

**Jaime Danielle Barnes**

Professor

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***Education:***

- 2006 Ph.D. University of New Mexico, Earth and Planetary Sciences  
*Tectonic and metamorphic implications of high chlorine contents in serpentinites*  
(Drs. Zachary Sharp and Jane Selverstone, co-advisors)  
*\*\*graduated with distinction*
- 2002 M.S. University of New Mexico, Earth and Planetary Sciences  
*Fluid-mediated strain localization during alpine age strike-slip deformation in the Eastern Alps* (Dr. Jane Selverstone, advisor)
- 2000 B.S. University of Texas at Austin, Geological Sciences  
*Major- and trace-element zoning as a function of garnet crystallization temperature* (Dr. Bill Carlson, advisor)  
*\*\*Dean's Honored Graduate in the Geological Sciences*
- 2000 B.A. University of Texas at Austin, Plan II Liberal Arts Honors Program

***Professional Experience:***

- 2021-current Professor, Department of Geological Sciences, Jackson School of Geosciences, University of Texas at Austin
- 2015-2021 Associate Professor, Department of Geological Sciences, Jackson School of Geosciences, University of Texas at Austin
- 2009-2015 Assistant Professor, Department of Geological Sciences, Jackson School of Geosciences, University of Texas at Austin
- 2006-2009 Post-doctoral researcher, Department of Earth and Planetary Sciences, University of New Mexico  
*Chlorine cycling along the Central American and Izu-Bonin-Mariana subduction zones: insights from chlorine isotopes*  
(Drs. Zachary Sharp and Tobias Fischer, co-advisors)
- 2004-2006 Graduate Research Assistant, University of New Mexico
- 2001-2004 NSF Graduate Student Fellowship, University of New Mexico
- 2000-2001 Teaching Assistant, University of New Mexico
- 1999-2000 Undergraduate Research Assistant, University of Texas at Austin

***Research interests:*** stable isotope geochemistry; volatile cycling; metamorphism and volatile transport in subduction zones; serpentinitization; fluid-rock interactions and metasomatism; geochemical cycling; halogens; stable chlorine isotopes

***Research Grants:*** (\$12.4 M total; \$3.7 M to UT-Austin; does not include internal UT funding)

***Current:***

National Science Foundation (EAR-2234385): Tracing Ancient Subduction in the

- Lithospheric Mantle via Traditional and Non-Traditional Stable Isotopes (7/1/23-6/30/26) \$505,820 (+ \$54,621 NSF-INTERN supplement) to UT-Austin (**J.D. Barnes** (*P.I.*), J. Lassiter (*co-P.I.*))
- National Science Foundation (EAR-2211242): Collaborative Research: Halogen behavior in the plutonic-to-volcanic arc system (8/15/22-7/31/26, no cost extension) \$555,156 total; \$149,580 to UT-Austin (E.H.G. Cooperdock (*P.I.*), **J.D. Barnes** (*co-P.I.*), J.S. Lackey (*co-P.I.*))
- National Science Foundation (EAR-2147570): Collaborative Research: Rodingites as Recorders of Tectonic Processes from the Seafloor to Convergence: A case study of the Dun Mountain Ophiolite Belt (7/15/22-6/30/26, no cost extension) \$640,803 total; \$409,005 to UT-Austin (**J.D. Barnes** (*P.I.*), D.F. Stockli (*co-P.I.*), B. Dragovic (*co-P.I.*), M. Gevedon (*co-P.I.*))

*Past:*

- National Science Foundation (EAR-2321368): Collaborative Research: Halogen and chlorine isotope behavior during metamorphism of metapelitic rocks (9/1/23-8/31/25) \$396,216 total; \$65,281 to UT-Austin (R. Rudnick (*P.I.*), **J.D. Barnes** (*co-P.I.*))
- National Science Foundation (EAR-1850749): Sequestration of halogens in the sub-continental lithospheric mantle: implications for global element cycling. (5/15/19-4/30/24, no cost extension) \$350,099 to UT-Austin (**J.D. Barnes** (*P.I.*), J.C. Lassiter (*co-P.I.*))
- National Science Foundation (PIRE-OIA-1545903): “PIRE: ExTerra Field Institute and Research Endeavor (E-FIRE)” (6/1/16-5/31/24, no cost extension) \$4,022,940 total; \$283,941 to UT-Austin (M. Kohn (*P.I.*), S. Penniston-Dorland (*co-P.I.*), M. Feineman (*co-P.I.*), **J.D. Barnes**, E. Baxter, G. Bebout, M. Caddick, B. Hacker, F. Klein, H. Marschall, A. Smye)
- University of Texas at Austin, VPR Research & Creative Grant (2022-2023): “Insights into the Sulfur Cycle and Volcanic Eruptive Behavior via the Sulfur Isotope Composition of Volcanic Gases,” \$10,000 (**J.D. Barnes** (*P.I.*))
- National Science Foundation (GeoPRISMS-1850711): Collaborative Research: Fluid-mobile element cycling (halogens, boron, lithium) through the forearc of Costa Rica. (5/1/19-4/30/23, no cost extension) \$321,406 total; \$248,063 to UT-Austin (**J.D. Barnes** (*P.I.*), J.M. de Moor (*co-P.I.*))
- National Science Foundation (EAR-1725110): “Retrograde metamorphism in the Greek Cycladic Islands as a window into exhumation mechanisms of high pressure terranes”; (7/1/17-6/30/22; no cost extension); \$334,775 to UT-Austin (**J.D. Barnes** (*P.I.*), W. Behr, D. Stockli)
- National Science Foundation (FESD-OCE-1338842): “Type I. Continent-island arc fluctuations: linking deep Earth dynamics to long-term climate” (9/1/13-6/30/20; no cost extension) \$4,210,000 total; \$486,888 to UT-Austin (C.-T. Lee (*P.I.*), R. Dasgupta, G. Dickens, J.S. Lackey, A. Lenardic, **J.D. Barnes**, M. Tice, R. Zeebe, T. Schneider)
- National Science Foundation (EAR-GeoPRISMS-1455432): “Fluid-mobile and volatile element (Cl, B, and Li) cycling through the forearc: Case study of cold and thermal spring geochemistries from the Hikurangi accretionary prism, New Zealand” (1/1/16-12/31/19; no cost extension) \$228,508 (+ \$18,991 NSF-GSP supplement) (**J.D. Barnes** (*P.I.*), J. Lassiter)
- National Science Foundation (EAR-1301621): “CSEDI: Constraining the mechanisms of melt

transport, storage, and crustal contamination from temporal geochemical variations in monogenetic vents”) \$349,851 (6/1/13-5/31/16) (J. Lassiter (*P.I.*), **J.D. Barnes**, M. Hesse)

National Science Foundation (EAR-0946686): “Chlorine isotope geochemistry of altered oceanic crust: empirical and experimental observations” (3/15/10-2/28/14; no cost extension) \$248,857 (**J.D. Barnes** (*P.I.*), J.E. Gardner)

National Science Foundation (EAR-0711533): “Chlorine Isotope Chemistry of Volcanic Systems” (6/1/07-5/31/10) \$138,924 (**J.D. Barnes** (*P.I.*), Z.D. Sharp, T.P. Fischer)

University of Texas at Austin, Summer Research Assignment (SRA): “Deciphering the Tectonic Setting of Hydrated Oceanic Rocks from the western Alps using Geochemistry” (6/1/13-7/31/13), 2 months summer salary, (**J.D. Barnes** (*P.I.*))

University of Texas at Austin, Summer Research Assignment (SRA): “Hydrothermally altered oceanic crust and the global chlorine cycle” (6/1/10-7/31/10), 2 months summer salary, (**J.D. Barnes** (*P.I.*))

***Honors, Awards, and Fellowships:***

The First Mr. and Mrs. Charles E. Yager Professorship (holder) (2025-current)

Jackson School of Geosciences Joseph C. Walter Jr. Excellence Award (2025) “*in recognition of outstanding service and special contributions to teaching and research programs*”

Geological Society of America Fellow (2022)

NSF GeoPRISMS Distinguished Lecturer (2018-2019)

Faculty Annual Evaluation Award (Assistant Professor level; Dept. of Geol. Sci.) (2015)

American Geophysical Union Editors’ Citation for Excellence in Refereeing for *Geochemistry, Geophysics, Geosystems* (2014)

Jackson School of Geosciences Outstanding Educator Award (2013)

Society for Teaching Excellence (University of Texas at Austin) (2011, inaugural class)

G. Moses and Carolyn G. Knebel Distinguished Teaching Award (Dept. of Geol. Sci.) (2010; 2016; 2018)

GSA Subaru Outstanding Woman in Science Award from the Geological Society of America (2009): awarded to a woman within 3 years of having received a Ph.D. who has “*impacted the field of geosciences in a major way based on [her] Ph.D. research*”

L’Oréal USA For Women in Science Fellowship (administered by the American Association for the Advancement of Science on behalf of L’Oréal) (2007-2008)  
*\*\*award highlighted in “UNM Researcher’s Published Work in Geochemistry Blazes Trail for Female Scientists” Albuquerque Journal, April 27, 2007*

National Science Foundation Graduate Student Fellowship (2001-2004)

Sigma Xi “Excellence in Graduate Research” Award from the University of New Mexico Sigma Xi chapter (2006)

Best Doctoral Candidate from the Department of Earth and Planetary Sciences, University of New Mexico (2006)

V.C. Kelly Outstanding Doctoral Candidate Scholarship from the University of New Mexico (2005)

Association for Women in Science (AWIS) Educational Foundation Gail Naughton predoctoral award (2005)

Association for Women Geoscientists (Denver Chapter) Outstanding Geoscience Student Award (2002; 2003)

***Invited Departmental/Workshop Lectures:***

2025: invited talk at “Fluids in Cascadia”- CRESCENT (Cascadia Region Earthquake Science Center) Topical Workshop; invited keynote talk at ECROFI (European Current Research on Fluid and Melt Inclusions)

2024: Washington University at St. Louis; Smithsonian National Museum of Natural History; Observatorio Vulcanológico y Sismológico de Costa Rica, Universidad Nacional

2023: Trinity University

2022: Geological Society of Washington (virtual)

2021: Missouri University of Science and Technology (virtual); University of Nebraska-Lincoln (virtual); Center for Stable Isotopes at the University of New Mexico (virtual)

2020: Woods Hole Oceanographic Institution (virtual); Texas Tech (virtual)

2019: University of Maine; Winona State University; Wesleyan University; University of Utah; Utah State University; University of Nevada-Reno; Rowan University; Oklahoma State University

2018: University of Southern California; Northwestern University

2017: Boston College; University of Delaware; Scripps Oceanographic Institute

2016: Baylor University; University of Saskatchewan; University of Texas at San Antonio

2015: University of Louisiana-Lafayette; Colorado State University

2013: Northern Illinois University; ExTerra Workshop (Florence, Italy; invited keynote lecture)

2011: Yale University; GeoPRISMS Implementation Workshop: Subduction Cycles and Deformation

2009: University of Texas at Arlington; University of New Mexico

2008: University of Houston; University of California, Berkeley; Rensselaer Polytechnic Institute; Tufts University; University of Texas at Austin

2007: Central Washington University; New Mexico Tech

2006: Kansas State University; University of Maine; Rice University

***Professional Societies:***

Member: Geological Society of America, Mineralogical Society of America, American Geophysical Union

***Professional service:***

Departmental/School

Undergraduate Faculty Advisor and Undergraduate Studies Committee (chair) (Fall 2022 – current)

co-Director, Undergraduate Honors Research Program (Fall 2014-current)

Assistant Graduate Advisor, Dept. of Geological Sciences (2012-current)

Chair, Comprehensive Periodic Review committee for Luc Lavier (Fall 2025)

Member, JSG Dean’s search consultation committee (Spring 2025 – Summer 2025)

