

Jaime Danielle Barnes

Assistant Professor

Department of Geological Sciences, Jackson School of Geosciences

1 University Station C9000

University of Texas at Austin

Austin, Texas 78712-0254, USA

Phone (512) 471-5379, FAX (512) 471-9425, jdbarnes@jsg.utexas.edu

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:

- 2009-current 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 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: fluid-rock interactions and metasomatism in the high-T environment, the relationship between metamorphic processes and deformation from outcrop to regional scales, metamorphism and volatile transport in subduction zones, geochemical cycling, and stable isotope geochemistry

Research Grants:

- National Science Foundation (EAR-Petrology and Geochemistry): "Linking stable isotope geochemistry (O, H, Cl) to serpentinite petrogenesis" (pending) (**J.D. Barnes**)
- National Science Foundation (EAR-CSEDI): "CSEDI: Extracting constraints on the length-scales of mantle heterogeneity and mechanisms of melt transport from short timescale geochemical variations in monogenetic vents" (pending) (J.C. Lassiter (*P.I.*), **J.D.**)

Barnes, M. Hesse)

National Science Foundation (EAR-0946686): “Chlorine isotope geochemistry of altered oceanic crust: empirical and experimental observations” (3/15/10-3/14/13)

\$248,857 (**J.D. Barnes** (*P.I.*), J.E. Gardner)

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.*))

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)

Awards and Fellowships:

Society for Teaching Excellence (University of Texas at Austin) (2011- current), member G. Moses and Carolyn G. Knebel Distinguished Teaching Award (2010)

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 Lectures:

Yale University, Spring 2011, “Subduction Zone Cycling of Chlorine”

***part of Yale’s “Frontiers in Earth Surface System Interactions” symposium to “recognize scientific topics and individuals of exceptional merit in the general realm of Earth crust-surface-atmosphere system interactions who incorporate pioneering advances in field, theoretical or analytical methods in their work”*

GeoPRISMS Implementation Workshop: Subduction Cycles and Deformation, Spring 2011, “The global chlorine cycle: a subduction zone perspective”

University of Texas at Arlington, Fall 2009, “Chlorine stable isotopes as a geochemical tracer in subduction zones”

University of New Mexico, Spring 2009, “Chlorine stable isotopes as a geochemical tracer in subduction zones”

University of Houston, Spring 2008, “Chlorine isotope distribution on Earth”

University of California, Berkeley, Spring 2008, “Tracing fluids in subduction zones using chlorine stable isotopes” and “Chlorine isotope distribution on Earth”

Rensselaer Polytechnic Institute, Spring 2008, “Chlorine isotope distribution on Earth”

Tufts University, Spring 2008, “Tracing fluids in subduction zones using chlorine stable isotopes”
University of Texas at Austin, Spring 2008, “Tracing fluids in subduction zones using chlorine stable isotopes” and “Chlorine isotope distribution on Earth”
Central Washington University, Spring 2007, “Studying serpentinitization, seafloor tectonics, and arc volcanism using Cl stable isotopes”
New Mexico Tech, Spring 2007, “Studying serpentinitization, seafloor tectonics, and arc volcanism using Cl stable isotopes”
Kansas State University, Fall 2006, “Studying serpentinitization, seafloor tectonics, and arc volcanism using Cl stable isotopes”
University of Maine, Summer 2006, “Tectonic and metamorphic implications of high chlorine contents in serpentinites”
Rice University, Spring 2006, “Tectonic and metamorphic implications of high chlorine contents in serpentinites”

Professional Societies:

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

Professional service:

Member, Departmental Seminar Series Committee, Department of Geological Sciences (2010-current)
Member, Undergraduate SACS (Southern Accreditation of Colleges and Schools) Committee, Department of Geological Sciences (2010-current)
Member, Undergraduate Curriculum Committee, Department of Geological Sciences (2009-current)
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)
Reviewer for Nature Geoscience; American Journal of Science; Journal of Metamorphic Petrology; National Science Foundation (EAR- Petrology and Geochemistry Section); National Science Foundation (EAR- Post-doctoral fellowship program); National Science Foundation (OCE- Marine Geosciences Section); National Science Foundation (EAR- Instrumentation & Facilities Program); Geochemical News; Geological Journal; International Journal of Mass Spectrometry

