

## Research Field: Planetary Geology and Habitability Focused Field: Extraterrestrial Materials

I am now a post-doctoral at Macao University of Science and Technology. My research fields are: (1) planetary geological processes revealed by extraterrestrial materials; (2) development and applications of planetary soil simulants; and (3) scientific demonstration for planetary exploration. I have published 13 first-author papers (e.g., Nature Astronomy, GRL, JGR-Planets, and Icarus).

In addition to the scientific research, I also participated in the demonstration, pre-research, and key technology research for China's lunar and planetary exploration projects. This mainly includes: (1) landing site selection for manned lunar exploration; (2) geological survey for manned landing site on the Moon; and (3) development of various planetary soil simulants (JMSS-1 martian soil simulants, JMDS-1 martian dust simulant, and asteroid regolith simulants) for planetary exploration missions.

## Postdoc Xiaojia Zeng ( )



PhD: Geochemistry – Institute of Geochemistry, CAS (2018)
Masters: Geological Engineering – Institute of Geochemistry, CAS (2015)
Bachelor: Geological Engineering – China University of Mining and Technology



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**Zeng, X.** et al. 2022. Exotic clasts in Chang'e-5 regolith indicative of unexplored terrane on the Moon. **Nature Astronomy**, 1-8.

Zeng, X. et al. 2021b. Revealing High-Manganese Material on Mars at Microscale. GRL, 48(17)

Zeng, X. et al. 2021a. New Evidence for 4.32 Ga Ancient Silicic Volcanism on the Moon. GRL, 48(13)

Zeng, X. et al. Discerning lunar pyroclastic and impact glasses via Raman spectroscopy. JGR-Planets, 125(12)

Zeng, X. et al. 2020. Oldest immiscible silica-rich melt on the Moon recorded in a ~4.38 Ga zircon. GRL, 47(4)

Zeng, X. et al. 2015. JMSS-1: a new Martian soil simulant. EPS, 67(1), 72.

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08/2022 – Present: Post Doctoral, Macau University of Science and Technology, China 07/2018 – 03/2023: Post Doctoral, Institute of Geochemistry, Chinese Academy of Sciences, China

2022–2024: National Natural Science Foundation of China (42103036), ¥300,000 (**PI**)

2021–2022: "Landing site selection for manned lunar exploration", ¥3,400,000 (Academic secretary)

2020–2025: B-type Strategic Priority Program of the CAS (XDB41000000), ¥2,000,000, (**Core-member**, I am responsible for "Martian environment recorded by secondary minerals in martian meteorites", ¥300,000)

2020–2024: National Natural Science Foundation of China (41931077), ¥2,960,000, (**Core-member**, I am responsible for "Space weathering revealed by lunar regolith grains", ¥700,000)

2019–2021: China Postdoctoral Science Foundation, ¥80,000, (PI)

2018–2020: Pre-research project for asteroid exploration founded by CAS, ¥20,000,000, (**Core-member**, I am responsible for "development of asteroid regolith simulants", ¥400,000)