Member, EPS Committee for Student, Faculty, and Staff Engagement and Success (2022 – 2023)

Member, Comprehensive Periodic Review committee for Julia Clarke (Fall 2022)

Member, Provost’s Early Career Cohort Postdoctoral Fellow Search Committee (Spring 2022 – Fall 2022)

Member, search committee for Senior Grants and Contracts Specialist in JSG (Fall 2020)

LDE (Lithosphere and Deep Earth) program leader (Summer 2018-Fall 2020)

Member, search committee for Petrology Professor, Department of Geological Sciences (Fall

2019 – Spring 2020)  
Member, JSG Dean's search consultation committee (Spring 2019 – Fall 2019)  
Plan II Sophomore Advising Program, faculty advisor (since 2014)  
GSC ad hoc Membership Review Committee (Spring 2019)  
GSC ad hoc Dean's special committee (Spring 2018 – Spring 2019)  
Member, search committee for Structural Geology Chair position, Department of Geological Sciences (Fall 2017- Spring 2018)  
LDE (Lithosphere and Deep Earth) PBIS coordinator (Fall 2017)  
LDE (Lithosphere and Deep Earth) Knowledge and Skills Matrix evaluation committee (Fall 2017- Spring 2018)  
Member, Tenure review committee for W. Behr (Spring 2017 – Fall 2017)  
Member, LDE faculty evaluation committee (Spring 2017)  
Member, ad hoc IDC and technical staff support evaluation committee (Spring 2017)  
Member, UT faculty panel for *Is Grad School For Me?*, sponsored by the Graduate Coordinator Network (Fall 2017)  
Member, ad hoc committee on strategic planning for the MS and MA degrees (Fall 2015-Spring 2016)  
Member, evaluation committee for the Jackson School of Geosciences Dean (Spring 2015)  
Member, search committee for Petrology Professor, Department of Geological Sciences (2013-2014; 2014-2015)  
Member, SE&TP (Solid Earth and Tectonic Processes) Theme Ad-Hoc Executive Committee (2012-2014)  
Member, MG&G (Marine Geology and Geophysics) Theme Ad-Hoc Executive Committee (2013-2015)  
Member, Undergraduate Curriculum Committee, Department of Geological Sciences (2009-2012)  
Chair, ad hoc Student Grievance Committee (Fall 2014)  
Member, ad hoc committee on Ph.D. candidacy for the GSC (Fall 2012)  
Undergraduate Faculty Mentor, Dept. of Geological Sciences (Spring 2013)  
Member, Departmental Seminar Series Committee, Department of Geological Sciences (2010-2011)  
Member, Undergraduate SACS (Southern Accreditation of Colleges and Schools) Committee, Department of Geological Sciences (2010-2011)  
Member, search committee for Structural Geology and Tectonics Professor, Department of Geological Sciences (2010-2011)  
Member, search committee for MC-ICP-MS Laboratory Manager, Department of Geological Sciences (2009-2010)

University:

Undergraduate Research Task Force (Summer 2020)

National:

L'Oréal USA For Women in Science Fellowship reviewer (administered by the American Association for the Advancement of Science on behalf of L'Oréal) (2014; 2015; 2016; 2017; 2018; 2019; 2020; 2022; 2023; 2024)  
Member, National Science Foundation (EAR) Petrology and Geochemistry Review Panel

Member, National Science Foundation GeoPRISMS Review Panel  
Member, National Science Foundation (OCE) Marine Geology and Geophysics Review Panel

International:

Co-Guest editor for Frontiers in Earth Science special issue: Fluid-Mobile Element Tracers of Subduction Processes – The Record in Volcanic Arc Magmas and Exposed Subduction Complexes

Reviewer for:

Nature Geoscience  
Nature Communications  
Geology  
American Journal of Science  
Earth and Planetary Science Letters  
Geochimica et Cosmochimica Acta  
Geochemical Perspective Letters  
American Mineralogist  
Chemical Geology  
Geochemistry Geophysics Geosystems  
Lithos  
Contributions to Mineralogy and Petrology  
Journal of Geophysical Research - Solid Earth  
Journal of Volcanology and Geothermal Research  
Bulletin of Volcanology  
Journal of Metamorphic Petrology  
Journal of Petrology  
Encyclopedia of Geochemistry  
Geochemical News  
Geological Journal  
International Journal of Mass Spectrometry  
Journal of Analytical Atomic Spectrometry  
Isotopes in Environmental and Health Studies  
National Science Foundation (EAR- Petrology and Geochemistry)  
National Science Foundation (EAR-Tectonics)  
National Science Foundation (EAR- Geobiology and Low-Temperature Geochemistry)  
National Science Foundation (EAR- Post-doctoral fellowship program)  
National Science Foundation (EAR- Instrumentation & Facilities)  
National Science Foundation (OCE- Ocean Drilling Program)  
National Science Foundation (OCE-Marine Geology & Geophysics)  
National Science Foundation (GeoPRISMS)  
National Science Foundation (Major Research Instrumentation)  
Swiss National Science Foundation  
Marsden Fund Council (New Zealand)

***Professional activities:***

American Red Cross Adult and Pediatric First Aid/CPR/AED certification training (Spring 2024)  
Participant, Employee Assistance Program (EAP) Workshop: Life/Work Integration: Boundaries

at Work (Fall 2023)

Participant, SZ4D Community Meeting. Served as mentor and invited speaker at the Early Career Event (pre-meeting). (Fall 2022)

Participant, JSG EDGE Event (Fall 2022)

Participant, JSG Workshop on “Title IX Supportive Resources” (Fall 2022)

Participant, NSF GeoPRISMS “Volatiles from source to surface” workshop (Spring 2022)

Participant, ADVANCEGeo Workshop on Implicit Bias via the JSG (Fall 2021)

Co-convener of the session “Modification of lithosphere from oceanic alteration to deep subduction” at the Goldschmidt conference (Summer 2021)

Participant, NAGT “Being an Inclusive Geoscientist” Workshop via the JSG (Spring 2021)

Participant, NSF GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute (Spring 2019)

Speaker for the AWG (Association of Women Geologists) Distinguished Lecturer Program (2012-current)

Invited speaker, 2016 Mineralogical Society of America and Geochemical Society Short Course: Measurements, Theories and applications of non-traditional stable isotopes (Fall 2016)

Participant, GeoPRISMS Theoretical and Experimental Institute on Subduction Cycles and Deformation (Fall 2015)

Co-convener of the session “Volatile distribution and cycling in the mantle” at American Geophysical Union (Fall 2015)

Co-convener of the session “Volatile cycles and volatile-rich magmas in the deep Earth” at the Goldschmidt conference (Summer 2015)

Participant, Tectonic Fluxes of Carbon DCO (Deep Carbon Observatory) Workshop (Fall 2013)

Pre-Conference excursion co-leader: “From passive margins to orogens: the link between Zones of Exhumed Subcontinental Mantle and (U)HP metamorphism,” 10<sup>th</sup> International Eclogite Conference, Courmayeur, Aosta, Italy (September 2-3, 2013)

Participant, ExTerra Workshop, Summer 2013, Florence, Italy, (Summer 2013)

Participant, NSF- GeoPRISMS Planning Workshop for the New Zealand Primary Site (Spring 2013)

Participant, ExTerra: “Understanding convergent margin processes through studies of exhumed terranes,” GeoPRISMS mini-workshop (Fall 2011)

Co-convener of the session “The Role of Island and Continental Arcs in Continent Formation” at the Goldschmidt conference (Summer 2011)

Participant and Invited Speaker, GeoPRISMS Implementation Workshop: Subduction Cycles and Deformation (Spring 2011)

Participant, NSF-MARGINS Successor Program Planning Meeting (Spring 2010)

Participant, NSF-MARGINS Theoretical and Experimental Institute (TEI), “Volatiles in the Subduction Factory” (Fall 2009)

Participant, Joint NSF-MARGINS and IFREE Workshop, “Subduction Factory Studies in the Izu-Bonin-Mariana Arc System: Results and Future Plans” (Fall 2007)

Participant, Joint NSF-MARGINS and German SFB-574 Workshop, “Workshop to Integrate Subduction Factory and Seismogenic Zone Studies in Central America” (Summer 2007)

***Synergistic activities:***

Speaker for Jackson School of Geosciences’ Geoscience Leadership Organization of Women

(GLOW) (Spring 2023)  
Speaker for Undergraduate Geological Society (Fall 2022)  
Participate/Panelist in “For Women in Science” week in Washington D.C. (2019). Served on panels at both the National Academy of Sciences and a Capitol Hill Briefing focused on strategies and resources needed for post-doctoral positions.  
Speaker for the UT Undergraduate American Chemical Society chapter (Spring 2019)  
GeoForce Instructor for the 10<sup>th</sup> Grade Academy, Grand Canyon, June 1 – 7, 2019  
GeoForce Instructor for the 10<sup>th</sup> Grade Academy, Grand Canyon, June 2 – 8, 2018  
GeoForce Instructor for the 10<sup>th</sup> Grade Academy, Grand Canyon, June 3 – 9, 2017  
GeoForce Instructor for the 10<sup>th</sup> Grade Academy, Grand Canyon, June 4 – 11, 2016  
Faculty Advisor for the University of Texas at Austin Student Chapter of the Geothermal Research Council (2016 – 2018)  
Speaker for Undergraduate Geological Society and Geoscience Leadership Organization of Women (Spring 2016)  
Speaker for the Austin Geological Society (Fall 2014)  
GeoForce Instructor for the 10<sup>th</sup> Grade Academy, Austin and Port Aransas, July 27 - Aug 1, 2014  
GeoForce Instructor for the 11<sup>th</sup> Grade Young Geoscientists, Austin area, June 12-14, 2013  
GeoForce Instructor for the 11<sup>th</sup> Grade Young Geoscientists, Austin area, June 15-17, 2012  
Faculty Advisor for Jackson School of Geosciences’ Geoscience Leadership Organization of Women (GLOW) (2012 – 2014). GLOW is an outreach organization designed to promote leadership development and sense of community through public outreach. Of particular interest is outreach to young women to encourage their interests in science through positive educational interactions. GLOW participates in multiple outreach activities each year.  
Organize and present hand-on geology activities to 120 6<sup>th</sup> grade girls from the Ann Richards School for Young Women Leaders (Spring 2011)  
Invited panelist for “Publishing in the Geosciences” sponsored by the Earth Science Women's Network (ESWN) Leadership Board at the annual American Geophysical Union meeting (Fall 2010)  
Invited lead article on balancing family and life in academia for Gaea (publication of the Association for Women Geoscientists, AWG) (Spring 2010)  
Barnes, J.D., 2010, New Year, New Beginnings: Balancing the Roles of a New Assistant Professor, Dual-Career Spouse, and New Mom, Gaea, 33, pgs. 1, 12-13.  
Speaker for the GSA Women in Geology Mentor Program (Fall 2009)  
Invited GSA delegate (“good will ambassador”) to the Y.E.S. (Young Earth Scientists) Congress in Beijing, China (Fall 2009- declined due to commitment issues)  
Special Judge for INTEL International Science Fair, 2007 (hosted in Albuquerque, NM)  
Lecture to New Mexico Women's Chemist Committee (Spring 2008)  
Role model for Young Women’s Science Institute at Wittenberg University (program for gifted middle school girls to help inspire and encourage them in the area of math and science) (Summer 2007)  
NASA SHARP minority high school student mentor

