

Meng Guo

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Education

- Yale University** **New Haven, CT**
Ph.D. in Earth & Planetary Sciences (GPA: Honor) Aug. 2018 – Expected Sep. 2023
- Thesis: The Physics and Chemistry of Crust-Mantle Differentiation
 - Thesis Advisor: Dr. Jun Korenaga
- University of Maryland, College Park** **College Park, MA**
M.S. in Geology (GPA: 3.93/4.0) Aug. 2016 - May 2018
- Thesis: Earth's Thorium and Uranium Abundance and Distribution
 - Thesis Advisor: Dr. Bill McDonough
- Central South University** **Hunan, China**
B.S. in Applied Chemistry (GPA: 3.73/4.0) Aug. 2008 - May 2012
- Thesis: Enhancing Selective Separation of Vanillin and O-Vanillin using a Cellulose Acetate-based Molecularly Imprinted Polymeric Membrane
 - Thesis Advisor: Dr. Shian Zhong

Working Experience

- Yale University** **New Haven, CT**
Teaching Fellow Aug. 2018 - present
- EPS 540 Advanced Topics in Geodynamics Spring 2023
 - Guest Lecturers: “The Mystery of Mid-Ocean Ridge” (9 lectures)
 - EPS 110 Dynamic Earth Fall 2022
 - EPS 212 Global Tectonics Spring 2020 & 2022
 - EPS 312 Structural Geology Fall 2021
 - EPS 725 Geoengineering and Carbon Capture Spring 2021
 - Guest Lecturer: “Implement Monte Carlo in Carbon Cycle Models”
- University of Maryland, College Park** **College Park, MA**
Research Fellow Aug. 2016 - May 2018
- Represented the UMD research group to organize 2 bi-annual Geoneutrino Collaboration Meetings with researchers from Tsinghua University and Tohoku University
- Institute of Crustal Dynamics, China Earthquake Administration** **Beijing, China**
Associate Researcher, Earthquake Forecasting Department Jun. 2012 - Aug. 2016
- Managed the operation of X-ray fluorescence laboratory. Performing experiments and conducting scientific reports
 - Conducted analyses of radon concentration change in rivers associated with earthquake events

Publications

* Corresponding author + Co-first author

[5] **Guo***, M., Korenaga, J., “The combined Hf and Nd isotope evolution of the depleted mantle requires Hadean continental formation”, *Science Advances*, **9**, eade2711, 2023.

[4] **Guo***, M., Wostbrock, J. A., Planavsky, N. J., Korenaga, J., “Reconstructing seawater $\delta^{18}\text{O}$ and $\Delta^{17}\text{O}$ values with solid Earth system evolution”, *Earth and Planetary Science Letters*, **592**, 117637, 2022.

[3] **Guo***, M., Korenaga, J., “A new halogen budget of the bulk silicate Earth points to a history of early halogen degassing followed by net regassing”, *Proceedings of the National Academy of Sciences*, **118**, e2116083118, 2021.

[2] **Guo***, M., Korenaga, J., “Argon constraints on the early growth of felsic continental crust”, *Science Advances*, **6**, eaaz6234, 2020.

[1] Wipperfuth*⁺, S., **Guo**⁺, M., Sramek, O., McDonough*, W., “Earth's chondritic Th/U: Negligible fractionation during accretion, core formation, and crust–mantle differentiation”, *Earth and Planetary Science Letters*, **498**, 196-202, 2018.

Awards and Honors

Yale University

- Elias Loomis Prize (Excellence in studies of physics of the Earth) \$1,000 2023
- Karl Turekian Prize (Excellence in Geochemical Studies) \$1,000 2022
- Estwing Hammer Award (Outstanding Geology Graduate Student) \$700 2021
- Outstanding Student Paper Award, AGU Fall Meeting \$800 2019

University of Maryland, College Park

- Fulbright Fellowship \$150,000 2016 - 2018

Institute of Crustal Dynamics, China Earthquake Administration

- The Outstanding Central Committee of the Youth League of China 2013 - 2015

Central South University

- Outstanding Undergraduate Thesis 2012

Conference Abstracts

AGU Fall Meeting Poster (Presenter): 2022

- **Guo, M.**, Korenaga, J., The combined Hf and Nd isotope evolution of the depleted mantle requires Hadean continental formation.

