

Research Field: ASTROBIOLOGY

Focused Field: MARS ANALOGUES & BIOSINATURES

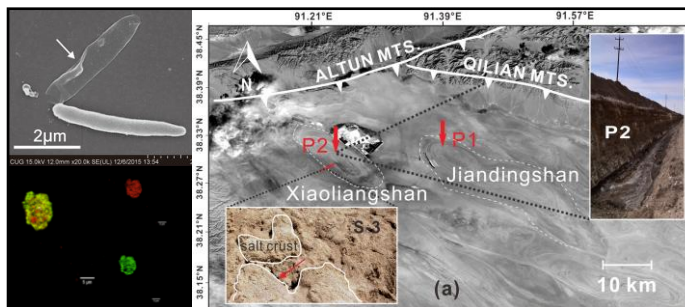
SHORT BIO

I completed my Ph.D. at the China University of Geosciences (Wuhan) under the supervision of Prof. Long Xiao in December 2018. My doctoral research focused on astrobiology, specifically studying hypersaline environments in the Qaidam Basin and acidic environments in the Rio Tinto. I investigated the comparison between these extreme terrestrial environments and Mars, exploring preserved life signatures in analogs crucial for assessing the potential life on Mars. In late May 2019, I began a postdoctoral researcher position at the State Key Laboratory of Planetary Sciences in Macao, China, collaborating with Associate Prof. David C. Fernandez Remolar and Prof. Long Xiao. Currently, as an Assistant Professor at the State Key Laboratory of Lunar and Planetary Sciences, I am searching for biosignatures preserved in ancient terrestrial materials and analyzing organics preserved in extraterrestrial materials.

Asst. Prof.

Ting Huang

PhD: PLANETARY GEOLOGY AND
COMPARATIVE PLANETOLOGY
China University of Geosciences (Wuhan)



Astrobiology study in the Qaidam Basin- Huang T. et al., 2018

KEY PUBLICATIONS *(first and corresponding* author)*

Xie, YH., **Huang, T.*** et al., Preservation Characteristics of Biosignatures in Sulfates and Their Implications for the Search for Life on Mars. *Science China Earth Sciences*. 2025; SSTe-2024-0294.

Huang, T. et al., The Molecular Profile of Soil Microbial Communities Inhabiting a Cambrian Host Rock. *Microorganisms*. 2024; 12(3).

Huang T. et al., *Sediminibacillus dalangtanensis* sp. nov., a moderate halophile isolated from hypersaline sediments of the Qaidam Basin in Northwest China. *International Journal of Systematic and Evolutionary Microbiology*. 2022;71(8):005501.

Huang, T. et al. Habitability and Astrobiological Significances, Mars On Earth: A Study Of The Qaidam Basin, 2021; 293-327.

Huang, T. et al., Dalangtan Playa (Qaidam Basin, NW China): Its microbial life and physicochemical characteristics and their astrobiological implications. *PloS one*. 2018;13(8): e0200949.

PROFESSIONAL EXPERIENCE

Ongoing – 2024.7 - Macau University of Science and Technology, Macao (China) – Assistant Professor

GRANTS

National Natural Science Foundation of China - 2025-2028 – Co-PI – PI Jun HUANG

Research on the Distribution of Hydrous Minerals, Sedimentary Structures, and Potential Biosignature Detection in Typical Martian Regions

Ministry of Science and Technology of PR China - 2022-2027 – Co-PI – PI Honglei LIN

Exploration of hydrated minerals on Mars and their implications to habitable environments

Fundo para o Desenvolvimento das Ciências e da Tecnologia - 2020-2023 – Co-PI – PI David C. FERNANDEZ-REMOLAR

Multidisciplinary search for biosignatures in ancient earthly evaporites as a proxy to find molecular evidence of primitive life on Mars