Dian Ji

Department of Earth, Environmental and Planetary Sciences, Rice University, Houston TX 77005
Email: dj56@rice.edu | URL: https://dian01811.github.io

EDUCATION

2023 – Present	**Ph.D.** in Geology 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 = 32; h-index = 3; i10-index = 2

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, Sulfur inventory of the young lunar mantle constrained by high pressure-temperature experiments on sulfide saturation of Chang'E 5 mare basalts. *resubmitted*

Y. Zhang, R. Dasgupta, **D. Ji**, C. Lee, Y. Peng, B. Charlier, Z. Jin, J. Chen, O. Namur, Mantle melting conditions of mare lavas on South Pole–Aitken basin of lunar farside. *resubmitted*

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*

D. Ji, R. Dasgupta, The existence of garnet in the source of young Chang'e-5 mare basalt. *in Preparation*

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.

CONFERENCE TALKS

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

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

HONORS & AWARDS

2024	**Planetary Origins to Habitability Graduate Fellowship**, Rice Space Institute ($2,000)
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

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 – 2023 **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

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

2023 **General field trip, New Mexico**
A field trip of igneous and metamorphic rocks in Valles Caldera, Los Alamos Surge Deposits, Bandelier National Monument, Rio Grande Gorge, etc., 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
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, and observation of structural geological phenomena led by Dr. Liang Luo
Analyzed the structure phenomena logically and drew geologic maps with CorelDraw

2017 **General Field Practice, Western Hills of Beijing**
A two-week geological field practice for learning to recognize magmatic rocks, sedimentary rocks, and metamorphic rocks led by Dr. Qin Zhang
Described how rock and fossil evidence are used to infer Earth's history