



Research Field: Cosmochemistry

Focused Field: Geochemistry and Mineralogy of Planetary Aquatic Systems



SHORT BIO

I Start my research career as a PhD candidate in Guangzhou Institute of Geochemistry, Chinese Academy of Sciences in 2014, under the supervision of Prof. Runliang Zhu. In 2018, I went to Virginia Tech as a joint PhD student, working with Prof. Michael F. Hochella. After I got the PhD degree in 2019, I continue worked as a post-doctoral fellow at GIG. In 2021, I joined the State Key Laboratory of Lunar and Planetary Science in Macau University of Science and Technology as an assistant professor.

My research interest include: 1) redox cycling of elements under environmentally relevant condition (e.g., light irradiation, hydrothermal condition). 2) the mineralogy of natural Fe- and Mn-rich specimen (e.g., rock varnish and ferromanganese nodule) and their implication to paleoenvironment. 3) The nucleation, crystallization, and phase transformation of nanominerals (e.g., iron and manganese oxides).

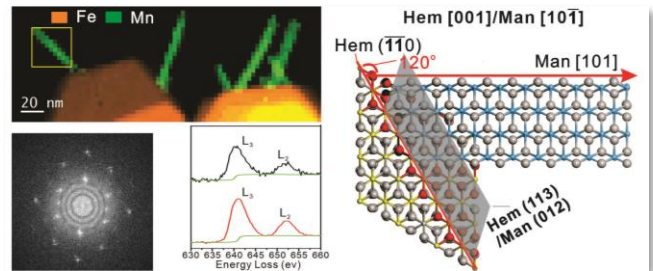
Asst. Prof.

Jing Liu

劉晶



PhD: Mineralogy, Petrology, Mineral deposits – Guangzhou Institute of Geochemistry, CAS
Degree: Environmental Science – Xiangtan University



Heterogeneous growth of Mn oxide on hematite
- Liu et al., 2021

KEY PUBLICATIONS (Selected)

- Liu, J.,** Chen, Q., Yang, Y., Wei, H., Laipan, M., Zhu, R., He, H., Hochella, F. M. **2022**
Coupled redox cycling of Fe and Mn in the environment: The complex interplay of solution species with Fe- and Mn-(oxyhydr) oxide crystallization and transformation. **Earth-Science Reviews** (rank 4/200)
- Liu, J.,** Inoué, S., Zhu, R., He, H., Hochella, F. M. **2021**
Facet-specific oxidation of Mn(II) and heterogeneous growth of manganese (oxyhydr)oxides on hematite nanoparticles. **Geochimica et Cosmochimica Acta** (9/139)
- Liu, J.,** Zhu, R., Ma, L., Fu, H., Lin, X., Parker, S.C., Molinari, M. **2021**
Adsorption of phosphate and cadmium on iron (oxyhydr)oxides: A comparative study on ferrihydrite, goethite, and hematite. **Geoderma** (4/145)
- Liu, J.,** Zhu, R., Chen, Q., Zhou, H., Liang, X., Ma, L., Parker, S.C. **2019**
The significant effect of photo-catalyzed redox reactions on the immobilization of chromium by hematite. **Chemical Geology** (22/273)
- Liu, J., Zhu, R., Liang, X., Ma, L., Lin, X., Zhu, J., He, H., Parker, S.C., Molinari, M. **2018**
Synergistic adsorption of Cd(II) with sulfate/phosphate on ferrihydrite: An in situ ATR-FTIR/2D-COS study. **Chemical Geology** (22/273)

PROFESSIONAL EXPERIENCE

- Ongoing – 2021** – Macau University of Science and Technology, Macao (China) – Assistant Professor
2021 – 2019 – Guangzhou Institute of Geochemistry, Chinese Academy of Sciences (China) – Post Doctoral
2018 – 2017 – Virginia Polytechnic and State University (USA) – Joint Doctoral Student

GRANTS

- Faculty Research Grants of the Macau University of Science and Technology, 2022.5~2023.5, **PI**
Open Project of Guangdong Key Laboratory of Mineral Physics and Material Development, 2021-2023, **PI**
China Postdoctoral Science Foundation, 2019-2021, **PI**