***Courses:***

\*\*Note on Faculty Development Leave during Fall 2024

### Geology 401: Physical Geology

Fall 2009	130 students	4.7 out of 5.0, overall instructor rating
Fall 2010	128 students	4.1 out of 5.0, overall instructor rating
<i>(MWF section, co-taught w/ Breecker)</i>		
Fall 2010	124 students	4.4 out of 5.0, overall instructor rating
<i>(TTh section, co-taught w/ Breecker)</i>		
Fall 2011	134 students	4.6 out of 5.0, overall instructor rating
Fall 2012	111 students	4.5 out of 5.0, overall instructor rating
Fall 2013	132 students	4.4 out of 5.0, overall instructor rating
Fall 2014	112 students	4.6 out of 5.0, overall instructor rating
Fall 2015	150 students	4.3 out of 5.0, overall instructor rating
Fall 2016	152 students	4.4 out of 5.0, overall instructor rating
Fall 2017	140 students	4.6 out of 5.0, overall instructor rating
Fall 2018	139 students	4.6 out of 5.0, overall instructor rating
Fall 2019	148 students	4.5 out of 5.0, overall instructor rating
Fall 2020	76 students	
Fall 2021	126 students	4.7 out of 5.0, overall instructor rating
Fall 2022	144 students	4.5 out of 5.0, overall instructor rating
Fall 2023	139 students	4.5 out of 5.0, overall instructor rating
Fall 2025		

### Geology 388L and 376C\*: Isotope Geology

\*co-listed starting Fall 2013; 376C carried a writing flag Fall 2013-2023

Fall 2010	<i>(co-taught w/ Ketcham)</i>	12 students	4.6 out of 5.0, overall instructor rating
Fall 2011	<i>(co-taught w/ Ketcham)</i>	11 students	4.3 out of 5.0, overall instructor rating
Fall 2012	<i>(co-taught w/ Ketcham)</i>	7 students	4.6 out of 5.0, overall instructor rating
Fall 2013	<i>(co-taught w/ Ketcham)</i>	13 students	4.4 out of 5.0, overall instructor rating
Fall 2014	<i>(co-taught w/ Ketcham)</i>	8 students	4.6 out of 5.0, overall instructor rating
Fall 2015	<i>(co-taught w/ Ketcham)</i>	9 students	4.8 out of 5.0, overall instructor rating
Fall 2016	<i>(co-taught w/ Ketcham)</i>	15 students	4.3 out of 5.0, overall instructor rating
Fall 2018	<i>(co-taught w/ Ketcham)</i>	21 students	4.5/4.6 out of 5.0, overall instructor rating
Fall 2019	<i>(co-taught w/ Ketcham)</i>	4 students	4.8 out of 5.0, overall instructor rating
Fall 2020	<i>(co-taught w/ Ketcham)</i>	9 students	5.0 out of 5.0, overall instructor rating
Fall 2022	<i>(co-taught w/ Ketcham)</i>	10 students	5.0 out of 5.0, overall instructor rating
Fall 2023	<i>(co-taught w/ Ketcham)</i>	14 students	4.3 out of 5.0, overall instructor rating
Fall 2025	<i>(co-taught w/ Ketcham)</i>		

### Geology 391N and 371C: The In's and Out's of Subduction Zones

Spring 2012	11 students	4.4 out of 5.0, overall instructor rating
Spring 2014	9 students	4.6 out of 5.0, overall instructor rating
Spring 2016	11 students	4.9 out of 5.0, overall instructor rating
Spring 2018	11 students	5.0 out of 5.0, overall instructor rating
Spring 2022	8 students	5.0 out of 5.0, overall instructor rating
Spring 2025	11 students	5.0 out of 5.0, overall instructor rating

### Geology 171H, 172H, 173H, 379H: Undergraduate Research Honors Program

Fall 2014 ( <i>co-taught w/ Cloos</i> )	20 students
Spring 2015 ( <i>co-taught w/ Cloos</i> )	18 students
Fall 2015 ( <i>co-taught w/ Cloos</i> )	17 students
Spring 2016 ( <i>co-taught w/ Cloos</i> )	17 students
Fall 2016 ( <i>co-taught w/ Cloos</i> )	20 students
Spring 2017 ( <i>co-taught w/ Cloos</i> )	17 students
Fall 2017 ( <i>co-taught w/ Cloos</i> )	20 students
Spring 2018 ( <i>co-taught w/ Cloos</i> )	19 students
Fall 2018 ( <i>co-taught w/ Cloos</i> )	19 students
Spring 2019 ( <i>co-taught w/ Cloos</i> )	20 students
Fall 2019 ( <i>co-taught w/ Cloos</i> )	15 students
Spring 2020 ( <i>co-taught w/ Cloos</i> )	14 students
Fall 2020 ( <i>co-taught w/ Cloos</i> )	16 students
Spring 2021 ( <i>co-taught w/ Cloos</i> )	14 students
Fall 2021 ( <i>co-taught w/ Cloos</i> )	11 students
Spring 2022 ( <i>co-taught w/ Cloos</i> )	11 students
Fall 2022 ( <i>co-taught w/ Ketcham</i> )	13 students
Spring 2023 ( <i>co-taught w/ Ketcham</i> )	13 students
Fall 2023 ( <i>co-taught w/ Ketcham</i> )	20 students
Spring 2024 ( <i>co-taught w/ Ketcham</i> )	18 students
Spring 2025 ( <i>co-taught w/ Ketcham</i> )	21 students
Fall 2025 ( <i>co-taught w/ Ketcham</i> )	21 students

TC 302: Forensic Geology (Plan II course; UGS Signature course; carries a writing flag)

Spring 2020 ( <i>co-taught w/ Breecker</i> )	14 students	5.0 out of 5.0, overall instructor rating
Spring 2021 ( <i>co-taught w/ Breecker</i> )	9 students	
Spring 2024 ( <i>co-taught w/ Breecker</i> )	10 students	4.9 out of 5.0, overall instructor rating

Geology 660B: Field Course

Summer 2018 (one week, Rock Springs, Wyoming)	28 students
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Chemistry 475K: Independent Study: Introduction to Geochemistry

Spring 2011	1 student	(3 hours of one-on-one lecture/discussion a week)
(capstone course for undergraduate chemistry degree for student)		

***Teaching Development and Training/Service:***

- Participant, Summit on the Future of Undergraduate Education (NSF sponsored workshop) (Spring 2014)
- Reviewer for Pearson Education (“Essentials of Geology”, 11<sup>th</sup> edition, by Lutgens, Tarbuck, and Tasa), Spring 2012
- Accuracy check for textbook animations for Pearson Education/Prentice Hall Publishers (“How Does Earth Work?” by Smith and Pun, 2<sup>nd</sup> edition), Summer 2010
- Reviewer for Pearson Education/Prentice Hall Publishers (“How Does Earth Work?” by Smith and Pun, 2<sup>nd</sup> edition), Spring 2010
- Participant, “Interactive Techniques for Large Classes,” hosted by DIIA (Division of Instructional Innovation and Assessment), University of Texas at Austin, Fall 2009

## ***Undergraduate Students:***

### Current students:

### Past students:

Ryan Campbell (undergraduate laboratory assistant Spring 2025)

Samantha Kaspar (undergraduate laboratory assistant Spring 2024 to Spring 2025)

Julie Hammons (JSG Honors Student, B.S., Spring 2025; now in the M.S. program at Louisiana State University)

“Fluid Source for Navajo Volcanic Field Garnet-Rich Xenoliths” (B.S. Thesis)

Cesar Diaz (undergraduate laboratory assistant Spring 2023 to Fall 2024)

Enrique Morales (undergraduate laboratory assistant Fall 2022 to Summer 2023)

Maria Herrera (JSG Honors Student, B.S., Spring 2023)

“Mineral Hosts of Halogens from Drilled Rock Cores in The Yellowstone Hydrothermal System” (B.S. thesis)

John Carson (undergraduate laboratory assistant Spring 2022 to Fall 2023)

Warren Wegener (JSG Honors Student, B.S., Spring 2023, co-advised by T. Childress; now in the M.S. program at Univ of British Columbia)

“Investigation into fluid transport of the Trans-Pecos alkaline intrusions: Calcite veins and their implications on the economic potential of igneous bodies in Cornudas, Texas” (B.S. thesis)

Ayden Cavill (undergraduate laboratory assistant Spring 2022 to Fall 2022)

Matthew Riley (JSG Honors Student, B.S., Spring 2022; now in the M.S. program at the Colorado School of Mines)

“Chlorine and Fluorine Abundances of Hydrous Minerals in Colorado Plateau Mantle Xenoliths: A Step Towards Quantifying the Mantle Halogen Budget” (B.S. thesis)

*\*won Outstanding Student Paper Award at AGU 2021 for his poster presentation*

Hannah Long (undergraduate laboratory assistant Fall 2019 to Spring 2020)

Hannah Anderson (JSG Honors Student, B.S., Spring 2019, co-advised by M. Cloos; now in the M.S. program at Univ of Houston)

“Apatites of the Ertsberg-Grasberg Mining District: Implications for Cl and S content of Copper Ore Forming Magmas” (B.S. thesis)

Rosalind Moreman (undergraduate laboratory assistant Summer 2019)

Claire Plum (undergraduate laboratory assistant Spring 2018 to Spring 2019)

Preston Fussee-Durham (undergraduate laboratory assistant Fall 2015 to Summer 2017)

Cody Draper (JSG Honors Student, B.S., Spring 2017; now at Intera Geoscience & Engineering Solutions)

“Oxygen Isotope, Major and Trace Element Compositional Zoning in Garnet from the Sidewinder and Whitehorse Skarns, California” (B.S. thesis)

Natalie Raia (JSG Honors Student; B.S., Fall 2016; now in Ph.D. program at Univ of Minnesota)

“Tectonic Origin of Serpentinites on Syros, Greece: Geochemical Signatures of Seafloor Serpentinization in a HP/LT Subduction Complex” (B.S. thesis)

Rebecca deGraffenried (independent research project; undergraduate laboratory assistant Spring 2014 to Spring 2015; now in Ph.D. program at Univ. of Hawaii)

Timothy Prather (JSG Honors Student, B.S., Fall 2013; now at Anadarko)

“Chlorine and hydrogen isotope geochemistry of obsidian glasses: behavior during

volcanic degassing at Mono Craters, CA” (B.S. thesis)  
Rania Eldam (JSG Honors Student, B.S., Fall 2013; now in PhD program at Colorado School of Mines)  
“Serpentinite Petrogenesis in the Franciscan Complex/Coast Range Ophiolite, northern California” (B.S. thesis)  
*\*won Outstanding Student Paper Award at AGU 2012 for her oral presentation*  
*\*recipient of an NSF Graduate Research Fellowship*  
Christopher Cacciatore (undergraduate laboratory assistant Spring 2013 to Spring 2014; now at Pacific Northwest National Laboratory)  
*\*recipient of an NSF Graduate Research Fellowship*  
Nicholas Benz (undergraduate laboratory assistant Spring 2012 to Summer 2013; now in PhD program at Univ. of Missouri)

### ***Graduate Students:***

#### Current students:

Saisha Brody (Ph.D., in progress since Fall 2025)  
Claudiu Nistor (M.S., in progress since Fall 2023)  
“Mixed-Origin Serpentinites Record the Tectonic and Magmatic Evolution of the Dun Mountain Ophiolite Belt, New Zealand” (M.S. thesis)  
Joshua Munro (Ph.D., in progress since Fall 2023, co-advised by John Lassiter)  
*\*awarded Jackson School of Geoscience Recruiting Fellowship (2023-2024)*  
*\*awarded Geological Society of America Graduate Student Research Grant (2024)*  
Sarah Brooker (Ph.D., in progress since Fall 2022; M.S., Summer 2022)  
“Stable Isotope Composition of the Archean Slave Craton Subcontinental Lithospheric Mantle as a Tracer of Metasomatism” (M.S. thesis)  
*\*awarded Geological Society of America Graduate Student Research Grant (2022; 2024)*

