

# ROGER N. BRYANT

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Assistant Professor, Purdue University,  
 Department of Earth, Atmospheric, and Planetary Sciences,  
 Rm. 3277-A, Delon and Elizabeth Hampton Hall of Civil Engineering  
 550 Stadium Mall Drive, West Lafayette, IN 47907  
 +1(434) 989-2944, mbryant@purdue.edu  
[www.rogernbryant.com](http://www.rogernbryant.com)  
[Google Scholar](https://scholar.google.com/citations?user=0000-0001-7171-2070), ORCID [0000-0001-7171-2070](https://orcid.org/0000-0001-7171-2070)

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## EDUCATION

- 2014 – 2019 *Doctor of Philosophy* in Earth and Planetary Sciences, **Washington University in St. Louis**, St. Louis, Missouri, U.S.A.  
 Department of Earth & Planetary Sciences  
 Thesis: [“Local Environmental Controls on Sulfur Isotope Ratios in Marine Sedimentary Iron Sulfide Minerals”](#) (Advisor: David Fike)
- 2010 – 2014 *Bachelor of Science* in Earth Science, **University of St. Andrews**, St. Andrews, Fife, United Kingdom

## PROFESSIONAL EXPERIENCE

- 01/2023 – Assistant Professor, Department of Earth, Atmospheric, and Planetary Sciences, **Purdue University**, West Lafayette, Indiana, U.S.A.
- 2019 – 2023 *Postdoctoral Scholar*, Department of the Geophysical Sciences, **The University of Chicago**, Chicago, Illinois, U.S.A.

## PUBLICATIONS

- ... **Bryant, R. N.**, Todes, J. P., Richardson, J. A., Kalia, T. C., Prave, A. R., Lepand, A., Kirsimäe, K., & Blättler, C. L., Marine sulfate levels after the Great Oxidation Event. *In review, PNAS* (available upon request).
9. **Bryant, R. N.**, Houghton, J. L., Jones, C., Pasquier, V., Halevy, I., & Fike, D. A. (2023). Deconvolving microbial and environmental controls on marine sedimentary pyrite sulfur isotope ratios. *Science*, 382(6673), 912–915. <https://doi.org/10.1126/science.adg6103>
8. Halevy, I., Fike, D. A., Pasquier, V., **Bryant, R. N.**, Wenk, C. B., Turchyn, A. V., Johnston, D. T., & Claypool, G. E. (2023). Sedimentary parameters control the sulfur isotope composition of marine pyrite. *Science*, 382(6673), 946–951. <https://doi.org/10.1126/science.adh1215>
7. **Bryant, R. N.**, Richardson, J. A., Kalia, T. C., Gros, O., Lopez-Garriga, J., & Blättler, C. L., 2023. Inorganic sulfate-based signatures of chemosymbiosis in modern infaunal lucinids. *Geology*. 51(11), 1022–1026. <https://doi.org/10.1130/G51353.1>
6. **Bryant, R.N.**, Present, T.M., Ahm, A-S.C., McClelland, H.L.O., Rationale, D., & Blättler, C.L., 2022. Early diagenetic constraints on Permian seawater chemistry from the Capitan Reef. *Geochim. Cosmochim. Acta*. 328, 1–18. <https://doi.org/10.1016/j.gca.2022.04.027>
5. Rationale, D., **Bryant, R.N.**, Blättler, C.L., 2021. Adapting automated instrumentation for high-throughput calcium isotope measurements by MC-ICP-MS. *Rapid Commun. Mass Spectrom.* <https://doi.org/10.1002/rcm.9249>
4. Pasquier, V., **Bryant, R.N.**, Fike, D.A., Halevy, I., 2021. Strong local, not global, controls on marine pyrite sulfur isotopes. *Sci. Adv.* 7, eabb7403. <https://doi.org/10.1126/sciadv.abb7403>

3. **Bryant, R.N.**, Jones, C., Raven, M.R., Owens, J.D., Fike, D.A., 2020. Shifting modes of iron sulfidization at the onset of OAE-2 drive regional shifts in pyrite  $\delta^{34}\text{S}$  records. *Chem Geo.* 553, 119808. <https://doi.org/10.1016/j.chemgeo.2020.119808>
2. **Bryant, R.N.**, Jones, C., Raven, M.R., Gomes, M.L., Berelson, W.M., Bradley, A.S., Fike, D.A., 2019. Sulfur isotope analysis of microcrystalline iron sulfides using secondary ion mass spectrometry imaging: Extracting local paleo-environmental information from modern and ancient sediments. *Rapid Commun. Mass Spectrom.* 33, 491–502. <https://doi.org/10.1002/rcm.8375>
1. **Bryant, R.N.**, Pasteris, J.D., Fike, D.A., 2018. Variability in the Raman Spectrum of Unpolished Growth and Fracture Surfaces of Pyrite Due to Laser Heating and Crystal Orientation. *Appl. Spectrosc.* 72, 37–47. <https://doi.org/10.1177/0003702817736516>

## GRANTS/FELLOWSHIPS

- 2021 – 2022 Funded proposal “Understanding the preservation of sulfur isotope ratios in dolomitized carbonates”, with PI Clara Blättler; \$110,000 from **American Chemical Society Petroleum Research Fund** (PRF #62442-DNI2).
- 2021 – 2023 Successful facilities proposal “Assessing the bonding and co-localization of sulfate and iron in ancient carbonates” for beam time at **Stanford Synchrotron Radiation Lightsource** (S-XV-ST-5892).
- 2014 – 2017 3-year Graduate Fellowship, **McDonnell Center for the Space Sciences**.

