

CURRICULUM VITAE

Wenbo ZHANG

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Education:

Peking University, School of Earth and Space Sciences, Beijing, China

- ❖ 2021–Present, Ph.D., *Planetary Science*, Advisor: Prof. Nan Zhang
 - Expected defense: December 2026.
- ❖ 2017–2021, B.Sc., *Geology*, Advisor: Prof. Nan Zhang
 - Thesis: “Effects of Rheology and Internal Heating on Lunar Cumulate Mantle Convection.”

Research Experience:

- ❖ **Ludwig Maximilian University of Munich**, University Observatory Munich, Germany
2025–Present, **Visiting Student**, Supervisor: Dr. Meng Tian.
Research Topic: Lunar mantle heterogeneity inferred from returned rock samples
- ❖ **Peking University**, School of Earth and Space Sciences, Beijing, China
2021–Present, **Graduate Researcher**, Advisor: Prof. Nan Zhang
Research Topic 1: Long-lasting lunar mare volcanism from 4.0 Ga to 2.0 Ga
 - Calculated lunar tidal heating rates using different viscoelastic models
 - Demonstrated sustained lunar mare volcanism driven by radiogenic and tidal heating
 - Developed skills in analyzing geochemical and remote-sensing data
 - Published 1 peer-reviewed paper and delivered 1 oral presentation
Research Topic 2: Hemispheric distribution of lunar mare basalts
 - Conducted 3-D modeling of lunar mantle convection using comprehensive rheology
 - Addressed the hemispheric distribution of lunar mare basalts by incorporating pressure-, composition-, and temperature-dependent viscosity
 - Developed skills in high-performance computing
 - Published 2 peer-reviewed papers and delivered 2 oral presentations

Research Interests:

- ❖ Volcanism and Magmatism of Terrestrial Bodies
- ❖ Tidal Dissipation Evolution of Moons
- ❖ Magma Ocean Evolution
- ❖ Planetary Internal Structure

Full Publication List:

1. Zhang, W., & Zhang, N. (2025). Long-Lived Lunar Mare Volcanism Powered by Radiogenic and Tidal Heating. *Journal of Geophysical Research: Planets*, 130(10), e2024JE008828. DOI: 10.1029/2024JE008828.

2. **Zhang, W.**, Zhang, N., Liang, Y., & Tokle, L. (2023). The Effect of Pressure-Dependent Viscosity on the Dynamics of the Post-Overturn Lunar Mantle. *Journal of Geophysical Research: Planets*, 128(10), e2023JE007933. DOI: 10.1029/2023JE007933.
3. **Zhang, W.**, Zhang, N., & Li, H. (2022). Abundances of Lunar Heat-Producing Elements Constrained by a 3-D Numerical Model of Titanium-Rich Basaltic Eruption. *Chinese Journal of Geophysics*, 65(1), 119-136. DOI: 10.6038/cjg2022P0753.

Conference Presentations and Talks:

1. 2023, *American Geophysical Union Fall Meeting*: Long-lived Lunar Mare Volcanism Powered by Radiogenic and Tidal Heating, **oral**, San Francisco, USA
2. 2023, *the 5th Youth Scientist Forum of Planetary Science*: Effect of Pressure-Dependent Viscosity on Dynamics of Post-Overturn Lunar Mantle, **oral**, Sanya, China
3. 2021, *the 6th Conference on Earth System Science*: Effect of Rheology and Internal Heating on Lunar Cumulate Mantle Convection, **oral**, Shanghai, China

Seminar Presentations:

1. 2025, *Lunch Time Seminar*: Why Was Lunar Volcanism Hemispherically Localized and Prolonged for 2 Billion Years? A Geodynamic Hypothesis, Department of Earth and Environmental Sciences, Ludwig Maximilian University of Munich, Germany

Awards & Honors:

- ❖ 2025, LMU-CSC Scholarship, Ludwig Maximilian University of Munich
- ❖ 2024, Luo Yuehua Scholarship, Peking University
- ❖ 2024, Merit Student, Peking University
- ❖ 2022, Merit Student, Peking University
- ❖ 2019, Model Student of Academic Records, Peking University

Skills:

- ❖ Numerical Modeling
 - Utilized the finite-element mantle convection code CitcomS (C)
 - Developed a semi-analytic tidal heating code (Python)
 - Developed a two-phase flow model (Python)
 - Utilized the Markov Chain Monte Carlo code (PyMC)
 - High-performance computing with MPI
- ❖ Data Analysis
 - Machine learning tools
 - Utilized the data visualization software (ParaView)
 - Utilized the Planetary Data System (PDS) and image processing software (ISIS)

Languages:

Chinese (native), English (fluent)