Dian Ji

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EDUCATION

Department of Earth and Planetary Sciences, University of Tennessee June 2021 - Present
MS track in Geology Knoxville, TN
Advisor: Dr. Nicholas Dygert
GPA: 4.0 / 4.0

College of Geosciences, China University of Petroleum, Beijing Sep 2016 - Jun 2020
B.E. in Resource Exploration Engineering Beijing
Advisor: Dr. Huichuan Liu
GPA: 3.9 / 5.0 (Average score: 89 / 100)
Rank: 4 / 117 (Top 3.4%)

PUBLICATION

D. Ji, H.C. Liu, Y.L. Li, (2019) 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, N. Dygert, Trace element evidence for serial processing of the lunar flotation crust and a depleted bulk Moon. *Revision submitted September 2022*
D. Ji, N. Dygert, Trace element partitioning between apatite and silicate melts. *In Preparation*

CONFERENCE ABSTRACTS

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

53rd Lunar and Planetary Science Conference, Houston Mar 2022
31st Goldschmidt Conference, Virtual Jul 2021

TRAINING

Teaching Assistant, University of Tennessee Aug 2022 – Present
GEOL310: Mineralogy

Research Assistant, University of Tennessee June 2021 – July 2022
Supervisor: Dr. Nicholas Dygert

RESEARCH

Research on the trace element partitioning between apatite and silicate melts Apr 2022 – Present

- Expanded the dataset of partition coefficients between apatite and silicate melt through piston cylinder experiments
- Conducted a series of experiments with constant initial composition but different metal buffers to characterize the Eu anomaly of apatite under different oxygen fugacities
- Built predictive models to calculate the partition coefficients of trace elements between apatite and silicate melts

Research on the Eu anomalies in lunar plagioclase Sep 2020 – Apr 2022

- Compiled published crystallization sequences and cumulate products of the lunar magma ocean
- Numerical modeled the trace element abundances of crystallized plagioclase, and tested the reasons of Eu anomalies by subsolidus reequilibration and KREEP addition
- Proposed a post-LMO model to explain the petrogenesis of lunar anorthosites and to reconcile the trace elements, isotopic evidence, and the overlap in ages of Mg-suite, KREEP basalt, and ferroan anorthosites

Laboratory Work and Visiting in UT Dallas Jul 2019 – Sep 2019

- Worked in the Global Magmatic and Tectonic Research Laboratory with Dr. Robert Stern at UT Dallas on a project aims at determining the petrogenesis of all the Early Cretaceous adakites in China

Research on Petrogenesis of Early Cretaceous Adakites in Northeast China Oct 2018 – Apr 2019

- Aimed at figuring out the controversial tectonic settings in NE China by confirming the petrogenesis of the large-scale Early Cretaceous adakitic rocks
- Compiled the temporal and spatial distribution as well as the major elements, trace elements, and Sr-Nd, Lu-Hf isotopic data of the Early Cretaceous adakites
- Proposed a convergent bidirectional subduction model to explain the tectonic settings

HONORS & AWARDS

- **Jimmy Walls Colloquium Presentation Award**, University of Tennessee 2022
- **Li Siguang Outstanding Student Award** (the highest undergraduate geoscience award in China) 2020
- **Excellent Senior Thesis Award**, Beijing 2020
- **Dean's Nomination Award of College of Geosciences**, China University of Petroleum 2020
- **First-class Scholarship**, China University of Petroleum 2019
- **Second Prize in Tectonic Knowledge Competition**, China University of Petroleum 2019
- **Oriental Geophysics Company Scholarship** 2018
- **First Prize of the 2018 "FLTRP Cup" English Reading Contest** 2018
- **Third Prize of Comprehensive Geological Skills Competition**, China University of Petroleum 2018
- **Second Prize in Tectonic Knowledge Competition**, China University of Petroleum 2018
- **Third Prize in General Geology Knowledge Competition**, China University of Petroleum 2018
- **Second-class Scholarship**, China University of Petroleum 2017

SERVICE

Journal Reviewer

American Mineralogist; International Geology Review (×2)

FIELD EXPERIENCE

Rio Grande Rift and Jemez Lineament xenolith sampling, New Mexico 2022

- Collected mantle and crustal xenolith from Kilbourne Hole to Cerro de Guadalupe in New Mexico for a week led by Dr. Nick Dygert

McClung Blue Ridge Foothills Field Trip 2022

- 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

Archean Basic Rock Collection, Miyun 2019

- Collected Archean garnet pyroxenite

- Measured geological occurrence of basaltic dyke group led by Dr. Huichuan Liu

Field Practice in Oilfield, Dagang Oilfield 2019
- Learned the working methods of oilfield engineers, and interpretation of seismic data as well as logging data for two weeks

Comprehensive Geological Field Practice, Liujiang Basin 2018
- 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

General Field Practice, Western Hills of Beijing 2017
- 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

SKILLS

- MATLAB, R, C/C++, Adobe Illustrator, Photoshop, CorelDRAW, Grapher, Surfer, Igpet
- Piston Cylinder, Gas Mixing Furnace, Scanning Electron Microscope, Electron Probe Microanalyzer, LA-ICP-MS