

DANIEL L. JOHNSON

Isotope Mass Spectrometrist, SNA International

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danjohnson92



EDUCATION

Ph.D., Geochemistry

California Institute of Technology

Oct 2014 – October 2020

M.Sc., Geochemistry

California Institute of Technology

Oct 2014 – June 2017

B.Sc., Environmental Earth Sciences

Washington University in St. Louis

August 2010 – May 2014

Summa Cum Laude; minor: Anthropology

HONORS & AWARDS

Graduate Dean's Award
Caltech, 2021

Graduate Research Fellowship
National Science Foundation, 2014-19

Ernest L. Ohle, Jr. Award
WUSTL Earth & Planetary Sciences
(EPSci) Department, 2014

Margaret Hewig Memorial
Field Camp Award
WUSTL EPSci Dept., 2014

J. Steven Fossett Pathfinder Fellowship
WUSTL EPSci Dept., 2014

SKILLS

Ion chromatography

MC-ICP-MS

TQ-ICP-MS

EA-IRMS

XANES

Column chemistry

XRF microscopy

MATLAB

Reactive transport modeling

Box modeling

Cluster analysis

Wet chemistry

Instrument maintenance

Methods development

Field work

Journal review (EPSL, ChemGeo, NatComm)

MEMBERSHIPS

- American Geophysical Union (AGU)
- Geological Society of America (GSA)
- Geochemical Society
- National Association of Geoscience Teachers (NAGT)

PUBLICATIONS

- Johnson, Daniel L., Theodore M. Present, Menghan Li, et al. (2021). "Carbonate associated sulfate (CAS) $\delta^{34}\text{S}$ heterogeneity across the End-Permian Mass Extinction in South China". In: *Earth and Planetary Science Letters* 574, p. 117172. ISSN: 0012-821X. DOI: 10.1016/j.epsl.2021.117172.
- Johnson, Daniel L., Ethan L. Grossman, et al. (2020). "Brachiopod $\delta^{34}\text{S}_{\text{CAS}}$ microanalyses indicate a dynamic, climate influenced Permo-Carboniferous sulfur cycle". In: *Earth and Planetary Science Letters* 546, p. 116428. ISSN: 0012-821X. DOI: 10.1016/j.epsl.2020.116428.
- Rosenthal, Y. et al. (2018). "Western Pacific Warm Pool". In: *Proceedings of the International Ocean Discovery Program* 363. DOI: 10.14379/iodp.proc.363.2018.

RESEARCH & WORK EXPERIENCE

Isotope Mass Spectrometrist

SNA International

June 2022 – Present

Joint Base Pearl Harbor-Hickam, HI

- Supporting the DPAA in the forensic application of stable isotope ratio mass spectrometry toward identification of POW/MIA remains from past conflicts

Postdoctoral Research

Rice University

November 2020 – May 2022

Houston, TX

- Developed a new in-house method for measuring elemental ratios in carbonates via TQ-ICP-MS

Ph.D. Research

California Institute of Technology

October 2014 – October 2020

Pasadena, CA

- Analyzed the controls upon sedimentary sulfur cycling in modern and ancient marine environments using diagenetic modeling, EA-IRMS, and MC-ICP-MS

Undergraduate Research

Washington University in St. Louis

June 2013 – May 2014

St. Louis, MO

- Tested sulfide reoxidation as a mechanism to form "superheavy" pyrite through laboratory experiments and EA-IRMS

Undergraduate Research

Columbia University

June 2012 – August 2012

New York, NY

- Used K-Ar ages to determine the provenance of fine-grained Southern Ocean sediments

OUTREACH

Skype a Scientist

📅 September 2020 - Ongoing

- Participant in program to connect scientists with elementary and JHHS classrooms

Graduate Research Spotlight

Caltech Alumni Weekend

📅 May 2019

- Featured oral presenter at Caltech Alumni Weekend event highlighting graduate student research

"Science for March"

Caltech Postdoc Association

📅 2018/2019

- Organizer (2018) and participant (2019) in event demonstrating scientific concepts to the public

"Digging into Earth's Muddy Past"

Caltech Letters

📅 2018

- Author of article on deep sea drilling for the Caltech Letters science blog

Los Angeles March for Science

📅 April 2017

- Participant in science demonstrations for the event

Science Olympiad

California Institute of Technology

📅 2015-17

- Exam writer and proctor for regional and state Science Olympiad events

RISE Tutoring

Caltech Y

📅 2015-16

- Math tutor for JHHS students from local public schools

TEACHING EXPERIENCE

Teaching Assistant

California Institute of Technology

- Paleoceanography (Winter 2019)
- Introduction to Geology & Geochemistry (Fall 2017)
- Stable Isotope Geochemistry (Winter 2017)
- Earth & Environment (Spring 2016)

Washington University in St. Louis

- Biogeochemistry (Spring 2014)

Research Mentor

California Institute of Technology

- Yashna Peerthum (Spring/Summer 2019)
- Melissa Gutierrez (Summer 2018)

Student in Pedagogical Strategies

California Institute of Technology

- Completed Caltech Project for Effect Teaching (CPET) "Certificate of Interest in University Teaching" program (2018-19)

LEADERSHIP

Unlearning Racism in the Geosciences (URGE)

Rice University

📅 2021-present

- Participant in Spring 2021 national URGE program as a member of the Rice University pod
- Current co-leader of the Rice URGE Action Group for the 2021-22 academic year

Graduate Title IX Committee

California Institute of Technology

📅 2016-2020

- Provided feedback on institute Title IX policies and activities to promote awareness

Graduate Orientation Team

California Institute of Technology

📅 Sept. 2019

- Organized and assisted with events for new graduate student orientation

Graduate Student Council (GSC)

California Institute of Technology

📅 2015-2018

- Led organization and interfaced with Caltech administration as Chair/Vice Chair (2017-18)
- Co-organized bi-annual forum between graduate students and faculty (2018)
- Served as Treasurer and organizer of GSC Formal event (2016-17)