#### Past students:

George Segee-Wright (Ph.D., Summer 2024, co-advised by John Lassiter, now a postdoctoral researcher at CRPG, University of Lorraine, Nancy, France)  
“Halogens in the sub-continental lithosphere mantle beneath the southwestern United States” (Ph.D. dissertation)  
*\*awarded Geological Society of America Graduate Student Research Grant (2021)*  
Ever “Hoss” Hostettler (M.S., Summer 2024, now at Mission Capital)  
“Rodingites, The Alternative Rock: A Geochemical Characterization of Western Alpine Rodingites as a Tracer of Provenance” (M.S. thesis)  
*\*awarded MSA Grant for Mineralogy/Petrology Research (2022)*  
*\*awarded Geological Society of America Graduate Student Research Grant (2021; 2022)*  
*\*awarded McNair Graduate Fellowship (2020-2021)*  
Jacob Helper (M.S., Spring 2022; co-advised by J. Maarten de Moor, now at EnergyX)  
“Fluid-mobile element cycling (halogens, boron, lithium) and sourcing through the Costa Rican convergent margin” (M.S. thesis)  
Grace Beaudoin (Ph.D., Spring 2022; now program manager for community engagement at Washington University in St. Louis)  
“The behavior of halogens (F, Cl, Br, I) in altered oceanic crust during prograde subduction zone metamorphism and devolatilization” (Ph.D. dissertation)

- \*awarded ExxonMobil special recognition Geological Society of America Graduate Student Research Grant (2018)*
- \*awarded Geological Society of America Graduate Student Research Grant (2017)*
- \*awarded Jackson School of Geoscience Recruiting Fellowship (2016-2017)*
- Evan Ramos (Ph.D., Summer 2021, co-advised by D. Breecker; M.S., Spring 2017, co-advised by M. Hesse; now an assistant professor at the University of Pittsburgh)
- “Toward a mechanistic understanding of silicate weathering and Li transfer across landscapes, past and present” (Ph.D. dissertation)
- “Fluid flow during low- $\delta^{18}\text{O}$  skarn formation: insights from Empire Mountain, Mineral King, Sierra Nevada” (M.S. thesis)
- \*awarded Geological Society of America Graduate Student Research Grant (2019)*
- \*awarded ExxonMobil special recognition Geological Society of America Graduate Student Research Grant (2016)*
- \*awarded University of Texas at Austin Diversity Mentoring Fellowship (2015-2016)*
- Alexandra Holmes (Ph.D., candidate in residence from 2018-2019; left for medical school, co-advised by J. Lassiter)
- \*awarded Jackson School of Geoscience Recruiting Fellowship (2017-2018)*
- Michelle Gevedon (Ph.D. Fall 2018, co-advised by J.S. Lackey, now an assistant professor at Colorado College)
- “On the Timing, Fluid Sources, and Behavior of Skarn Formation: Lessons from Oxygen Isotopes in Skarn Garnets of the North American Mesozoic Cordilleran Arc” (Ph.D. dissertation)
- \*awarded Geological Society of America Graduate Student Research Grant (2015)*
- \*awarded University of Texas at Austin Summer Fellowship (2018)*
- Miguel Cisneros (Ph.D., Fall 2018; M.S., Summer 2013, now at Lawrence Livermore National Lab)
- “Constraining the exhumation history of high-pressure subduction zone rocks: insights from the Cycladic islands, Greece and the application of novel thermobarometry techniques” (Ph.D. dissertation)
- “Chlorine Chemistry of Altered Oceanic Crust: Empirical and Experimental Results” (M.S. thesis)
- \*awarded Ford Foundation Predoctoral Fellowship*
- \*awarded University of Texas at Austin Diversity Mentoring Fellowship (2011-2012)*
- \*awarded Geological Society of America Graduate Student Research Grant (2017)*
- \*awarded Geological Society of America MGPV Division Research Grant (2017)*
- Jeffrey Cullen (Ph.D. Summer 2018, co-advised by S. Hurwitz; M.S., Summer 2013; now the stable isotope lab manager at UT-Austin)
- “Fluid-Rhyolite Interaction in the Yellowstone Hydrothermal System: Experimental Constraints and Insights from Cl, Li and B Isotopes” (Ph.D. dissertation)
- “Halogen chemistry and stable chlorine isotope composition of thermal springs and arc lavas in the Cascade arc” (M.S. thesis)
- \*awarded an NSF Graduate Student Preparedness (GSP) internship at the USGS (2016)*
- \*awarded Geothermal Resources Council Graduate Scholarship Award (2016)*
- \*awarded Geological Society of America Graduate Student Research Grant (2015; 2016)*
- Edward Marshall (Ph.D. Spring 2018, co-advised by J. Lassiter; now post-doc at Friedrich Alexander University Erlangen-Nuremberg)

“Navajo Volcanic Field xenoliths Colorado Plateau: a window into subduction processes from the Proterozoic to the present” (Ph.D. dissertation)

*\*awarded Geological Society of America Graduate Student Research Grant (2013; 2015)*

Dana Drew (Ph.D. candidate in residence from 2015-2016; left for position at Lawrence Livermore National Lab)

*\*awarded Society of Economic Geologists Foundation Student Research Grant (2016)*

*\*awarded Geological Society of America Graduate Student Research Grant (2016)*

*\*awarded Jackson School of Geoscience Recruiting Fellowship (2015-2016)*

Jessica Errico (M.S., Summer 2012, now at BHP Billiton)

“Oxygen isotope evidence for retrogression of Franciscan high-grade blueschists and eclogites by sediment-derived fluids” (M.S. thesis)

***Post-doctoral mentees:***

Liannie C. Velázquez Santana (Fall 2022 to Summer 2023; University of Texas at Austin Provost Early Career Fellow; now a postdoc at the University of Colorado)

Meghan Guild (Fall 2020 to Summer 2022; NSF GeoPRISMS Post-Doctoral Fellow; now an assistant research scientist at Arizona State University)

Michelle Gevedon (Spring and Summer 2019, now an assistant professor at Colorado College)

***Graduate Student Committee Member:***

Lucia Bellino (Ph.D., current), Advisor: C. Sun

Sage Turek (Ph.D., current), Advisor: D. Stockli

Shelby Clark (Ph.D., current), Advisor: M. Locmelis

John Neary (M.S., current), Advisor: M. Hesse

Regan Swain (M.S., current), Advisor: M. Locmelis

Fernando Rey (Ph.D., Spring 2025), Advisor: M. Malkowski

Aya Shika Bangun (M.S., Summer 2023), Advisor: M.B. Cardenas

Nicholas Meszaros (Ph.D., Spring 2023), Advisor: J. Gardner

Eirini Poulaki (Ph.D., Summer 2022), Advisor: D. Stockli

Emily Hinshaw (M.S., Summer 2022), Advisor: D. Stockli

Amber Taylor (M.S., Summer 2022), Advisor: J. Lassiter

Andrew Gase (Ph.D., Fall 2021), Advisors: N. Bangs and H. van Avendonk

Kelly Olsen (Ph.D., Spring 2021), Advisor: N. Bangs

Brooklyn Gose (M.S., Fall 2020), Advisor: N. Bangs

Alissa Kotowski (Ph.D., Fall 2019), Advisors: W. Behr

Yinging Wang (M.S., Spring 2019), Advisor: J. Gardner

Rachel Bernard (Ph.D., Summer 2018), Advisor: W. Behr

Owen Callahan (Ph.D., Summer 2018), Advisors: P. Eichhubl

Jonathan Major (Ph.D., Summer 2018), Advisor: P. Eichhubl

Leslie Bruce (M.S., Summer 2017), Advisor: J. Lassiter

Jacob Jordan (Ph.D., Summer 2017), Advisor: M. Hesse

Emily H.G. Cooperdock (Ph.D., Summer 2017), Advisor: D. Stockli

Spencer Seman (Ph.D., Fall 2016), Advisor: D. Stockli

Ruohan Gao (Ph.D., Spring 2016), Advisor: J. Lassiter

Rudra Chatterjee (Ph.D., Spring 2016), Advisor: J. Lassiter

Marina Frederik (Ph.D., Spring 2016), Advisors: S. Gulick and J. Austin  
Kiran Sathaye (Ph.D., Spring 2016), Advisor: M. Hesse (rotated off in the last semester due to unavoidable logistical issues)  
Daniel Eakin (Ph.D., Fall 2014), Advisor: K. McIntosh and L. Lavier  
Ryan Lester (Ph.D., Spring 2013), Advisor: K. McIntosh and L. Lavier  
Shannon Cavanaugh (M.S., Summer 2012), Advisors: N. Bangs and K. McIntosh  
Karen Black (M.S., Spring 2012), Advisor: E. Catlos  
Scott Hoag (M.S., Spring 2012), Advisor: M. Cloos  
Guangjian “Cecilia” Xu (M.S., Spring 2012), Advisors: P. Eichhubl and S. Laubach

***Undergraduate Student Committee Member:***

Catherine Schmidt (Undergraduate Senior Honors Thesis; 2022), Advisor: J. Gardner  
Matthew Wade (Undergraduate Senior Honors Thesis; 2020), Advisor: J. Gardner  
Danny Anderson (Undergraduate Senior Honors Thesis; 2018), Advisor: J. Lassiter  
Gabrielle Ramirez (Undergraduate Senior Honors Thesis; 2015), Advisor: J. Lassiter  
Colin Sturrock (Undergraduate Senior Honors Thesis; 2015), Advisor: E. Catlos  
Pamela Speciale (Undergraduate Senior Honors Thesis, 2013), Advisor: E. Catlos  
Kathryn Dianiska (Undergraduate Senior Honors Thesis, 2012), Advisor: M. Cloos  
Elizabeth Block (Undergraduate Senior Honors Thesis, 2011), Advisor: R. Kyle  
Casey Corbin (Undergraduate Senior Honors Thesis, 2010), Advisor: W.D. Carlson

***Examining Member:***

Caitlin Moeller (Ph.D.), Advisor: C. Sun (Spring 2023)  
Maximilian Ehrenfels (Ph.D.), Advisor: D. Stockli (Fall 2022)  
Nicholas Montiel (Ph.D.), Advisor: L. Lavier (Fall 2021)  
Daniel Villanueva (Ph.D.), Advisor: J. Lassiter (Spring 2020)  
Alison Tune (Ph.D.), Advisors: D. Rempe and P. Bennett (Spring 2018)  
Carolyn Tewksbury-Christle (Ph.D.), Advisor: W. Behr (Fall 2017)  
Stephen Ferencz (Ph.D.), Advisor: B. Cardenas (Spring 2017)  
Luciano Correa (Ph.D.), Advisor: W. Fisher (Spring 2015-Spring 2016)  
Brent Jackson (Ph.D.), Advisor: J. Gardner (Spring 2015)  
Elliott Dahl (Ph.D.), Advisor: K. Spikes (Spring 2015)  
Kai Wang (Ph.D.), Advisor: R. Dickinson (Spring 2012)  
Veronica Anderson (Ph.D.), Advisors: T. Shanahan and B. Horton (Spring 2012)  
William Parker (Ph.D.), Advisor: T. Rowe (Spring 2010)

***International Examiner/Committee Member:***

Sigríður María Aðalsteinsdóttir (Ph.D., Univ. of Iceland, committee member, Fall 2022 - current)  
Joshua Munro (M.Sc., University of Cape Town; external examiner, Fall 2022)  
Clément Herviou (Ph.D., Sorbonne Université (Paris, France); external examiner, Spring 2022)  
Morgan Williams (Ph.D., Australia National University; external examiner, Spring 2018)

***Publications:***

ResearcherID = B-5454-2011; ORCID ID: 0000-0001-6612-3677

h-index [ISI] = 33; h-index [GoogleScholar] = 38

§ = post-doctoral advisee

\*\* = graduate student advisee; \* = graduate student

†† = undergraduate student advisee; † = undergraduate student

Manuscripts (published, in press, or accepted; all manuscripts are peer-reviewed; media coverage of high impact publications is noted):