Professional activities:

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

Faculty Advisor for Jackson School of Geosciences’ Geoscience Leadership Organization of Women (GLOW). 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 6th 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:

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

Geology 388L: Isotope Geology

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

Geology 391N: The In’s and Out’s of Subduction Zones

Spring 2012	13 students
-------------	-------------

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, “Interactive Techniques for Large Classes,” hosted by DIIA (Division of Instructional Innovation and Assessment), University of Texas at Austin, Fall 2009

Reviewer for Pearson Education/Prentice Hall Publishers (“How Does Earth Work?” by Smith and Pun, 2nd edition), Spring 2010

Accuracy check for textbook animations for Pearson Education/Prentice Hall Publishers (“How Does Earth Work?” by Smith and Pun, 2nd edition), Summer 2010

Undergraduate Students:

Timothy Prather

Rania Eldam

Graduate Students:

Jessica Errico (M.S., in progress since Fall 2010)- “Unraveling multiple fluid sources and histories of the Franciscan serpentinites using stable isotopes (O, H, Cl) and bulk major- and trace-element geochemistry”

Miguel Cisneros (M.S., in progress since Fall 2011)

Jeffrey Cullen (M.S., in progress since Fall 2011)

Committee Member:

Dan Eakin (Ph.D., in progress), Advisor: K. McIntosh and L. Lavier

Ryan Lester (Ph.D., in progress), Advisor: K. McIntosh

Rudra Chatterjee (Ph.D., in progress), Advisor: J. Lassiter

Shannon Cavanaugh (M.S., in progress), Advisors: N. Bangs and K. McIntosh

Karen Black (M.S., in progress), Advisor: L. Catlos

Scott Hoag (M.S., in progress), Advisor: M. Cloos

Guangjian “Cecilia” Xu (M.S., in progress), Advisors: P. Eichhubl and S. Laubach

Elizabeth Block (Undergraduate Senior Honors Thesis, 2011), Advisor: R. Kyle

Casey Corbin (Undergraduate Senior Honors Thesis, 2010), Advisor: W.D. Carlson

Outside Examiner:

William Parker (Ph.D.), Advisor: T. Rowe (Spring 2010)

Publications:

Manuscripts (in preparation, submitted or in review):

Barnes, J.D. and Cisneros, M. Mineralogical control on the chlorine isotope composition of altered oceanic crust. *Chemical Geology*. (in preparation)

Brearley, A.J, **Barnes, J.D.**, and Sharp, Z.D. Chrysotile tubes as a significant Cl-host at shallow subduction zone depths. *Nature-Geosciences*. (pending resubmission)

Barnes, J.D., Brearley, A.J., Sharp, Z.D., and Selverstone, J., The siting of chlorine in serpentinites: a TEM study. *American Mineralogist*. (in preparation)

Fischer, T.P., Ramirez, C., Hilton, D.R., Mora Amador, R.A., **Barnes, J.D.**, Le Brun, M., and Shaw, A.M. Temporal and spatial variations in fumarole gas chemistry at Poas volcano, Costa Rica (2001-2008). *Central America Geological Journal* (Special volume on Poas volcano) (in preparation)