## AWARDS/RECOGNITION

- Publication #9 was selected as one of three top scholarly publications from the College of Science at Purdue University to be highlighted to the President’s Office (Fall 2023).
- Purdue University Teaching Honor Roll (Fall 2023)

## TEACHING EXPERIENCE

### Purdue University

- 2024 spring Instructor, EAPS 112 (The Earth Through Time) – enrolment ~210
- 2023 fall Instructor, EAPS 100 (Planet Earth) – enrolment ~300

### The University of Chicago (postdoc)

- 2021 spring Instructor, Introduction to Climate Science (UChicago Upward Bound college prep.)
- 2021 spring Auditor, Topics in Stratigraphy and Biosedimentology (Instructor: Susan Kidwell)
- 2020 fall Instructor, Introduction to Climate Science (UChicago Upward Bound college prep.)
- 2019 fall Auditor, Low Temperature Geochemistry (Instructor: Clara Blättler)
- 2019 fall Instructor, Introduction to Climate Science (UChicago Upward Bound college prep.)

### Washington University in St. Louis (graduate student)

- 2017 fall Graduate instructor, Earth & Environment
- 2017 spring Graduate instructor, Earth’s Future: Causes and Consequences of Climate Change

## INVITED TALKS

- 2023 **Goldschmidt conference**, Lyon, France – keynote speaker in Session 8e IUPUI, Dept. of Earth Sciences, Indianapolis, IN
- 2022 **University of Chicago**, Dept. of the Geophysical Sciences (“Noon Balloon” Series)
- 2021 **Purdue University**, Dept. of Earth, Atmos. & Planetary Sciences, W. Lafayette, IN

2020 **University of Chicago**, Dept. of the Geophysical Sciences (“Noon Balloon” Series)  
 2019 **Northwestern University**, Dept. of Earth & Planetary Sciences, Evanston, IL  
 2019 **SDSMT**, Dept. of Geology and Geological Engineering, Rapid City, SD

## CONFERENCE PRESENTATIONS

### Oral presentations

9. Bryant, R. N., Richardson, J. A., Prave, T., Lepland, A., Kirsimäe, K., Kalia, T. C., Todes, J., Blättler, C., No evidence for falling marine sulfate levels after the Great Oxidation Event in Fennoscandia. *Life & Planet*, 2023
8. Bryant, R. N., Blättler, C., Platform carbonates fail to capture mid-Eocene isotopic shift in ocean sulfate. *Goldschmidt*, 2023
7. Bryant, R. N., Richardson, J. A., Prave, T., Lepland, A., Kirsimäe, K., Valdes, M., Kalia, T. C., Todes, J., Blättler, C., A local origin for carbonate carbon and sulfur isotopic trends after the GOE. *AGU Fall Meeting*, 2022
6. Bryant, R. N., Blättler, C. L., Seeing past sulfate reduction in the bulk-carbonate sulfur isotope record. *AGU Fall Meeting*, 2021
5. Bryant, R. N., Blättler, C. L., Seeing past sulfate reduction in the bulk-carbonate sulfur isotope record. *Midwest Geobiology Symposium*, 2021
4. Bryant, R. N., Present, T. M., Blättler, C. L., Diagenetic constraints on the drivers of Capitan Reef encrustation. *Goldschmidt*, 2021
3. Bryant, R. N., Oglione, R., Gomes, M. L., Pasteris, J. D., Fike, D. A., Sedimentary Marcasite: a Proxy for Ocean Acidification? *AGU Fall Meeting*, 2020
2. Bryant, R. N., Jones, C., Pasquier, V., Halevy, I., Fike, D. A., Local Environmental Controls on Marine Sedimentary Pyrite Sulfur Isotope Ratios. *Midwest Geobiology Symposium*, 2018
1. Bryant, R. N., Jones, C., Pasquier, V., Halevy, I., Fike, D. A., Depositional Conditions Control Marine Sedimentary Pyrite Isotopes. *Goldschmidt*, 2018

## MENTORSHIP

### Graduate students (Bold indicates primary advisee)

**Emily Apel**; **Isabelle Rein** (Purdue University) 2023 –  
 Emilie Lafleche; Kyle Batra; Ashika Capirala (Purdue University) 2022 –  
 Jordan Todes; Chiza Mwinde (University of Chicago) 2020 –

### Undergraduate students (Bold indicates direct advisee)

**Julia Kassis** (Purdue University) 2024 –  
 Tara Kalia (University of Chicago) 2021 – 2023

## PROFESSIONAL SERVICE

### Proposal reviews

*NASA Exobiology Program* (2023)

### Manuscript reviews

*Science Advances* (2023, 2024); *Earth & Planetary Science Letters* (2019, 2021); *Economic Geology* (2020); *Geochimica et Cosmochimica Acta* (2019, 2020, 2021, 2022); *Chemical Geology* (2022, 2023, 2024); *Geophysical Research Letters* (2022); *Geostandards and Geoanalytical Research* (2019, 2020, 2021); *Frontiers in Earth Science* (2021, 2023).

## REFEREES

Prof. Clara Blättler, University of Chicago ([cblattler@uchicago.edu](mailto:cblattler@uchicago.edu); +1 6176786211)  
 Prof. David Fike, Washington University in St. Louis ([dfike@levee.wustl.edu](mailto:dfike@levee.wustl.edu); +1 3149356607)  
 Prof. Itay Halevy, Weizmann Institute of Science ([itay.halevy@weizmann.ac.il](mailto:itay.halevy@weizmann.ac.il); +972 89346987)