

DANIEL L. JOHNSON

Postdoctoral Research Associate, Rice University

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EDUCATION

Ph.D. in Geochemistry

California Institute of Technology

📅 Oct 2014 – October 2020

M.Sc. in Geochemistry

California Institute of Technology

📅 Oct 2014 – June 2017

B.Sc. in Environmental Earth Sciences

Washington University in St. Louis

📅 August 2010 – May 2014

Summa Cum Laude; minor: Anthropology

RESEARCH EXPERIENCE

Postdoctoral Research

Rice University

📅 November 2020 – Present

📍 Houston, TX

- Developing a new in-house method for measuring elemental ratios in carbonates via TQ-ICP-MS
- Conducting laboratory experiments to study the role of mineral protection in modifying organic matter degradation rates

Ph.D. Research

California Institute of Technology

📅 October 2014 – October 2020

📍 Pasadena, CA

- Created a new record of the marine sulfur cycle during the Permo-Carboniferous using MC-ICP-MS
- Analyzed the controls upon sedimentary sulfur cycling in deep ocean depositional environments using diagenetic modeling and EA-IRMS

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

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

Column chemistry

XRF microscopy

XANES

MATLAB

Reactive transport modeling

Box modeling

Cluster analysis

Field work

Shipboard analyses

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

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)

PUBLICATIONS

Published & Accepted

- 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. URL: <https://www.sciencedirect.com/science/article/pii/S0012821X21004271>.
- 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. URL: <http://www.sciencedirect.com/science/article/pii/S0012821X20303721>.

In Preparation

- Johnson, Daniel L., Theodore M. Present, and Jess F. Adkins (n.d.). "Description and evaluation of a new reactive transport model for sulfur cycling in deep marine sediments".
- Johnson, Daniel L., Theodore M. Present, Melissa Gutierrez, et al. (n.d.). "Sulfur Cycling in Deep Marine Oxygenated Settings".

MEMBERSHIPS

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

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

OUTREACH (CONT.)

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

LEADERSHIP

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 (2016-7)