



Research Field: Planetary Geology and Habitability

Focused Field: Extraterrestrial Materials

SHORT BIO

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

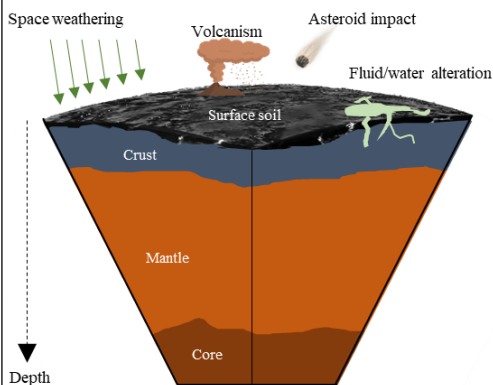
Xiaojia Zeng
(曾小家)



PhD: Geochemistry – Institute of Geochemistry, CAS (2018)

Masters: Geological Engineering – Institute of Geochemistry, CAS (2015)

Bachelor: Geological Engineering – China University of Mining and Technology



■ **Surface geological processes** (e.g., Zeng et al. 2020, *MAPS*; 2021a, *GRL*; 2022, *NA*; 2023, In prep.).

■ **Lithological diversity of crust** (e.g., Zeng et al. 2018, *MAPS*; 2020, *GRL*; 2021b, *GRL*)

■ **Deep-rock and mantle evolution** (e.g., Zeng et al. 2019, *EPS*)

KEY PUBLICATIONS (13 first-author papers)

- 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.

PROFESSIONAL EXPERIENCE

- 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

GRANTS & PROJECT ACTIVITIES

- 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)

Google Scholar:

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