90. \*\*Segee-Wright, G.H., Lassiter, J.C., **Barnes, J.D.**, Bouvier, A-S. (2025) Resolving the chlorine isotope composition of Earth's depleted mantle. *Geochemical Perspective Letters*, 36, 8–12, doi.org/10.7185/geochemlet.2526
89. de Moor, J.M., Barry, P.H., Rodríguez, A., Aguilera, F., Aguilera, M., Gonzalez, C., Layana, S., Chiodi, A., Apaza, F., Masias, P., Kern, C., **Barnes, J.D.**, Cullen, J.T., Bastoni, D., Bastianoni, A., Cascone, M., Jimenez, C., Salas-Navarro, J., Ramírez, C., Jessen, G., Giovannelli, D., and Lloyd, K.G. (2025) Origins and fluxes of gas emissions from the Central Volcanic Zone of the Andes. *Journal of Volcanology and Geothermal Research*, 466, doi.org/10.1016/j.jvolgeores.2025.108382 R
88. Gil, G., Mizielińska, K.D., **Barnes, J.D.**, Jokubauskas, P., Grabarczyk-Gurba, A., Liu, Y., Gunia, P., and Bagiński, B. (2025) The Złoty Stok deposit in Sudetes (European Variscides, SW Poland): sources of Fe, As, Au and W, and the role of organic matter in the formation of nephrite and metallic mineralization. *Ore Geology Reviews*, 184, doi.org/10.1016/j.oregeorev.2025.106708.
87. \*\*Hostettler, E.I., **Barnes, J.D.**, Lassiter, J.C., Dragovic, B., Satkoski, A. (2025) Origins of rodingite-forming fluids from the seafloor to exhumed terranes: insights from Ca, Sr, and O isotopes. *Chemical Geology*, doi:10.1016/j.chemgeo.2025.122775
86. \*Löw, N., Halldórsson, S.A., Beier, C., Bali, E., Matthews, S., Guðfinnsson, G.H., Marshall, E.W., Helgason, J., Ranta, E., Abersteiner, A., **Barnes, J.D.**, and Caracciolo, A. (2025) Magma storage and transport beneath the near-rift Fjallgarðar Volcanic Ridge, Northeast Iceland. *Contributions to Mineralogy and Petrology*, 180, 84, doi:10.1007/s00410-025-02212-w
85. \*\*Brooker, S.E., **Barnes, J.D.**, Lassiter, J.C., Satkoski, A., and Pearson, D.G. (2024) Tracking subduction-related metasomatism of the subcontinental lithospheric mantle using Ca-, O-, and H-isotopes. *Geochimica et Cosmochimica Acta*, 385, 16-33, <https://doi.org/10.1016/j.gca.2024.09.036>
84. \*\*Helper, J.P., **Barnes, J.D.**, de Moor, J.M., Rodríguez, A., Agostini, S., \*\*Segee-Wright., G., Chatterjee, R., and Stockli, D.F. (2024) Cycling of fluid-mobile elements through the Costa Rica forearc. *Geochimica et Cosmochimica Acta*, 377, 52-67, <https://doi.org/10.1016/j.gca.2024.05.030>
83. \*\*Beaudoin, G., **Barnes, J.D.**, Orlandini, O.F., Chatterjee, R., Stockli, D.F., and John, T. (2024) Halogen (F, Cl, Br, and I) devolatilization during prograde subduction: Insights from Western Alps ophiolites. *Geochemistry, Geophysics, Geosystems*, 25, e2023GC011295. <https://doi.org/10.1029/2023GC011295>
82. \*\*Segee-Wright, G.H., **Barnes, J.D.**, Lassiter, J.C. (2024) Chlorine isotope evidence for Farallon-derived metasomatism of the North American lithospheric mantle. *Geochimica et Cosmochimica Acta*, 365, 70-84.
81. \*\*Helper, J.P., **Barnes, J.D.**, de Moor, J.M., Rodríguez, A., Barry, P.H., \*\*Ramos, E.J., and Lassiter, J.C. (2023) Li isotope ratios of spring fluids as an effective tracer of slab-derived subducted sources across the Costa Rica forearc. *Geology*, doi: <https://doi.org/10.1130/G51277.1>

80. \*\*Segee-Wright, G., **Barnes, J.D.**, Lassiter, J.C., \*\*Holmes, D.J., \*\*Beaudoin, G.M., Chatterjee, R., Stockli, D.F., Hoffman, J.E., and John, T. (2023) Halogen enrichment in the North American lithospheric mantle from the dehydration of the Farallon plate. *Geochimica et Cosmochimica Acta*, 348, 187-205.
79. Kendrick, M. and **Barnes, J.D.** (2022) Sediments, oceanic crust, serpentinites and subduction: Halogen recycling from the surface to deep Earth. *Elements*18, 21-26, doi: 10.2138/gselements.18.1.21 *\*invited\**
78. \*\*Beaudoin, G., **Barnes, J.D.**, John, T., Hoffman, J.E., Chatterjee, R., and Stockli, D.F. (2022) Global halogen cycling of subducting oceanic crust. *Earth and Planetary Science Letters*. doi.org/10.1016/j.epsl.2022.117750.
77. \*Kotowski, A.J., \*\*Cisneros, M., Behr, W.M., Stockli, D.F., Soukis, K., **Barnes, J.D.**, and †Ortega-Arroyo, D. (2022) Subduction, underplating, and return flow recorded in the Cycladic Blueschist Unit exposed on Syros, Greece. *Tectonics*, 41, e2020TC006528. <https://doi.org/10.1029/2020TC006528>
76. Gil, G., Borowski, M.P., **Barnes, J.D.**, Jokubauskas, P., Bagiński, B., Gunia, P., and Ilnicki, S. (2022) Formation of serpentinite-hosted talc in a continental crust setting: Petrographic, mineralogical, geochemical, and O, H and Cl isotope study of the Gilów deposit, Góry Sowie Massif (SW Poland). *Ore Geology Reviews*, <https://doi.org/10.1016/j.oregeorev.2022.104926>.
75. \*Caracciolo, A., Halldórsson, S.A., Bali, E., Marshall, E.W., Jeon, H., Whitehouse, M.J., **Barnes, J.D.**, Guðfinnsson, G.H., Kahl, M., and Hartley, M.E. (2022) Oxygen isotope evidence for progressively assimilating trans-crustal magma plumbing systems in Iceland. *Geology*, 50, 796-800, <https://doi.org/10.1130/G49874.1>.
74. Lassiter, J.C., †Anderson, D., \*Villanueva-Lascrain, D., \*\*Marshall, E., and **Barnes, J.D.** (2022) Xenolith constraints on “self-assimilation” and the origin of low  $\delta^{18}\text{O}$  values in Mauna Kea basalts. In AGU Volume “Isotopic Constraints on Earth System Science” (eds. K.W.W. Sims, K. Maher, and D.P. Schrag) <https://doi.org/10.1002/9781119595007.ch6>
73. \*\*Ramos, E.J., Breecker, D.O., **Barnes, J.D.**, Li, F., Gingerich, P.D., Loewy, S.L., Satkoski, A.M., Baczynski, A.A., Wing, S.L., Miller, N.R., and Lassiter, J.C. (2022) Swift weathering response on floodplains during the Paleocene-Eocene Thermal Maximum. *Geophysical Research Letters*, 49, e2021GL097436. <https://doi.org/10.1029/2021GL097436>
72. Grabarczyk, A., Gil, G., Liu, Y., Kotowski, J., Jokubauskas, P., **Barnes, J.D.**, Nejbort, K., Wiszniewska, J., and Bagiński, B. (2022) Ultramafic-alkaline-carbonatite Tajno Intrusion in NE Poland: a new hypothesis about the massif formation and related mineralization. *Ore Geology Reviews*, 143, 104772.
71. Marshall, E.W., \*Ranta, E., Halldórsson, S.A., \*Caracciolo, A., Bali, E., Jeon, H., Whitehouse, M., **Barnes, J.D.**, and Stefánsson, A. (2022) Boron isotope evidence for the presence of devolatilized and rehydrated subducted materials in the Icelandic mantle source. *Earth and Planetary Science Letters*, 577, 117229.

70. \*Poulaki, E.M., Stockli, D.F., \*Flansburg, M., §Gevedon, M.L., Soukis, K., Stockli, L.D., **Barnes, J.D.**, Kitajima, K., and Valley J.W. (2021) Zircon U-Pb and geochemical signatures in high-pressure metamorphic rocks as recorders of subduction zone processes, Sikinos and Ios islands, Greece. *Chemical Geology*, 582, <https://doi.org/10.1016/j.chemgeo.2021.120447>
69. \*\*Gevedon, M. L., Lackey, J.S., **Barnes, J.D.** (2021) Skarn fluid sources as indicators of timing of Cordilleran Arc emergence and paleogeography in the southwestern United States. *Geology*, 49, <https://doi.org/10.1130/G49005.1>
68. \*\*Cisneros, M., **Barnes, J.D.**, Behr, W.M., \*Kotowski, A.J, Stockli, D.F., and Soukis, K. (2021) Insights from elastic thermobarometry into exhumation of high-pressure metamorphic rocks from Syros, Greece. *Solid Earth*, 12, 1335–1355.
67. \*\*Cullen, J.T., Hurwitz, S., **Barnes, J.D.**, Lassiter, J.C., Penniston-Dorland, S., Meixner, A., Wilckens, F., Kasemann, S.A., and McCleskey, R.B. (2021) The systematics of chlorine, lithium and boron and  $\delta^{37}\text{Cl}$ ,  $\delta^7\text{Li}$  and  $\delta^{11}\text{B}$  in the hydrothermal system of the Yellowstone Plateau volcanic field. *Geochemistry, Geophysics, Geosystems*, 22, e2020GC009589. <https://doi.org/10.1029/2020GC009589>
66. \*Hoare, B.C., Tomlinson, E.L., **Barnes, J.D.**, Tappe, S., Marks, M.A.W., Epp, T., Caulfield, J., and Riegler, T. (2021) Recycled halogens and volatile loss in kimberlite magmatism from Greenland: Evidence from the combined F-Cl-Br and  $\delta^{37}\text{Cl}$  systematics. *Lithos*, 384-385, 105976.
65. \*Ranta, E., Halldórsson, S.A., **Barnes, J.D.**, Jónasson, K., and Stefánsson, A. (2021) Chlorine isotope ratios record magmatic brine assimilation during rhyolite genesis. *Geochemical Perspective Letters*, 16, 35-39.
64. Bekaert, D.V., Turner, S.J., Broadley, M.W., **Barnes, J.D.**, Halldórsson, S.A., Labidi, J., Wade, J., Walowski, K.J., and Barry, P.H. (2021) Subduction-driven volatile recycling: a global mass balance. *Annual Review of Earth and Planetary Sciences*, 49, 37-70.  
*\*invited\**
63. \*Wudarska, A., Słaby, E., Wiedenbeck, M., **Barnes, J.D.**, Bonifacie, M., Sturchio, N.C, Couffignal, F., Glodny, J., John, T., Kusebauch, C., Mayanna, S., and Wilke, F. (2020) Inter-Laboratory Characterization of Apatite Reference Materials for Chlorine Isotope Analysis. *Geostandards and Geoanalytical Research*, doi:10.1111/ggr12366
62. Kleine, B.I., Stefánsson, A., Halldórsson, S.A., and **Barnes, J.D.** (2020) Impact of fluid-rock interaction on water uptake of the Icelandic crust: Implications for the hydration of the oceanic crust and subducted water flux. *Earth and Planetary Science Letters*, 538, 116210.
61. \*\*Ramos, E.J., Lackey, J.S., **Barnes, J.D.**, and †Fulton, A.A. (2020) Remnants and rates of metamorphic decarbonation in continental arcs. *GSA Today*, 30, <https://doi.org/10.1130/GSATG432A.1>
60. Gil, G., Gunia, P., **Barnes, J.D.**, Bagiński, B., Szymański, M., Jokubauskas, P., and Kalbarczyk, A. (2020) The Origin of Talc and Fe-Ti-V Mineralization in the Kletno Deposit (the Śnieżnik Massif, Central Sudetes, SW Poland). *Minerals*, 10, 13, doi:10.3390/min10010013
59. \*Urann, B.M., Le Roux, V., John, T., \*\*Beaudoin, G., and **Barnes, J.D.** (2020) The halogen content of eclogitized oceanic crust: an in-situ SIMS perspective. *American Mineralogist*, 105, 307-318.
58. Keppler, F., **Barnes, J.D.**, Horst, A., Bahlmann, E., Luo, J., Nadalig, T., Greule, M.,

