consultant, PONY Test
International Group, Shanghai, CN
2018-2019: Research Assistant, Tsinghua, CN

Expertise

- Drinking water quality
- River restoration
- Soil and groundwater remediation
- Historical water quality data analysis
- Algae culturing and jar testing operation
- Data extraction and meta-data analysis
- Green material synthesis and characterization
- Mesocosm sampling and analysis

Summary of relevant experience

River, soil and groundwater remediation

2020: Remediation techniques for PFAS contaminated sites
2019: Modified biochar materials for benzene removal from groundwater
2018: Review on phytoremediation of contaminated soil
2018: Controlled release materials for benzene removal from groundwater
2017: Mesocosm study on river sediment
2016: River simulation system setup and operation
2015: Review on biogeochemical cycling of nitrogen and sulphur in aquatic systems

Wetland restoration and drinking water quality

2024: Hexham Swamp sea level rise
2023: Meta-analysis of odour treatability at full-scale DWTPs
2023: Jar testing and pilot plant operation at Orchard Hills Water Filtration.-4(l7-4(o)-p8(p)-3(l)9(a)-3(n)-3(t)-176(o)-3(p)-3(e)

Analytical Skills

Characterization of synthesized materials:

XRD, FTIR, XPS, SEM, EPR

Detection and characterization of organic compounds:

GC-FID, GC-MS, ICP-OES, LC-OCD

Floc size and strength: Mastersizer and Zeta sizer

Routine water quality: Turbidity meter, UV spectrometer,
pH meter, DO meter

Computing Skills

Programming: R studio

GIS: ArcGIS

Analytical software: Jade, XPS

Data extraction: GetData Digitizer