JUNJIE "JJ" DONG

Harvard University
Department of Earth and Planetary Sciences (EPS)
20 Oxford Street, Cambridge, Massachusetts 02138
junjiedong@g.harvard.edu / +1 (734) 730-3921 / dong2j.github.io

EDUCATION

2017–present: Harvard University, Ph.D. in Earth and Planetary Sciences
2014–2017: University of Michigan, B.S. in Earth and Environmental Sciences, with honors

POSITIONS HELD

2017–present Graduate research assistant, Harvard University, Laboratory for Mineral Physics with Prof. Rebecca A. Fischer
2015–2017 Undergraduate research assistant, University of Michigan, Mineral Physics Research Group with Prof. Jie Li

HONORS AND AWARDS

2019: Goldschmidt Planetary Science Grant, *Geochemical Society/NASA*
2018: Best Student Presentation Award, *Consortium for Materials Properties Research in Earth Sciences (COMPRES) 2018 Annual Meeting*
2017–2019: Peirce Fellowship, *Harvard University Graduate School of Arts and Sciences (GSAS)*
2017: Undergraduate Academic Excellence Award, *University of Michigan Department of Earth and Environmental Sciences*
2017: Best Poster Award, *"Origin and Evolution of Deep Primordial Reservoirs" Winter School at Kusatsu*, Japan
2016: Turner Undergraduate Award, *University of Michigan Department of Earth and Environmental Sciences*
2015–2016: Angell Scholar, *University of Michigan*

PUBLICATIONS

J. Dong, R. A. Fischer, L. P. Stixrude, C. Lithgow-Bertelloni, *AGU Adv.*, 2020: The volume of Earth's early oceans constrained by temperature-dependent mantle water storage capacity. (OA)

K. Daviau, R. A. Fischer, M. C. Brennan, **J. Dong**, T.-A. Suer, S. Couper, Y. Meng, V. B. Prakapenka, *J. Geophys. Res. Solid Earth*, 2020: Equation of state of TiN at high pressures and temperatures: A possible host for nitrogen in planetary mantles.

J. Li, F. Zhu, J. Liu, **J. Dong**, *Carbon in Earth's Interior* (AGU Geophysical Monograph 249, Ch. 15), 2020: Reactive preservation of carbonate in Earth's mantle transition zone. (OA)

D. Zhou, **J. Dong**, Y. Si, F. Zhu, J. Li, *Minerals*, 2020: Melting curve of potassium chloride from *in situ* ionic conduction measurements. (OA)

F. Zhu, J. Li, J. Liu, **J. Dong**, Z. Liu, *PNAS*, 2019: Metallic iron limits silicate hydration of Earth's transition zone.

J. Dong, J. Li, F. Zhu, *Front. Earth Sci.*, 2019: Wetting behavior of iron-carbon melt in silicates at mid-mantle pressures with implications for the Earth's deep carbon cycle. (OA)

J. Dong, J. Li, F. Zhu, Z. Li, R. Farawi, *Am. Min.*, 2019: Melting curve minimum of barium carbonate $BaCO_3$ near 5 GPa.

CONTRIBUTED CONFERENCE PRESENTATIONS ([T]alk; [P]oster)

Dec 2020: "Subsolidus phase relations for Mg_2SiO_4 at mantle transition zone conditions", *American Geophysical Union (AGU) Fall Meeting 2020*, Online Everywhere. [P]

Aug 2020: "Phase equilibria and water storage capacities of Martian mantle materials", *COMPRES 2020 Virtual Annual Meeting*, Online Everywhere. [T]

Dec 2019: "Water storage in the Martian mantle", *AGU Fall Meeting 2019*, San Francisco. [P]

Aug 2019: "Water storage in the Martian mantle", *Goldschmidt Conference 2018*, Barcelona, Spain. [T]

Aug 2019: "Subsolidus phase transitions in $(Mg,Fe)_2SiO_4$ at transition zone conditions", *COMPRES 2019 Annual Meeting*, Big Sky. [P]

Dec 2018: "The volume of Archean oceans constrained by temperature-dependent mantle water storage capacity", *AGU Fall Meeting 2018*, Washington D.C. [T]

Aug 2018: "Water Storage Capacity of Earth's Mantle and Its Temporal Evolution", *Goldschmidt Conference 2018*, Boston. [T]

Aug 2018: "Water Storage Capacity of Earth's Mantle and Its Temporal Evolution", *COMPRES 2018 Annual Meeting*, Albuquerque. [T]&[P]

Dec 2017: "Melting curve of compressed barium carbonate from in situ ionic conductivity measurements: Implications for the melting behavior of alkaline earth carbonates in Earth's deep carbon cycle", *AGU Fall Meeting 2017*, New Orleans. [P]

Nov 2017: "Melting curve of compressed barium carbonate from in situ ionic conductivity measurements: Implications for the melting behavior of alkaline earth carbonates in Earth's deep carbon cycle", *Deep Carbon Observatory (DCO) Extreme Physics and Chemistry (EPC) Workshop 2017*, Tempe. [T]

Jan 2017: Is the Earth's core still growing? Assessing the fate of molten iron-carbon alloy by investigating its wetting of mantle silicates", *"Origin and Evolution of Deep Primordial Reservoirs" Winter School*, Kusatsu, Japan. [P]

Dec 2016: Is the Earth's core still growing? Assessing the fate of molten iron-carbon alloy by investigating its wetting of mantle silicates", *DCO EPC Workshop 2016* at Stanford University, Palo Alto. [P]

June 2016: "Is the Earth's core still growing? Assessing the fate of molten iron-carbon alloy by investigating its wetting of mantle silicates", *COMPRES 2016 Annual Meeting*, Albuquerque. [T]

TEACHING

January Term 2021: Programming coach for Earth and Planetary Sciences 101 (EPS 101): Global Warming Science, with Prof. Eli Tziperman at Harvard University Department of Earth and Planetary Sciences.

Spring 2019: Teaching Fellow for Science of the Physical Universe 30 (SPU 30): Life as a Planetary Phenomenon, with Prof. Dimitar D. Sasselov at Harvard University Department of Astronomy.

SCIENTIFIC AND UNIVERSITY SERVICE

Journal reviewer: Astronomy & Astrophysics, Nature

2020: Session organizer (student mentee), "DI023 - A Multidisciplinary Approach to Understanding Volatiles in Earth's Mantle", *AGU 2020 Fall Meeting*
2020: Session organizer and chair, Contributed Talks Session: "Advances in High-Pressure Techniques", *COMPRES 2020 Virtual Annual Meeting*
2020: Session organizer and chair, Contributed Talks Session: "Water, Water Everywhere", *COMPRES 2020 Virtual Annual Meeting*
2020: Session organizer and chair, Student/Postdoc Breakout Session: "Conducting Research and Managing Your Career in the Time of a Pandemic", *COMPRES 2020 Virtual Annual Meeting*
2020: Student Representative, Meeting Planning Committee, *COMPRES 2020 Virtual Annual Meeting*.
2019–2020: Chair, Student and Postdoc Committee, *COMPRES*
2018–2019: Member, Student and Postdoc Committee, *COMPRES*
2018–2019: Organizer, Solid Earth Graduate Student Lunch Seminar, *Harvard University Department of Earth and Planetary Science*

OUTREACH

2020: Interviewed for #AGU20 Scientific Roll Call (https://youtu.be/bQxVCHEvSlg?t=1394), *AGU 2020 Fall Meeting*
2019: Speaker, EPS Day Talk, *Harvard University Department of Earth and Planetary Science*
2019: Volunteer educator, I Heart Science Festival, *Harvard Museum of Natural History*