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

19. D'Errico, M.E., Lackey, J.S., Surpless, B.W., Loewy, S.L., Wooden, J.L., **Barnes, J.D.**, Strickland, A., and Valley, J.W. A Shallow Hydrothermal System from the Early Sierran Arc: Low $\delta^{18}\text{O}$ Skarns at Empire Mountain, California. *Geology* (accepted pending revision)
18. Amundson, R., **Barnes, J.D.**, Ewing, S., Heimsath, A., and Chong, G. The stable isotope composition of chlorine in hyperarid soils. *Geochimica et Cosmochimica Acta* (accepted pending revision)
17. John, T., Scambelluri, M., Frische, M., **Barnes, J.D.**, and Bach, W., 2011, Dehydration of subducting serpentinite: implications for the deep halogen cycle and element mobility in subduction zones. *Earth and Planetary Science Letters*. **308**, 65-76.
16. Hanley, J., Ames, D., **Barnes, J.D.**, Sharp, Z.D., and Guillong, M., 2011, Interaction of magmatic fluids and silicate residues with saline groundwater in the footwall of the Sudbury Igneous Complex, Ontario, Canada: new evidence from bulk rock geochemistry, fluid inclusions and stable chlorine isotopes. *Chemical Geology*, **281**, 1-25.
15. John, T., Layne, G.D., Haase, K.M., and **Barnes, J.D.**, 2010, Chlorine isotope evidence for crustal recycling into the Earth's mantle. *Earth and Planetary Science Letters*. **298**, 175-182.
14. Sharp, Z.D., Shearer, C.K., McKeegan, K.D., **Barnes, J.D.**, and Wang, Y.Q., 2010, The chlorine isotope composition of the moon and implications for an anhydrous mantle. *Science*. **329**, 1050-1053.
***Selected for early release in Science Express. Media coverage in New York Times, BBC News, Science News, Space.com, National Geographic News, Nature News, New Scientist, Science Podcast, Chemistry World (Royal Society of Chemistry), Discovery News, Science Now, Scientific American, Albuquerque Journal.*
13. **Barnes, J.D.** and Straub, S.M., 2010, Chlorine stable isotope variations in Izu-Bonin tephra: Implications for serpentinite subduction. *Chemical Geology*. **272**, 62-74.
12. Sharp, Z.D., **Barnes, J.D.**, Fischer, T.P., and Halick, M., 2010, A laboratory determination of chlorine isotope fractionation in acid systems and applications to volcanic fumaroles. *Geochimica et Cosmochimica Acta*. **74**, 264-273.
11. **Barnes, J.D.**, Sharp, Z.D., Fischer, T.P., Hilton, D.R., and Carr, M., 2009, Chlorine isotope variations along the Central American volcanic front and back arc. *Geochem. Geophys. Geosyst.* **10**, Q11S17, doi:10.1029/2009GC002587.
10. **Barnes, J.D.**, Paulick, H., Sharp, Z.D., Bach, W., and Beaudoin, G., 2009, Stable isotope ($\delta^{18}\text{O}$, δD , $\delta^{37}\text{Cl}$) evidence for multiple fluid histories in mid-Atlantic abyssal peridotites (ODP Leg 209). *Lithos*. **110**, 83-94.
9. **Barnes, J.D.**, Sharp, Z.D., and Fischer, T.P., 2008, Chlorine isotope variations across the Izu-Bonin-Mariana arc. *Geology*. **36**, 883-886.
8. Sharp, Z.D. and **Barnes, J.D.**, 2008, Comment to "Chlorine stable isotopes and halogen concentrations in convergent margins with implications for the Cl isotopes cycle in the ocean" by Wei *et al.* A review of the Cl isotope composition of serpentinites and the

- global chlorine cycle. *Earth and Planetary Science Letters*, **274**, 531-534.
7. Bao, H., **Barnes, J.D.**, Sharp, Z.D., and Marchant, D., 2008, Two chloride sources in soils of the McMurdo Dry Valleys, Antarctica. *Journal of Geophysical Research*, **113**, D03301, doi:10.1029/2007JD008703.
 6. Sharp, Z.D., **Barnes, J.D.**, Brearley, A.J., Chaussidon, M., Fischer, T.P., and Kamenetsky, V.S., 2007, Chlorine isotope homogeneity of the mantle, crust and carbonaceous chondrites. *Nature*, **446**, 1062-1065.
***paper highlighted in "UNM Researcher's Published Work in Geochemistry Blazes Trail for Female Scientists," Albuquerque Journal, April 27, 2007*
 5. Liebscher, A., **Barnes, J.D.**, and Sharp, Z.D., 2006, Chlorine isotope vapor-liquid fractionation during experimental fluid-phase separation at 400°C/23 MPa to 450°C/42 MPa. *Chemical Geology*, **234**, 340-345.
 4. **Barnes, J.D.**, J. Selverstone, and Z.D. Sharp, 2006, Chlorine isotope chemistry of serpentinites from Elba, Italy, as an indicator of fluid source and subsequent tectonic history, *Geochem. Geophys. Geosyst.*, **7**, Q08015, doi:10.1029/2006GC001296.
 3. **Barnes, J.D.**, and Sharp, Z.D., 2006, A chlorine isotope study of DSDP/ODP serpentinitized ultramafic rocks: insights into the serpentinization process. *Chemical Geology*, **228**, 246-265.
 2. Sharp, Z.D., and **Barnes, J.D.**, 2004, Water soluble chlorides in massive seafloor serpentinites: a source of chloride in subduction zones. *Earth and Planetary Science Letters*, **226**, 243-254.
 1. **Barnes, J.D.**, Selverstone, J., and Sharp, Z.D., 2004, Interactions between serpentinite devolatilization, metasomatism, and strike-slip localization during deep-crustal shearing in the Eastern Alps. *Journal of Metamorphic Geology*, **22**, 4, 283-300.