- Hartmann, S.C., Vuilleumier, S. (2020) Chlorine isotope fractionation of the major chloromethane sinks in the environment. *Environmental Science and Technology*, 54, 1634-1645.
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Abstracts (awards or invitations are noted):

- †Hite, C., †Lara Rivas, J., †Mims, D., †Hams, J., Gevedon, M., \*\*Nistor, C., **Barnes, J.D.**, Stockli, L., Stockli, D., Dragovic, B., Goswami, N., and Satkoski, A. (2025) Isotopic Insights into Progressive Rodingitization in the Dun Mountain Ophiolite, Aotearoa New Zealand. Geological Society of America, Abstracts with Programs.
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- Cooperdock, E.H.G., **Barnes, J.D.**, \*Bucheli, C., Lackey, J.S., \*\*Segee-Wright, G., \*Grabiec, J.G., Stockli, L.D., and Stockli, D.F. (2025) Assessing halogen behavior within mature continental arc systems: A case study from the Cretaceous Sierra Nevada arc, CA. American Geophysical Union Annual Meeting. *\*invited\**
- Barnes, J.D. (2025) The role of sub-continental lithospheric mantle and continental crust in the global halogen cycle. ECROFI (European Current Research on Fluid and Melt Inclusions). *\*invited keynote\**
- Broadley, M.W., Seltzer, A.M., Anderson, M., Mitchell, S., Hayes-Guastella, L., Lloyd, K.G., Reese, B.K., Huber, J.A., Lang, S.Q., Seewald, J.S., Wheat, G., **Barnes, J.D.**, \*\*Segee-

- Wright, G., Barry, P.H. (2025) Tracing volatile recycling through the Mariana Forearc using halogens and noble gases. Goldschmidt Conference.
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- Poulaki, E.M., Bickert, M., Vannucchi, P., Shuck, B., Morishita, T., Sanfilippo, A., Pandey, A., Akizawa, N., Cunningham, E.H., Tribuzio, R., **Barnes, J.D.**, Garber, J., \*\*Nistor, C., Bernard, R., Loocke, M., Lei, C., Abe, N., Di Stefano, A., Filina, I.Y., Fu, Q., Gontharet, S.B.L., Kearns, L.E., Koorapati, R.K., Loreto, M.F., Magri, L., Menapace, W., Pavlovics, V.L., Pezard, P.A., Rodriguez-Pilco, M.A., Zhao, X., Estes, E.R., Malinverno, A., and Zitellini, N. (2025) Rapid exhumation of mantle rocks along detachment faults facilitated by felsic granitoids at a continent-ocean transition drilled in the Tyrrhenian Sea. European Geophysical Union Annual Meeting.
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- de Moor, M., Rodríguez, A., Barry, P., Aguilera, F., Aguilera, M., Gonzalez, C., Layana, S., Vallejos, H., Chiodi, A., Jiménez, C., Bartels, C., **Barnes, J.D.**, Ramírez, C., Giovannelli, D., and Lloyd, K. (2023) Gas compositions of fumaroles and bubbling springs from the Andean Central Volcanic Zone (Chile and Argentina). 14<sup>th</sup> Field Workshop of the IAVCEI Commission on the Chemistry on Volcanic Gases.
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- \*Caracciolo, A., Halldórsson, S.A., Bali, E., Marshall, E.W., Jeon, H., Whitehouse, M.J., **Barnes, J.D.**, Guðfinnsson, G.H., Kahl, M., and Hartley, M.E. (2022) Oxygen isotope analyses in melt inclusions as an archive of crustal contamination processes underneath Bárðarbunga volcano. Nordic Geological Winter Meeting.
- Magna, T., **Barnes, J.D.**, Rapprich, V., and Giebel, R.J. (2022) Constraints on the chlorine and fluorine inventory of carbonatites. Goldschmidt Conference.
- \*Ranta, E., Halldórsson, S.A., **Barnes, J.D.**, Jónasson, K., and Stefánsson, A. (2022) Melt-brine interaction in silicic magma mushes. Goldschmidt Conference. *\*invited\**
- \*\*Hostettler, E., **Barnes, J.D.**, Lassiter, J.C., Satkoski, A., Dragovic, B., Starr, P., and Baxter, E. (2022). Calcium Isotopes as Fluid Tracers during Rodingitization. Goldschmidt Conference.
- Marshall, E.W., Rasmussen, M.B., Halldórsson, S.A., Matthews, S., \*Ranta, E., Sigmarsson, O., Robin, J.G., **Barnes, J.D.**, Bali, E., \*Caracciolo, A., Guðfinnsson, G., and Mibei, G. (2022) An overview of the geochemistry and petrology of the mantle-sourced Fagradalsfjall eruption, Iceland. European Geophysical Union Annual Meeting.
- §Gevedon, M., \*Poulaki, E.M., **Barnes, J.D.**, Stockli, D.F., Stockli, L., \*Schuck, B., \*Seman, S., Soukis, K., Kitajima, K., and Valley, J.W. (2021) Tracking exhumation-related fluids through coupled oxygen isotopes, trace elements and U-Pb ages of metamorphic zircon rims in the Cycladic Blueschist Unit, Syros, Greece. American Geophysical Union

Annual Meeting.

- ††Riley, M.K., \*\*Segee-Wright, G.H., §Guild, M.R., and **Barnes, J.D.** (2021) Chlorine and Fluorine Abundances of Hydrous Minerals in Colorado Plateau Mantle Xenoliths: A Step Towards Quantifying the Mantle Halogen Budget. American Geophysical Union Annual Meeting.
- \*\*Brooker, S.E., **Barnes, J.D.**, Lassiter, J.C., and Pearson, D.G. (2021) Stable Isotope Composition of the Slave Cratonic Lithospheric Mantle as a Tracer of Metasomatism. American Geophysical Union Annual Meeting.
- \*\*Hostettler, E.H., **Barnes, J.D.**, Stockli, D.F., Stockli, L., Starr, P.G., Baxter, E., and Dragovic, B. (2021) Timing of Rodingitization of the Servette Mine Meta-Rodingite (Zermatt-Saas Ophiolite) using U-Pb Geochronology of Andradite-Grossular Garnet. American Geophysical Union Annual Meeting.
- §Guild, M.R. and **Barnes, J.D.** (2021) Carbon and oxygen isotope composition of mantle carbonates from the Navajo Volcanic Field (Colorado Plateau, USA). Geological Society of America, Abstracts with Programs.
- \*\*Ramos, E.J., Breecker, D.O., **Barnes, J.D.**, Li, F., Gingerich, P.D., Loewy, S.L., Satkoski, A.M., Baczynski, A.A., Wing, S.L., Miller, N.R., and Lassiter, J.C. (2021) Active silicate weathering response in floodplains during the Paleocene-Eocene Thermal Maximum: Insights from the Bighorn Basin, Wyoming, USA. Geological Society of America, Abstracts with Programs.
- \*Poulaki, E.M., Stockli, D.F., \*Flansburg, M., Gevedon, M.L., Stockli, L.D., Shuck, B., **Barnes, J.D.**, Soukis, K., Kitajima, K., and Valley J.W. (2021) Zircon grains as recorders of subduction zone metamorphism in the Southern Cyclades, Greece and the Betic Cordillera, S. Spain. Geological Society of America, Abstracts with Programs.
- \*\*Segee-Wright, G.H., **Barnes, J.D.**, and Lassiter, J.C. (2021) Chlorine isotope evidence for multiple Farallon-derived components in the North American lithospheric mantle. Goldschmidt Conference.
- \*\*Ramos, E.J., Breecker, D.O., **Barnes, J.D.**, \*Li, F., Loewy, S.L., and Satkoski, A.M. (2020) Silicate weathering intensity in floodplains across the Paleocene-Eocene thermal maximum influenced by paleo-landscape position. Geological Society of America, Abstracts with Programs.
- \*\*Gevedon, M.L., Lackey, J.S., **Barnes, J.D.**, McCarty, K., and Kitajima, K., and Valley J.W. (2020) Using skarn garnet U-Pb ages and oxygen isotopes to understand skarn fluid sources and the paleogeography of the Jurassic Mojave segment of the North American Cordilleean margin arc. Geological Society of America, Abstracts with Programs.
- \*invited\**
- \*Poulaki, E.M., Stockli, D.F., \*Flansburg, M., Gevedon, M.L., Soukis, K., Stockli, L.D., **Barnes, J.D.**, Kitajima, K., and Valley J.W. (2020) Zircon U-Pb and trace-element signatures in high-pressure metamorphic rocks as recorders of subduction and exhumation processes, Sikinos and Ios Islands (Cyclades, Greece). Geological Society of America, Abstracts with Programs.
- Barnes, J.D.**, Lassiter, J.C., \*\*Holmes, A., \*\*Segee-Wright, G.H., \*\*Beaudoin, G.M., Hoffman, E., and John, T. (2020) Modification of the halogen budget of the North American lithospheric mantle from subduction. American Geophysical Union Annual Meeting.
- \*invited\**

- \*\*Beaudoin, G.M., **Barnes, J.D.**, Hoffman, E., and John, T. (2020) The evolution of the halogen budget in ophiolites from the Western Alps. American Geophysical Union Annual Meeting.
- \*Kotowski, A., Behr, W.M., \*\*Cisneros, M., Stockli, D.F., Soukis, K., **Barnes, J.D.**, and †Ortega-Arroyo, D. (2020) Structural petrology and petrochronology record subduction, underplating, and return flow in the Cycladic Blueschist Unit exposed on Syros Island, Greece. American Geophysical Union Annual Meeting.
- Lassiter, J.C., **Barnes, J.D.**, \*\*Holmes, A., \*Segee-Wright, G.H., \*\*Beaudoin, G.M., Hoffman, E., and John, T. (2020) Effects of Farallon slab subduction on the halogen budget of the North American lithosphere. Goldschmidt Conference.
- \*Ranta, E., Halldórsson, S.A, **Barnes, J.D.**, Jónasson, K., and Stefánsson, A. (2020) Magmatic brine assimilation: a new process during rhyolite genesis. Geological Society of Iceland Conference
- Lackey, J.S., Gevedon, M. L., McCarty, K., and **Barnes, J.D.** (2020) U-Pb dating of skarns in the Sierra Nevada and Mojave sections of California's Mesozoic arc. Geological Society of America, Cordilleran Section, Abstracts with Programs.
- Kleine, B.I., Stefánsson, A., Halldórsson, S.A., and **Barnes, J.D.** (2019) Hydrogen isotope systematics and water contents of the Icelandic crust- Implications for the water budget of the oceanic crust. American Geophysical Union Annual Meeting, V34A-02
- \*\*Beaudoin, G., **Barnes, J.D.**, John, T., and Hoffmann, E. (2019) Global halogen flux of subducting oceanic crust. Goldschmidt Conference.
- Lassiter, J.C., **Barnes, J.D.**, \*\*Holmes, A., and †Yang, Y. (2019) New constraints from halogen abundances and lithium isotopes on the behavior of water in the mantle. Goldschmidt Conference.
- \*Ranta, E., Halldórsson, S., **Barnes, J.D.**, and Jónasson, K. (2019) Origin of large chlorine Isotope variability in Icelandic rhyolites. Goldschmidt Conference.
- Kleine, B.I., Stefánsson, A., Halldórsson, S.A., and **Barnes, J.D.** (2019) Hydrogen isotope systematics and water contents of the Icelandic crust- Implications for the water budget of the oceanic crust. Goldschmidt Conference.
- Gil, G., Bagiński, B., and **Barnes, J.D.** (2019) Metasomatism of nephrites hosted in serpentinites and marbles (Poland): Insights into source and transfer of Fe, Mg, Ca, Cl and O. Goldschmidt Conference.
- \*Urann, B.M., Le Roux, V., John, T., \*\*Beaudoin, G., and **Barnes, J.D.** (2019) The in situ halogen content of MORB-like eclogites, Raspas Complex, Ecuador. Goldschmidt Conference.
- Cisneros, M., **Barnes, J.D.**, Behr, W.M., \*Kotowski, A.J., and Stockli, D.F. (2019) Insights into subduction channel exhumation of high-pressure metamorphic rocks by using stable isotope and solid inclusion barometry. European Geosciences Union Annual Meeting.
- \*\*Ramos, E.J., **Barnes, J.D.**, and Lackey, J.S. (2018) Quantifying the shallow crustal contribution to continental arc CO<sub>2</sub> production. American Geophysical Union Annual Meeting in Washington, D.C.
- Cooperdock, E.H.G., Stockli, D.F., Raia, N.H., and **Barnes J.D.** (2018) Multi-stage history of fluids and faults in serpentinites on Syros, Greece. American Geophysical Union Annual Meeting in Washington, D.C. *\*invited\**
- Debret, B., Mattielli, N., Albers, E., Walter, B., Price, R., **Barnes, J.D.**, Beunon, H., and Williams, H. (2018) Role of the forearc in the geochemistry of subduction zones: new

