

DANIEL L. JOHNSON

Isotope Mass Spectrometrist, SNA International

@ daniel.johnson@sna-intl.com

☎ 815-494-0523

🌐 danjohnsonphd.github.io/website/

🌐 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

🏆 **SNA Spot Award**
SNA Intl., April 2023

🏆 **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

GasBench II Collagen extraction
Ion chromatography MC-ICP-MS
TQ-ICP-MS EA-IRMS XANES
Column chemistry XRF microscopy
MATLAB Reactive transport modeling
Box modeling Cluster analysis
Infrared spectroscopy Wet chemistry
Instrument maintenance Lab safety
Methods development Field work
Method validation Chemical hygiene
Journal review (EPSL, ChemGeo, NatComm)
Microsoft Office Overleaf/LaTeX

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 Defense POW/MIA Accounting Agency (DPAA) in the identification of POW/MIA remains from past conflicts
- Developing an in-house method for measuring the C and O isotope ratios in tooth enamel carbonate as part of a team of experts
- Ensuring quality assurance and quality control through the establishment and application of rigorous protocols

Postdoctoral Research

Rice University

📅 November 2020 – May 2022

📍 Houston, TX

- Developed new method for measuring elements in carbonates via triple quadrupole inductively coupled plasma mass spectrometry (TQ-ICP-MS)

Ph.D. Research

California Institute of Technology

📅 October 2014 – October 2020

📍 Pasadena, CA

- Analyzed sedimentary sulfur cycling using diagenetic modeling, elemental analyzer isotope ratio mass spectrometry (EA-IRMS), and multiple collector inductively coupled plasma mass spectrometry (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

MEMBERSHIPS

- Forensic Isotope Ratio Mass Spectrometry (FIRMS) Network
- American Geophysical Union (AGU)
- Geological Society of America (GSA)
- Geochemical Society

OUTREACH

Laboratory Tour Program

📅 Feb. 2023 - present 📍 DPAA

- Laboratory support volunteer to assist in hosting tours of the DPAA Laboratory at Joint Base Pearl Harbor-Hickam, Hawaii

Skype a Scientist

📅 Sept. 2020 - Sept. 2022

- 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 EXPERIENCE

Unlearning Racism in the Geosciences (URGE)

Rice University

📅 2021-present

- Participant in Spring 2021 national URGE program and 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)

Troop 620 - Roscoe, IL

Boy Scouts of America

📅 2004-2010

- Attained Eagle Scout rank (2007)