

Dian Ji

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EDUCATION

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|----------------|---|------------------|
| 2023 – Present | Ph.D. in Earth, Environmental and Planetary Sciences Department of Earth, Environmental and Planetary Sciences, Rice University Advisor: Rajdeep Dasgupta | GPA: 3.86 / 4.00 |
| 2021 – 2023 | M.Sc. in Geology Department of Earth and Planetary Sciences, University of Tennessee Advisor: Nicholas Dygert, Committee: Molly McCanta, Shichun Huang, Bradley Thomson Thesis: Numerical and Experimental Constraints on Trace Element Fractionation During Lunar Magma Ocean Solidification | GPA: 4.00 / 4.00 |
| 2016 – 2020 | B.E. in Resource Exploration Engineering College of Geosciences, China University of Petroleum, Beijing Advisor: Huichuan Liu | |

Google Scholar

PUBLICATION

Total citations = 36; h-index = 3; i10-index = 2

- Y. Zhang, R. Dasgupta, **D. Ji**, C. Lee, Y. Peng, B. Charlier, Z. Jin, J. Chen, O. Namur, (2025) Mantle melting conditions of mare lavas on South Pole–Aitken basin of lunar farside. *Geophysical Research Letters*. doi.org/10.1029/2024GL112418
- D. Ji**, R. Dasgupta, (2025) Sulfur inventory of the young lunar mantle constrained by experimental sulfide saturation of Chang’e-5 mare basalts and a new sulfur solubility model for silicate melts in equilibrium with sulfides of variable metal–sulfur ratio. *Geochimica et Cosmochimica Acta*. doi.org/10.1016/j.gca.2025.02.019
- N. Dygert, **D. Ji**, E. Etheridge, (2025) A predictive model for divalent element partitioning between clinopyroxene and basaltic melt and a europium-in-plagioclase-clinopyroxene oxybarometer for cumulate rocks. *Geochimica et Cosmochimica Acta*. doi.org/10.1016/j.gca.2025.02.003
- D. Ji**, N. Dygert, (2024) Trace element partitioning between apatite and silicate melts: Effects of major element composition, temperature, and oxygen fugacity, and implications for the volatile element budget of the lunar magma ocean. *Geochimica et Cosmochimica Acta*. doi: 10.1016/j.gca.2023.11.004
- D. Ji**, N. Dygert, (2023) Trace element evidence for serial processing of the lunar flotation crust and a depleted bulk Moon. *Earth and Planetary Science Letters*. doi: 10.1016/j.epsl.2022.117958
- D. Ji**, H.C. Liu, Y.L. Li, (2020) Large-scale Early Cretaceous lower-crust melting derived adakitic rocks in NE China: implications for convergent bidirectional subduction and slab rollback. *International Geology Review*. doi:10.1080/00206814.2019.1697968

FORTHCOMING

- D. Ji**, R. Dasgupta, C.T. Lee, Water-poor cumulate source for the water-rich lunar magma suggested by the effects of magmatic recharge. *Resubmitted*
- D. Ji**, R. Dasgupta, Garnet in the mantle source of young lunar basalts. *in Review*
- C.T. Lee, J. Zhang, D. Keller, Y. Zhang, **D. Ji**, J. Mou, The enigma of silicic magmatism and the missing cumulates: extreme magmatic differentiation without low melt fractions. *in Revision*

CONFERENCE ABSTRACTS

- D. Ji**, R. Dasgupta, 2025. The Existence of Garnet in the 2-Billion-Year-Old Lunar Mantle Indicated by High Pressure-Temperature Experiments and Trace Element Modeling. *Lunar and Planetary Science Conference, LVI* #1332.
- Y. Zhang, R. Dasgupta, **D. Ji**, C. Lee, Y. Peng, B. Charlier, Z. Jin, J. Chen, O. Namur, 2025. Mantle melting conditions in South Pole–Aitken basin. *Lunar and Planetary Science Conference, LVI* #2106.

D. Ji, R. Dasgupta, 2024. Deep Sulfur Cycle in the Young Lunar Mantle Constrained by High Pressure-Temperature Experiments on Sulfide Saturation of Chang'E 5 Mare Basalts. *AGU Fall Meeting* P51E-3015.

D. Ji, N. Dygert, 2024. A New Europium in Apatite-Plagioclase Oxybarometer for Lunar and Terrestrial Cumulate Rocks and Meteorites. *Lunar and Planetary Science Conference, LV* #1240.

N. Dygert, **D. Ji**, E. Etheridge 2024. Toward a Clinopyroxene-Plagioclase Oxybarometer for Lunar and Terrestrial Cumulates: An fO_2 -Dependent Predictive Model for Clinopyroxene-Melt Eu Partitioning. *Lunar and Planetary Science Conference, LV* #2419.

N. Dygert, **D. Ji**, 2023. Serial Processing of the Lunar Crust after the Magma Ocean Stage and a Depleted Bulk Moon: Insights from a Europium-in-Plagioclase Partitioning Model. *Goldschmidt Conference*, # 17023.

D. Ji, N. Dygert, 2023. New experimental constraints on REE partitioning between apatite and silicate melts and a temperature and composition-dependent predictive partitioning model. *Lunar and Planetary Science Conference, LIV* #1255.

D. Ji, N. Dygert, 2022. Serial processing after lunar anorthositic crust formation indicated by rare earth elements in plagioclase. *Lunar and Planetary Science Conference, LIII* #1229.

