

John N. Christensen, Ph.D.

Lawrence Berkeley National Laboratory, 1 Cyclotron Rd. MS70A-4418
Berkeley, CA 94720; ph.: (510) 486-6735; e-mail: jnchristensen@lbl.gov

Education:

Ph.D., Geology, University of California, Los Angeles.

Dissertation: **The Sr isotopic measurement of rates of tectonometamorphic processes: Case studies in Southeastern Vermont, USA and the Tauern Window, Eastern Alps**

M.S. Geology, University of California, Los Angeles.

Thesis: **A strontium isotopic study of processes in a silicic magma chamber: the Bishop Tuff, Long Valley, California**

B.A., Geology, University of California, Berkeley.

Professional Experience:

2006-present: *Staff Geological Scientist*
Earth Science Division, Lawrence Berkeley National Laboratory.

1999-2006: *Geological Scientist*
Earth Science Division, Lawrence Berkeley National Laboratory.

1997-1999: *Asst. Research Scientist*
Department of Geological Sciences, Univ. of Michigan.

1992-1997: *Post-Doctoral Research Fellow*
Department of Geological Sciences, Univ. of Michigan.

Professional Organizations:

American Geophysical Union

Mineralogical Society of America

Published Peer-Reviewed Articles:

34. Bourg, IC, Richter, FM, **Christensen, JN**, Sposito, G (2010) Isotopic Mass-Dependence of Metal Cation Diffusion Coefficients in Liquid Water, *Geochimica et Cosmochimica Acta*, in press.
33. Faybishenko, B, Hazen, TC, Long, PE, Brodie, EL, Conrad, ME, Hubbard, SS, **Christensen, JN**, Joyner, D, Borglin, SE, Chakraborty, R, Williams, KH, Peterson, JE, Chen, J, Brown, ST, Tokunaga, TK, Wan, J, Firestone, M, Newcomer, DR, Resch, CT, Cantrell, KJ, Willett, A, and Koenigsberg, A (2008) In Situ Long-Term Reductive Bioimmobilization of Cr(VI) in Groundwater Using Hydrogen Release Compound. *Environmental Science & Technology*, v.42, pp 8478–8485.
32. **Christensen, JN**, Conrad, ME, DePaolo, DJ, Dresel, PE (2007) Isotopic Studies of Contaminant Transport at the Hanford Site, WA. *Vadose Zone Journal*, Nov 20 2007, pp. 1018–1030.
31. Maher, K, DePaolo, DJ, and **Christensen, JN** (2006) U-Sr Isotopic Speedometer: Fluid Flow and Chemical Weathering Rates in Aquifers. *Geochimica et Cosmochimica Acta*, v.70, pp. 4417-4435.
30. DePaolo, DJ, Maher, K, **Christensen, JN**, and McManus, J (2006) Sediment Transport Time Measured with U-series Isotopes: Results from ODP North Atlantic Drift Site 984. *Earth and Planetary Science Letters*, v. 248(1-2), pp. 394-410.