- insights from the IODP expedition 366. Goldschmidt Conference. *\*invited\**
- \*\*Beaudoin, G., John, T., and Barnes, J.D.** (2018) Bulk F, Cl, Br, I abundances and Cl isotope compositions in mafic eclogites: implications for halogen cycling during subduction. Goldschmidt Conference.
- \*\*Marshall, E., Lassiter, J.C., and Barnes, J.D.** (2018) Understanding the (mis)behavior of water contents in nominally anhydrous mantle minerals. Goldschmidt Conference.
- Schwarzenbach, E.M., Caddick, M.J., †Petroff, M., Gill, B.C., Cooperdock, E.H.G., and **Barnes, J.D.** (2018) Sources and speciation of sulphur and carbon in the subduction zone mélange. EGU Galileo conference.
- Stefánsson, A., Halldórsson, S., Hilton, D., Sveinbjörnsdóttir, Á., **Barnes, J.D.**, Ono, S., Heinemeier, J., Fiebig, J., and Arnórsson, S. (2018) Isotope systematics of volatile elements in Icelandic thermal fluid. 20<sup>th</sup> EGU General Assembly, p. 13655
- \*\*Cullen, J.T., Hurwitz, S., Thordsen, J.J., and Barnes, J.D.** (2017) Experimental investigations of boron, lithium, and halogens during high-temperature water-rock interaction: insights into the Yellowstone hydrothermal system. Eos Trans. AGU. V14A-04.
- Barnes, J.D., \*\*Cullen, J.C., Barker, S., Agostini, S., Penniston-Dorland, S., Klügel, A., and Bach, W.** (2017) Fluid-mobile and volatile element cycling through the Hikurangi accretionary prism, New Zealand. Eos Trans. AGU. T22E-04.
- \*\*Gevedon, M. L., Barnes, J.D., and Lackey, J.S.** (2017) Oxygen isotope systematics of skarn garnet: fluid flow and ore forming histories of the Cordilleran Arc. Geological Society of America, Abstracts with Programs. Abstract 253-8.
- \*\*Marshall, E., Lassiter, J.C., and Barnes, J.D.** (2017) New Re-Os and Sm-Nd isotopic constraints on the tectonic setting of the 1.4 Ga Laurentian magmatic event. Geological Society of America, Abstracts with Programs. Abstract 19-13.
- \*\*Ramos, E.J., Hesse, M.A., Barnes, J.D., \*Jordan, J.S., Lackey, J.S.** (2017) Modeling fluid flow in low- $\delta^{18}\text{O}$  skarns: insights from Empire Mountain, Mineral King, Sierra Nevada, California. Goldschmidt Conference.
- \*Hoare, B.C., Tomlinson, E.L., Barnes, J.D., Caulfield, J., and Thirlwall, M.F.** Origin, distribution and residence of halogens in the North Atlantic Craton, Greenland. Goldschmidt Conference.
- Stefánsson, A., Hilton, D.R., Sveinbjörnsdóttir, Á.E., Torssander, P., Heinemeier, J., **Barnes, J.D.**, Ono, S., Halldórsson, S., and Fiebig, J. (2017) Sources and reactions of volatiles in Icelandic thermal fluid. International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) Scientific Assembly. Submission 628.
- Hurwitz, S., Lowenstern, J.B., Thordsen, J.J., **\*\*Cullen, J.T., Barnes, J.D.** McConville, E.G., Szymanski, M.E. (2017) The source and fate of the halogens fluorine, chlorine, and bromine in the Yellowstone Plateau Volcanic Field hydrothermal system. International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) Scientific Assembly, Submission 197.
- ††Draper, C., **\*\*Gevedon, M. L., Barnes, J.D., Lackey, J.S., \*Jiang, H., and Lee, C-T.** (2016) Trace Elements and Oxygen Isotope Zoning of the Sidewinder Skarn. Eos Trans. AGU.
- \*\*Gevedon, M. L., \*Seman, S., Barnes, J.D., Lackey, J.S., and Stockli, D.F.** (2016) U-Pb laser ablation dating of skarn garnet: a case-study of Jurassic skarns from the Sierra Nevada, California, USA. Eos Trans. AGU. V23B-2985
- Barnes, J.D., Manning, C.E., Scambelluri, M., and Selverstone, J.** (2016) Halogen Behavior during Subduction-Zone Processes. Eos Trans. AGU.

- \*\*M. Cisneros, **Barnes, J.D.**, Behr, W.M. (2016) Constraining the thermal and tectonic evolution of a greenschist facies shear zone on Syros, Greece by using stable isotopes and mineral chemistry. Eos Trans. AGU.
- ††Raia, N.H., \*Cooperdock, E.H.G., **Barnes, J.D.**, Stockli, D.F, Schwarzenbach, E.M. (2016) Tectonic Origin of Serpentinites on Syros, Greece: Geochemical Signatures of Seafloor Serpentinization Preserved in the HP/LT Subduction Complex. Eos Trans. AGU.
- Kleine, B.I., Stefánsson, A., Halldórsson, S.A., Whitehouse, M., **Barnes, J.D.**, Jónasson, K., and Franzson, H. (2016) Hydrogen, oxygen and silicon isotope systematics of groundwater-magma interaction in Icelandic hydrothermal systems. Eos Trans. AGU.
- Barnes, J.D.**, \*\*Cullen, J., Hurwitz, S., Stefánsson, A., and Leeman, W. (2016) Chlorine Behavior in Hydrothermal System. Geological Society of America, Abstracts with Programs. *\*Invited talk*
- \*\*Ramos, E.J., Hesse, M.A., \*Jordan, J.S., **Barnes, J.D.**, \*\*Gevedon, M., Lackey, J.S. (2016) Modeling fluid flow and stable isotope transport during skarn formation: insights from Empire Mountain, Mineral King Pendant, Sierra Nevada. Geological Society of America, Abstracts with Programs.
- Wong, C.I., Mahler, B.J., Musgrove, M., Banner, J.L., **Barnes, J.D.**, \*Roland, C.J, and \*Heitmann, E.O. (2016) Delineating controls on urban creek water quality in Austin, Texas using geochemical and isotopic approaches Geological Society of America, Abstracts with Programs. *\*Invited talk*
- \*\*Gevedon, M. L., Seman, S., **Barnes, J.D.**, Lackey, J.S., and Stockli, D.F. (2016) U-Pb laser ablation dating of skarn garnet: a case-study of Jurassic skarns from the Sierra Nevada, California, USA. Goldschmidt Conference. Abstract 927.
- \*\*Marshall, E.W, Lassiter, J.C., and **Barnes, J.D.** (2016) Constraints on the petrogenesis of the Laurentian 1.4 pluton belt: a Sm-Nd and Lu-Hf isotope study of peridotite xenoliths from the Colorado Plateau. Goldschmidt Conference. Abstract 1980.
- \*\*Cullen, J., Hurwitz, S., and **Barnes, J.D.** (2016) B, Li, and Cl systematics in the Yellowstone hydrothermal system. Goldschmidt Conference. Abstract 573.
- Halldorsson, S., **Barnes, J.D.**, Stefánsson, A., Hilton, D., Hauri, E., and \*\*Marshall, E. (2016) Subducted lithosphere controls halogen enrichments in the Iceland mantle plume source. Geological Society of Iceland Spring Meeting.
- \*\*Gevedon, M. L., †Ryan-Davis, J., **Barnes, J.D.**, Lackey, J.S., Prior, M.G., Kitajima, K., and Valley, J.W. (2016) Regional implications of low- $\delta^{18}\text{O}$  skarns of the Jurassic Mojave segment of the Sierra Nevada arc. Geological Society of America, Cordilleran Section, Abstracts with Programs.
- †Ryan-Davis, J., Lackey, J.S., D'Errico, M., Kitajima, K., \*Gevedon, M. L., **Barnes, J.D.**, Lee, C.-T.A., and Valley, J. (2016) Skarn-garnet archives of metasomatic and hydrothermal conditions in the Mineral King roof pendant, south-central Sierra Nevada. Geological Society of America, Cordilleran Section, Abstracts with Programs.
- Stefansson, A., Gunnarsson Robin, J., Keller, N.S., Ono, S., and **Barnes, J.** (2015) Volatile element isotope systematics of volcanic geothermal fluids, Krafla Iceland. Eos Trans. AGU. Abstract V11G-06.
- Wang, C.I., †Roland, C.J., **Barnes, J.D.**, Banner, J.L. (2015) Tracing chloride sources in urban waterways in Austin, Texas using stable chlorine isotopes. Geological Society of America.
- Salazar, E., Barra, F., **Barnes, J.**, Gervilla, F., González-Jiménez, J.M., Reich, M., Romero, R.,