D. Ji, N. Dygert, 2021. Eu anomalies in lunar plagioclase reflect secondary processing by subsolidus reequilibration and introduction of a KREEP component. *Goldschmidt Conference*, #3219.

N. Dygert, **D. Ji**, A.L. Fagan, C.R. Neal, D.S. Draper, J.F. Rapp, T.J. Lapen, 2021. Petrogenesis of and subsolidus reequilibration within lunar ferroan anorthosites: Two demonstrations of a new fO_2 -dependent model for plagioclase-melt europium partitioning. *Lunar and Planetary Science Conference, LII*, #2352.

TALKS

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| Mar 2025 | 56th Lunar and Planetary Science Conference, Houston |
| Feb 2025 | Geochemistry/Minerology/Petrology (GMP) Lunch Bunch Talk, Brown University |
| Mar 2024 | 55th Lunar and Planetary Science Conference, Houston |
| Mar 2023 | 54th Lunar and Planetary Science Conference, Houston |
| Mar 2022 | 53rd Lunar and Planetary Science Conference, Houston |
| Jul 2021 | 31st Goldschmidt Conference, Virtual |

GRANTS

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| 2023 – 2024 | MSA Grant for Student Research in Mineralogy and Petrology Mineralogical Society of America \$5,000 to Student PI: Ji |
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HONORS & AWARDS

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| 2025 | Torkild Reiber Award , Rice University (\$2,500) |
| 2024 | Planetary Origins to Habitability Graduate Fellowship , Rice Space Institute (one semester stipend + \$2,000 research funds) |
| 2024 | AGU Fall Meeting Travel Award , Rice University (\$500) |
| 2023 – 2028 | The Chair's Fellowship , Rice University (\$10,000) |
| 2023 | Virginia & James Bibee Graduate Student Professional Promise Award , University of Tennessee (\$500) |
| 2023 | Excellence in Teaching by GTA's Award , University of Tennessee (\$500) |
| 2023 | Member, The Honor Society of Phi Kappa Phi |
| 2023 | LPSC Meeting Travel Award , University of Tennessee (\$500) |
| 2022 | Jimmy Walls Colloquium Presentation Award , University of Tennessee (\$500) |
| 2022 | LPSC Meeting Travel Award University of Tennessee (\$500) |
| 2020 | Li Siguang Outstanding Student Award (¥15,000) |
| 2020 | Excellent Senior Thesis Award , Beijing |
| 2020 | Dean's Nomination Award , China University of Petroleum (¥5,000) |
| 2019 | First-class Scholarship , China University of Petroleum (¥2,000) |
| 2018 | Oriental Geophysics Company Scholarship (¥3,000) |
| 2017 | Second-class Scholarship , China University of Petroleum (¥1,000) |

SERVICE

Journal Reviewer

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| 2025 | Geochimica et Cosmochimica Acta × 1 |
| 2024 | Geochimica et Cosmochimica Acta × 1 |
| | Icarus × 1 |
| | Lithos × 2 |
| 2023 | Geochimica et Cosmochimica Acta × 1 |
| 2022 | American Mineralogist × 1 |
| 2019 | International Geology Review × 2 |

PROFESSIONAL TRAINING & EXPERIENCE

Rice University

2022 – Present **Research Assistant**

University of Tennessee

Spring 2023 **GEOL330: Igneous and Metamorphic Petrology**, Teaching Assistant
Student evaluation 5.0 / 5.0

Fall 2022 **GEOL310: Mineralogy**, Teaching Assistant
Student evaluation 4.8 / 5.0

2021 – 2022 **Research Assistant**

University of Texas at Dallas

Summer 2019 **Visiting scholar**
Supervisor: Robert J. Stern

SUPERVISION

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| Summer 2024 | Aahan Roy (High school intern) Sulfur solubility of lunar basalts |
| 2022 – 2023 | Jordan Marshall (Undergraduate, University of Tennessee) Piston-cylinder experiments → Materials Engineering, University of Tennessee (PhD track) |

FIELD EXPERIENCE

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| 2023 | General field trip, New Mexico A field trip of igneous and metamorphic rocks in New Mexico for a week led by Dr. Cin-Ty Lee and Dr. Rajdeep Dasgupta |
| 2022 | Rio Grande Rift and Jemez Lineament xenolith sampling, New Mexico Collected mantle and crustal xenolith from Kilbourne Hole to Cerro de Guadalupe in New Mexico for a week, led by Dr. Nicholas Dygert |
| 2022 | McClung Blue Ridge Foothills Field Trip Observed part of the transition from the external foreland fold-thrust belt of the Appalachians into the internal metamorphic core, led by Dr. Bob Hatcher |
| 2019 | Archean Basic Rock Collection, Miyun Collected Archean garnet pyroxenite and measured geological occurrence of basaltic dyke group, led by Dr. Huichuan Liu |
| 2019 | Field Practice in Oilfield, Dagang Oilfield Learned the working methods of oilfield engineers, and interpretation of seismic data as well as logging data for two weeks |
| 2018 | Comprehensive Geological Field Practice, Liujiang Basin A month-long geological field practice includes surveys of stratigraphic profiles and geological mapping, led by Dr. Liang Luo |
| 2017 | General Field Practice, Western Hills of Beijing A two-week geological field practice for learning magmatic, sedimentary, and metamorphic rocks, led by Dr. Qin Zhang |

Last updated: Apr 15, 2025