AGU Fall Meeting Poster (Presenter): 2021

- **Guo, M.**, Korenaga, J., A new halogen budget of the bulk silicate Earth points to a history of catastrophic halogen degassing followed by net regassing.

AGU Fall Meeting Invited Talk (Presenter): 2020

- **Guo, M.**, Korenaga, J., Reconciling seawater ^{18}O records with solid Earth

system evolution.

AGU Fall Meeting Talk (Presenter): 2019

- **Guo, M.**, Korenaga, J., Argon constraints on the growth of continental crust and its composition.

AGU Fall Meeting Talk: 2017

- McDonough, W. F., **Guo, M.**, Wipperfurth, S. A., The Earth's thorium and uranium abundance and distribution.

Invited Talks

Nanjing University 2022.08

Title: Reconstructing seawater $\delta^{18}\text{O}$ and $\Delta^{17}\text{O}$ values with solid Earth system evolution

Prebiotic Chemistry and Early Earth Environments Consortium, NASA 2021.09

Title: Argon constraints on the early development of massive continental crust and the onset of plate tectonics

AGU Fall Meeting 2020.12

Title: Reconciling seawater $\delta^{18}\text{O}$ records with solid Earth system evolution

Geochemistry Alumina Seminar, University of Maryland, College Park 2020.09

Title: Argon constraints on the growth of continental crust and its composition

Chengdu University of Technology 2020.08

Title: Argon constraints on the growth of continental crust and its composition

Institute of Geology and Geophysics, Chinese Academy of Sciences 2020.07

Title: Argon constraints on the growth of continental crust and its composition

Academic Media Coverages

Yale News 2023

Link: Earth needed time to 'mix' its continental crust, Yale researchers say

Yale Daily 2023

Link: Earth's crust dates back earlier than previously thought, Yale study finds

Yale Scientific 2022

Link: Halogens: A Gaseous Peek into the Earth's History

Yale News 2021

Link: Spice World – Earth's Early Ocean May Have Been Heavy on the Salt

Yale Scientific 2020

Link: Earth's Evolution through Eons: Using the History of Argon as a Constraint of Continental Evolution

Yale News 2020

Link: Yale Finds a much Earlier Birth Date for Tectonic Plates

University Services

Graduate Student Assembly Representative, Yale University

Aug. 2021 - present

- Initiated the International Student Ad-Hoc Committee which addressed pandemic-induced issues for international students
- Collaborated with Yale Mental Health and Counseling to create an International Student Group. Successfully organized 12 weekly meetings to increase social support, reduce cultural isolation, and normalize the challenges of studying abroad

Treasurer of Dana Club, Yale University

Aug. 2020 - Aug. 2021

- Served as the Treasurer of Dana Club (departmental Graduate Student Organization). Served as a liaison between the director of graduate school and the graduate student body
- Successfully organized departmental events throughout the academic year

Co-founder of Departmental DEI Committee, Yale University

Aug. 2021 - Aug. 2022

- Established the departmental DEI Committee; moderated the bi-weekly agenda for 16 committee meetings, authoring and proposing the initiatives to advance diversity and equity in the workplace
- Initiated the department Outreach Fellowship program and successfully launched it in collaboration with the Graduate School of Arts and Sciences; raised \$70,000 to support 2 graduate students' outreach projects in the 2022 academic year

Technical Skills

Programming: Matlab (proficient), Python (proficient)

Experimental skill: familiar with the operation of X-ray fluorescence experiment

Language: Chinese (native), English (proficient), Italian (beg.)