- Orellana, F. (2015) Mineralogía y Geoquímica de los Cuerpos Serpentiníticos del Complejo Ofiolítico del Centro-sur de Chile. Chilean Geological Meeting.
- \*\*Gevedon, M., \*Seman, S., Ryan-Davis, J., **Barnes, J.D.**, Lackey, J.S., Stockli, D., Kitajima, K., and Valley, J. (2015) Variation of skarn metasomatic fluid sources within the Sierra Nevada arc. Geological Society of America, Cordilleran Section, Abstracts with Programs.
- Barnes, J.D.**, Selverstone, J., Bebout, G., and Penniston-Dorland, S. (2014) Chlorine Behavior in Metasedimentary Rocks during Subduction Zone Metamorphism. Eos Trans. AGU. Abstract V24C-07.
- \*\*Marshall, E., **Barnes, J.D.**, and Lassiter, J.C. (2014) Stable isotopic constraints on formation of continental lithospheric mantle: a case study from the Colorado Plateau. Eos Trans. AGU. Abstract V43C-4894.
- Halldorsson, S., **Barnes, J.D.**, Stefansson, A., Hilton, D., and Hauri, E. (2014) Chlorine isotope variability in subglacial glasses from Iceland. Eos Trans. AGU. Abstract V11C-4741.
- \*\*Cisneros, M., ††Raia, N., and **Barnes, J.D.** (2014) Tracing retrograde fluid sources in serpentinite and greenschist facies rocks from Syros, Greece. Eos Trans. AGU. Abstract V31D-4781.
- \*\*Gevedon, M., Ryan-Davis, J., Lackey, J.S., **Barnes, J.D.**, Kitajima, K., and Valley, J. (2014) Oxygen Isotope Zoning in Skarn Garnets: Evidence for Spatial and Temporal Fluid Source Variability in the Sierra Nevada and Mojave. Eos Trans. AGU. Abstract V33B-4851.
- Lee, C.-T.A., Lackey, J.S., **Barnes, J.D.**, \*Jiang, H., Dasgupta, R., and Dickens, G. (2014) Continental arc-island arc fluctuations, skarn formation and long-term climate. 24th Annual Goldschmidt Conference. Abstract 1381.
- †Ryan-Davis, J.R., †Head, D.A., †Fulton, A.A., Lackey, J.S., **Barnes, J.D.**, and Lee, C.-T.A. (2014) Skarn Garnet Records of Fluid Control of Decarbonation and Ore Type in the California Arc. 24th Annual Goldschmidt Conference. Abstract 2147.
- \*\*Marshall, E., **Barnes, J.D.**, and Lassiter, J.C. (2013) Stable isotopic (O, H) evidence for hydration of the central Colorado Plateau lithospheric mantle by slab-derived fluids. Eos Trans. AGU. Abstract
- †Fulton, A., Lackey, J.S., †Sendek, C., and **Barnes, J.D.** (2013) Oxygen isotopes of California skarn garnets: monitors of fluid infiltration and decarbonation in Mesozoic arcs. Geological Society of America, Abstracts with Program.
- †Havranek, R.E., Lackey, J.S., Schwartz, J.J., and **Barnes, J.D.** (2013) Metamorphism and alteration of ultramafic rocks at Black Mountain, southern Mojave Desert, CA. Geological Society of America, Abstracts with Program.
- Barnes, J.D.**, Beltrando, M., Lee, C.-T., Loewy, S., and Chin, E. (2013) Subduction Channel or Fossil Rifted Margin? Serpentinite Geochemistry of the Punta Rosa Unit, Western Alps. 23rd Annual Goldschmidt Conference. *\*Invited talk*
- Liotta M., Rizzo A.L., Paonita A., **Barnes J.D.**, Caracausi A., Corsaro R. and Martelli M. (2013) Sulfur and Chlorine Isotopes in Volcanic Products at Mt. Etna, Italy. Mineralogical Magazine, 77(5) 1617. 23rd Annual Goldschmidt Conference.
- Rizzo, A.L., Caracausi, A., Liotta, M., Paonita, A., **Barnes, J.D.**, Corsaro, R.A., Martelli, M. (2013) Chlorine isotopic composition of volcanic gases and rocks at Mount Etna (Italy) and inferences on the local mantle source. EGU Abstract
- \*Kusebauch, C., John, T., **Barnes, J.D.**, Klügel, A., Austrheim, H.O. (2013) Fluid evolution

- during a regional metasomatic event (Bamble Sector, SE Norway): A halogen concentration and chlorine stable isotopes study. EGU Abstract
- \*\*Cisneros, M., **Barnes, J.D.**, Gardner, J.E., Jenkins, D.M. (2012) Chlorine isotope geochemistry of hydrothermally altered oceanic crust: Mineralogical controls and experimental constraints. Eos Trans. AGU. Abstract
- Barra, F., **Barnes, J.D.**, Reich, M. (2012) The Serpentinites from the Coastal Cordillera of South-Central Chile- A Preliminary Report. Eos Trans. AGU. Abstract
- ††Eldam, R., **Barnes, J.D.**, \*\*Errico, J.C., Lee, C.-T., Loewy, S.L., \*\*Cisneros, M. (2012) Petrogenesis of Franciscan Complex and Coast Range Ophiolite Serpentinites in northern California. Eos Trans. AGU. Abstract *\*won Outstanding Student Paper Award*
- \*\*Cullen, J., **Barnes, J.D.**, Hurwitz, S., Leeman, W.P. (2012) Halogen Chemistry and Stable Cl Isotope Composition of Thermal Springs in the Cascade Arc. Eos Trans. AGU. Abstract
- \*\*Errico, J.C., **Barnes, J.D.**, Strickland, A., and Valley, J.W. (2012) Oxygen isotope zoning in garnets from Franciscan eclogite blocks: evidence for rock-buffered fluid interaction in the mantle wedge. Eos Trans. AGU. Abstract
- \*Kusebauch, C., John, T., **Barnes, J.D.**, Klügel, A., Austrheim, H.O. (2012) Application of halogen concentration and chlorine stable isotopes to decipher the fluid evolution during a regional metasomatic event (Bamble Sector, SE Norway). Eos Trans. AGU. Abstract
- ††Prather, T., \*\*Cisneros, M., \*Befus, K., **Barnes, J.D.**, and Gardner, J.E. (2012) Chlorine and hydrogen isotope geochemistry of obsidian glasses: behavior during volcanic degassing at Mono Craters, CA. Eos Trans. AGU. Abstract
- †Sendek, C.E., †D'Errico, M.E., Lackey, J.S., **Barnes, J.D.** (2012) Microthermometry of fluid inclusions in the Empire Mountains skarns, Sierra Nevada, CA, implications for fluid  $\delta^{18}\text{O}$  and ore formation. Geological Society of America, Abstracts with Program.
- †D'Errico, M.E., Lackey, J.S., Surpless, B.E., Loewy, S.L., **Barnes, J.D.**, Strickland, A., and Valley, J.W. (2012) Evolution of a shallow hydrothermal system in the Sierra Nevada batholith: records from a zoned, low  $\delta^{18}\text{O}$  skarn in the Mineral King pendant. Geological Society of America, Abstracts with Program.
- \*Kusebauch, C., John, T., **Barnes, J.D.**, Klügel, A., Austrheim, H.O. (2012) Tracing multiple fluid events in the Bamble Sector, SE Norway: A halogen and chlorine isotope study. European Mineralogical Conference
- Salazar, E., Romero, R., Barra, F., **Barnes, J.**, Reich, M. (2012) Caracterización Mineralógica e Isótopos Estables de Cl de Serpentinitas del Centro-Sur de Chile. Chilean Geological Congress.
- Barnes, J.D.** and Stefánsson, A. (2012) Chlorine isotope geochemistry of Icelandic geothermal waters. 22nd Annual Goldschmidt Conference.
- \*\*Errico, J.C. and **Barnes, J.** (2011) Oxygen isotope evidence for retrogression of Franciscan eclogites by sediment derived fluids during subduction and exhumation, Ring Mountain, Tiburon, California. Eos Trans. AGU. Abstract U53B-0058.
- Barnes, J.D.** (2011) Chlorine Stable Isotopes as a Tracer of Crustal Fluids. 19<sup>th</sup> annual Hubbert Quorum.
- Barnes, J.D.** (2011) Chlorine chemistry of altered oceanic crust. 21st Annual Goldschmidt Conference.
- Amundson, R., **Barnes, J.D.**, Ewing, S., Heimsath, A., and Chong, G. (2011) The stable isotope composition of chlorine in hyperarid soils. 21st Annual Goldschmidt Conference.
- Barnes, J.D.** and Gardner, J.E. (2010) Chlorine stable isotope composition of altered oceanic

- crust: empirical and experimental results. Eos Trans. AGU. Abstract V33A-2352.
- Sharp, Z.D., Shearer Jr., C., McKeegan, K.D., **Barnes, J.** and Wang, Y. (2010) The Cl isotope composition of the moon as evidence for an anhydrous mantle. Eos Trans. AGU. Abstract P41A-02. *\*Invited talk.*
- Sharp, Z.D., Shearer Jr., C.K., and **Barnes, J.D.** (2010) The chlorine isotope composition of the moon. 41<sup>st</sup> Lunar and Planetary Science Conference. Abstract #2424.
- Sharp, Z., Selverstone, J., Halick, M., and **Barnes, J.** (2010) A chlorine and hydrogen isotope study of metasomatized peridotites from the Finero Body, Ivrea Zone, Italy. European Geophysical Union (EGU).
- Halick, M.A., Selverstone, J., Sharp, Z.D., and **Barnes, J.** (2009) Chlorine isotopic heterogeneity in mantle peridotites from the Ivrea Zone. Eos Trans. AGU, **90**(52), Fall Meet. Suppl., Abstract V31F-03.
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2009) Chlorine stable isotope gas and ash geochemistry from the Central American subduction system. NSF-MARGINS-TEI: Volatiles in the Subduction Factory.
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2009) A review of chlorine stable isotopes as a fluid tracer in subduction zones. 19<sup>th</sup> Annual Goldschmidt Conference. *\*Invited talk.*
- Sharp, Z.D., Shearer Jr., C.K., and **Barnes, J.D.** (2009) The chlorine isotope composition of the moon. 40<sup>th</sup> Lunar and Planetary Science Conference. Abstract #2351.
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- Sharp, Z.D. and **Barnes, J.D.** (2008) Chlorine isotope geochemistry. 4th International Symposium on Isotopomers.
- Fischer, T., Hilton, D., Shaw, A., Sharp, Z., **Barnes, J.**, and Hauri, E. (2008) Light elements in subduction zones: perspective from volatiles. 18<sup>th</sup> Annual Goldschmidt Conference, A272. *\*Invited keynote talk.*
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2007) A summary of chlorine stable isotopes as a volatile tracer in the Central American and Izu-Bonin-Mariana volcanic arcs. Eos Trans. AGU, **88**(52), Fall Meet. Suppl., Abstract T41C-0706.
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- Brearley, A.J., **Barnes, J.D.**, and Sharp, Z.D. (2007) Chrysotile nanotubes: potential host of insoluble chlorine in serpentinitized oceanic crust. Eos Trans. AGU, **88**(52), Fall Meet. Suppl., Abstract V11E-04.
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2007) Chlorine stable isotopes of recent tephra, lavas and volcanic gases: volatile tracers in the Central American arc. Halogens in Volcanic Systems and Their Environmental Impacts Workshop.
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2007) Chlorine isotope variations across the Izu-Bonin-Mariana Arc. Joint NSF-MARGINS and IFREE Workshop: Subduction factory studies in the Izu-Bonin-Mariana arc system: results and future plans.
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2007) Chlorine stable isotopes as a geochemical tracer along the Central American and Izu-Bonin-Mariana volcanic arcs. 17<sup>th</sup> Annual Goldschmidt Conference. *\*Invited talk.*

- Sharp, Z.D. and **Barnes, J.D.** (2007) Chlorine isotope distribution on Earth. 17<sup>th</sup> Annual Goldschmidt Conference. *\*Invited talk.*
- Liebscher, A., **Barnes, J.**, Heinrich, W., Meixner, A., Romer, R.L., and Sharp, Z. (2007) Vapor-liquid fractionation of B, Li, and Cl stable isotopes: Experimental constraints at 400 and 450 °C/20 to 42 MPa. 17<sup>th</sup> Annual Goldschmidt Conference. *\*Invited talk.*
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2007) Chlorine stable isotope systematics and geochemistry along the Central American volcanic arc. Workshop to Integrate Subduction Factory and Seismogenic Zone Studies in Central America.
- Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P. (2006) Chlorine stable isotope systematics and geochemistry along the Central American and Izu-Bonin-Mariana volcanic arcs. Eos Trans. AGU, **87**(52), Fall Meeting Suppl., Abstract V52B-08.
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- Barnes, J.D.**, Selverstone, J., Sharp, Z.D., and Dallai, L. (2005) Chlorine chemistry of serpentinites from Elba, Italy as an indicator of tectonic processes. Geological Society of America, Abstracts with Programs, **37**, 7, 124-125.
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- Selverstone, J., Steffen, K., and **Barnes, J.D.** (2002) Fluid-induced rheologic cycling in a deep-crustal shear zone from the Alps. Eos Trans. AGU, **83**(47), Fall Meeting Suppl., Abstract T21A-1062
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