



Research Field: Geochemistry & Mineralogy

Focused Field: Space Weathering

SHORT BIO

Hongyan Zuo is an Assistant Professor of Geochemistry, Mineralogy and Geomicrobiology at Macau University of Science and Technology (MUST). After obtaining her PhD at the Department of Geology & Environmental Earth Science, Miami University in 2020, she pursued her postdoctoral studies at MUST. In 2023, she became Assistant Professor at MUST. She graduated with a diverse area of interest and experience in aqueous geochemistry with an interest in contributing to the overall understanding of Fe geochemical cycling and soil organic matter at play between the geo-, hydro-, and biosphere. Her research is focused on four broad areas: 1) Space weathering effects on Fe-bearing minerals; 2) Planetary mineralogy; 3) Remediation of heavy metals and tailings; 4) Mineral-microbe interactions.

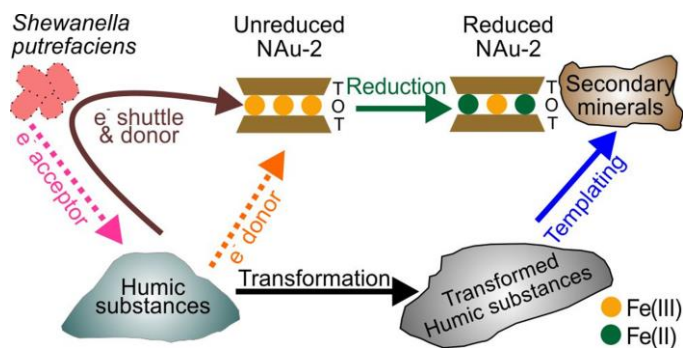
Assistant Professor

HONGYAN ZUO



PhD: GEOMICROBIOLOGY– Miami University (US)

Bachelor: GEOLOGY – Central South University (China)



Zuo H., et al., 2021

KEY PUBLICATIONS (selected)

Zuo, H., et al., 2021.

Reduction of Structural Fe(III) in Nontronite by Humic Substances in the Absence and Presence of Shewanella putrefaciens and Accompanying Secondary Mineralization. American Mineralogist.

Zuo, H., et al., 2020.

Role of clay-associated humic substances in catalyzing bioreduction of structural Fe (III) in nontronite by Shewanella putrefaciens CN32. Science of The Total Environment.

Zuo, H., et al., 2016.

Typomorphic feature of chromium sericite in granite hosted gold deposits in Jiaodong Peninsula, China. Applied Clay Science

PROFESSIONAL EXPERIENCE

Ongoing – 2023 – Macau University of Science and Technology, Macau (China) – Assistant Professor

2023 – 2021 – Macau University of Science and Technology, Macau (China) – Post Doctoral

2018 – 2016 – Center for Advanced Microscopy and Imaging, Miami University – EM teaching Assistant

2020 – 2015 – Department of Geology & Environmental Earth Science, Miami University – Research Assistant

GRANTS (selected)

1. 澳门科学技术发展基金FDCT: 月球表面含铁矿物风化作用受太阳风影响机制研究, 0046/2024/ITP2, 2025-2026, 项目负责人。
2. 国家自然科学基金面上项目: 高岭石增温增压过程脱羟基与产氢气的分子机制研究, 42272047, 2023-2026, 项目负责人。
3. 华南应用微生物国家重点实验室开放基金: 微生物协同含铁矿物还原固定土壤六价铬机制, SKLAM008-2021, 2022-2023, 课题负责人。