29. Nash, BP, Perkins, ME, **Christensen, JN**, Lee, D-C, and Halliday, AN (2006) The Yellowstone Hotspot in Space and Time: Nd and Hf Isotopes in Silicic Magmas. *Earth Planet. Science Ltrs.*, v.247(1-2), pp.143-156.
28. Freda, C, Gaeta, M, Karner, DB, Marra, F, Renne, P, Taddeucci, J Scarlato, P, **Christensen, JN**, Dallai, L (2006) Eruptive history and petrologic evolution of the Albano multiple maar (Alban Hills, Central Italy). *Bulletin of Volcanology*, v. 68, pp.567–591.
27. Richter, FM, Mendybaev, RA, **Christensen, JN**, Hutcheon, ID, Williams, RW, Sturchio, NC and Beloso, Jr., AD (2006) Kinetic isotopic fractionation during diffusion of ionic species in water. *Geochimica et Cosmochimica Acta*, v.70(2), pp.277-289.
26. Gaeta, M, Freda, C, **Christensen, JN**, Dallai, L, Marra, F, Karner, DB, and Scarlato, P (2006) Time-dependent geochemistry of clinopyroxene from the Alban Hills (Central Italy): Clues to the source and evolution of ultrapotassic magmas. *Lithos*, v.86(3-4), pp.330-346.
25. **Christensen, JN**, Dresel, PE, Conrad, ME, Maher, K, and DePaolo, DJ (2004) Identifying the Sources of Subsurface Contamination at the Hanford Site in Washington using High-Precision Uranium Isotopic Measurements. *Environmental Science & Technology*, v.38(12), pp. 3330-3337.
24. Kesler, SE, Chesley, JT, **Christensen, JN**, Hagni, RD, Heijlen, W, Kyle, JR, Misra, KC, Muech, P and van der Voo, R (2004) Discussion of “Tectonic Controls of Mississippi Valley-type Lead-Zinc Mineralization in Orogenic Forelands” by D.C. Bradley and D.L. Leach. *Mineralium Deposita*, v.39, pp. 512-514.
23. Aciego, S, Kennedy, BM, DePaolo, DJ, **Christensen, JN**, and Hutcheon, I (2003) U–Th/He age of phenocrystic garnet from the 79 AD eruption of Mt. Vesuvius. *Earth and Planetary Science Letters*, v.216(1-2), pp. 209-219.
22. Arehart, GB, Chakurian, AM, Tretbar, DR, **Christensen, JN**, McInnes, BA and Donelick, RA (2003) Evaluation of radioisotope dating of Carlin-type deposits in the Great Basin, western North America, and implications for deposit genesis. *Economic Geology*, v.98, pp. 235-248.
21. Nelson, JL, Paradis, S, **Christensen, JN** and Gabites, J (2002) Canadian Cordilleran Mississippi Valley-type deposits: a case for Devonian-Mississippian backarc hydrothermal origin. *Economic Geology*, v.97(5), pp.1013-1036.
20. Piotrowski, AM, Lee, DC; **Christensen, JN**, Burton, KW, Halliday, AN, Hein, JR, Günther, D (2000) Changes in erosion and ocean circulation recorded in the Hf isotopic compositions of North Atlantic and Indian Ocean ferromanganese crusts. *Earth and Planetary Science Letters*, v.181(3), p.315-325.
19. Tretbar, DR, Arehart, GB and **Christensen, JN** (2000) Dating gold deposition in a Carlin-type gold deposit using Rb/Sr methods on the mineral galkhaite. *Geology*, v.28(10), p.947-950.
18. Stirling, CH, Lee, D-C, **Christensen, JN** and Halliday, AN (2000) High-precision in situ ^{238}U - ^{234}U - ^{230}Th isotopic analysis using laser ablation multiple-collector ICPMS. *Geochimica et Cosmochimica Acta*, v. 64 (21), p. 3737-3750.
17. Halliday, AN, **Christensen, JN**, Lee, D-C., Rehkämper, M, Hall CM, Luo, X (2000) Multiple-Collector Inductively Coupled Plasma Mass Spectrometry. in “Inorganic Mass Spectrometry”, eds.: CB Barshick, DC Duckworth and DH Smith.
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14. Halliday, AN, Lee, D-C, **Christensen, JN**, Rehkämper, M, Yi, W, Luo, X, Hall, CM, Ballentine, CJ, Pettke, T and Stirling, C (1998) Applications of multiple collector ICPMS to cosmochemistry, geochemistry and paleoceanography. *Geochimica et Cosmochimica Acta*, v. 62 (6), p.919-940.

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10. **Christensen, JN** and Halliday, AN (1996) Rb-Sr ages and Nd isotopic compositions of melt inclusions from the Bishop Tuff and the generation of silicic magma. *Earth and Planetary Science Letters*, v. 144, p. 547-561.
9. **Christensen, JN**, Halliday, AN, Lee, D-C and Hall, CM (1995) *In situ* Sr isotopic analysis by laser ablation. *Earth and Planetary Science Letters*, v. 136, p. 79-85.
8. **Christensen, JN**, Halliday, AN, Leigh, KE., Randell, RN and Kesler, SE (1995) Direct dating of sulfides by Rb-Sr - a critical test using the Polaris Mississippi Valley-type Zn-Pb deposit. *Geochimica et Cosmochimica Acta*, v. 59, p. 5191-5197.
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6. **Christensen, JN**, Halliday, AN, Vearncombe, JR and Kesler, SE (1995) Testing models of large-scale crustal fluid flow using direct dating of sulfides: Rb-Sr evidence for early dewatering and formation of MVT deposits, Canning Basin, Australia. *Economic Geology*, v. 90, p. 877-884.
5. Halliday, AN, Lee, D-C., **Christensen, JN**, Walder, AJ, Freedman, PA, Jones, CE, Hall, CM, Yi, W, and Teagle, D (1995) Recent developments in inductively coupled plasma magnetic sector multiple collector mass spectrometry. *International Journal of Mass Spectrometry and Ion Processes*, v.146/147, p.21-33.
4. **Christensen, JN**, Selverstone, J, Rosenfeld, JL and DePaolo, DJ (1994) Correlation by Rb-Sr geochronology of garnet growth histories from different structural levels within the Tauern Window, Eastern Alps. *Contributions to Mineralogy and Petrology*, v. 118, pp. 1-12.
3. **Christensen, JN** and DePaolo, DJ (1993) Timescales of large volume silicic magma systems: constraints from Sr isotopic systematics of phenocrysts and glass from the Bishop Tuff, Long Valley, California. *Contributions to Mineralogy and Petrology*, v.113, pp. 100-114.
2. **Christensen, JN**, Rosenfeld, JL and DePaolo, DJ (1989) Rates of tectonometamorphic processes from rubidium and strontium isotopes in garnet. *Science*, v.224, pp. 1465-1469.
1. Barton, MD, Battles, DA, Bebout, GE, Capo, RC, **Christensen, JN**, Davis, SR, Hanson, RB, Michelsen, CJ, and Trim, HE (1988) Mesozoic contact metamorphism in the western United States. in *Ernst, W.G.*, ed., *Metamorphism and Crustal Evolution of the Western United States, Rubey Volume VII*, pp.110-178.