Abstracts (awards or invitations are noted; *Graduate student author):

- *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. 19th 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. 41st 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. 19th Annual Goldschmidt Conference. **Invited talk.*
- Sharp, Z.D., Shearer Jr., C.K., and **Barnes, J.D.** (2009) The chlorine isotope composition of the moon. 40th Lunar and Planetary Science Conference. Abstract #2351.
- Barnes, J.D.** and Straub, S.M. (2008) Chemical evolution of the Izu-Bonin Arc recorded by chlorine stable isotopes. Eos Trans. AGU, Fall Meet. Suppl., Abstract V31A-2107.
- 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. 18th 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.
- Sharp, Z.D., **Barnes, J.D.**, and Fischer, T. (2007) Chlorine isotope geochemistry as a monitor of fluid-rock interaction in volcanic systems. Eos Trans. AGU, **88**(52), Fall Meet. Suppl., Abstract V53E-07.
- 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. 17th Annual Goldschmidt Conference. **Invited talk.*
- Sharp, Z.D. and **Barnes, J.D.** (2007) Chlorine isotope distribution on Earth. 17th 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. 17th 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.
- Sharp, Z.D. and **Barnes, J.D.** (2006) Stable chlorine isotope fractionation. *Eos Trans. AGU*, **87**(52), Fall Meeting Suppl., Abstract V14C-03.
- Hanley, J., Ames, D., **Barnes, J.**, Sharp, Z., and Pettke, T. (2006) Stable Cl isotope evidence for multiple sources of Cl in ore fluids at the Sudbury Igneous Complex, Ontario, Canada. Joint Annual Meeting of the Geological Association of Canada and the Mineralogical Association of Canada. **Received Julian Boldly Award for contribution to Economic Geology.*
- 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.
- Sharp, Z.D., **Barnes, J.D.**, Brearley, A., Chaussidon, M., and van Zuilen, M. (2005) The global chlorine cycle over the last 3.7 Ga: chlorine isotope constraints. *Geological Society of America, Abstracts with Programs*, **37**, 7, 332.
- Barnes, J.D.**, Brearley, A., Sharp, Z.D., and Chaussidon, M. (2005) $\delta^{37}\text{Cl}$ values of the solar system. 15th Annual Goldschmidt Conference.
- Barnes, J.D.** and Sharp, Z.D. (2004) Chlorine stable isotopic composition of serpentinites. *Geological Society of America, Abstracts with Programs*, **36**, 5, 448-449.
- Barnes, J.D.**, and Sharp, Z.D. (2004) $\delta^{37}\text{Cl}$ values of serpentinites from ODP cores and the global chlorine cycle. 32nd International Geologic Congress.
- 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
- Barnes, J.D.**, Selverstone, J., and Sharp, Z.D. (2001) Fluid-mediated strain localization during Alpine-age strike-slip deformation in the Eastern Alps. *Geological Society of America, Abstracts with Programs*, **33**, 6, A-51.
- Barnes, J.D.**, and Carlson, W.D. (2001) Major- and trace-element zoning as a function of garnet crystallization temperature. *Geological Society of America, South-Central Section, Abstracts with Programs*, **33**, 56-57.