

Dian Ji

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EDUCATION

2023 – Present	Ph.D. in Earth, Environmental and Planetary Sciences Department of Earth, Environmental and Planetary Sciences, Rice University Advisor: Rajdeep Dasgupta	GPA: 3.88 / 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 = 55; h-index = 3; i10-index = 3

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

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

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, The effects of magmatic recharge on primary lunar melt compositions: Implications for the water and other volatile budget of the Moon. *Resubmitted*

D. Ji, R. Dasgupta, Garnet in the mantle source of young lunar basalts. *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*

CONFERENCE ABSTRACTS

D. Ji, R. Dasgupta, C. Lee, 2025. Water-depleted mantle source for the water-enriched lunar magma suggested by the effects of magmatic recharge. *2025 AGU Annual Meeting* V21B-0065.

N. Dygert, E. Etheridge, R. Huk, **D. Ji**, 2025. Applications of a new Eu-in-plagioclase-clinopyroxene oxybarometer. *Goldschmidt Conference* #27264.

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.

N. Dygert, **D. Ji**, E. Etheridge, 2025. 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.

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. *2024 AGU Annual 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

Jan 2026	Graduate Interdisciplinary Earth Science Symposia (GIESS) Talk, Rice University
Mar 2025	56th Lunar and Planetary Science Conference, Houston
Feb 2025	Graduate Interdisciplinary Earth Science Symposia (GIESS) Talk, Rice University
Feb 2025	Invited lunch Bunch Talk in Geochemistry/Mineralogy/Petrology (GMP), Brown University
Sep 2024	Graduate Interdisciplinary Earth Science Symposia (GIESS) Talk, Rice 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

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

2025	AGU Annual Meeting Travel Award , Rice University (\$500)
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 Annual 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, <i>The Honor Society of Phi Kappa Phi</i>
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)

OUTREACH & SERVICE

2025	Invited talk on planetary differentiation presented in the professional development series for K–12 science teachers in Houston.
2024	Volunteer Judge for Outstanding Student Poster Award, AGU Annual Meeting
Journal Reviewer	
2025	<i>Geochimica et Cosmochimica Acta</i> × 1
2024	<i>Geochimica et Cosmochimica Acta</i> × 1 <i>Icarus</i> × 1 <i>Lithos</i> × 2
2023	<i>Geochimica et Cosmochimica Acta</i> × 1
2022	<i>American Mineralogist</i> × 1
2019	<i>International Geology Review</i> × 2

PROFESSIONAL TRAINING & EXPERIENCE

Rice University

Fall 2025	Lecturer on <i>Trace Element Partitioning</i> , EEPS 322
Fall 2025	EEPS 322: Chemistry of Earth and Planetary Materials , Teaching Assistant
Fall 2024	Guest Lecturer on <i>Radiogenic Isotope Geochemistry</i> , EEPS 322
2022 – Summer 2025	Research Assistant

University of Tennessee

Spring 2023	GEOL330: Igneous and Metamorphic Petrology , Teaching Assistant Student evaluation 5.0 / 5.0
Fall 2022	Lecturer on <i>Optical Mineralogy</i> , GEOL 310
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
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SUPERVISION

Summer 2025	Denim-Leenox Sasser (High school intern) Garnet stability in the lunar mantle
Summer 2024	Aahan Roy (High school intern) Sulfur solubility of lunar basalts → Now a undergraduate student at UT Austin
2022 – 2023	Jordan Marshall (Undergraduate, University of Tennessee) Piston-cylinder experiments

→ Materials Engineering, University of Tennessee (PhD track)

FIELD EXPERIENCE

2025, 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: Feb 3, 2026