

LAURA NIELSEN LAMMERS
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Department of Environmental Science, Policy, and Management
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EDUCATION

Dartmouth College, B.A. in Earth Sciences Hanover, NH
June 2008
Summa Cum Laude
University of California-Berkeley, Ph.D. (advised by D. J. DePaolo) Berkeley, CA
May 2012
Department of Earth and Planetary Science, Center for Isotope Geochemistry

PROFESSIONAL EXPERIENCE

University of California-Berkeley, Assistant Professor July 2014-Current
Geosyntec Consultants, Senior Staff Geochemist September 2013-May 2014
Stanford University, Postdoctoral Scholar June 2012-July 2013
University of California-Berkeley, Graduate Student Instructor August 2011-December 2011
EPS 109: Computer Simulations in Earth and Planetary Sciences
University of California-Berkeley, Graduate Student Instructor January 2009-June 2009
EPS 50: The Planet Earth
Dartmouth College, Research Assistant January 2007-June 2008
Dartmouth College, Teacher's Assistant June 2007-August 2007
EARS 34: Earth Materials

FELLOWSHIPS & AWARDS

American Geophysical Union Outstanding Student Presentation Award December 2010
Achievement Rewards for College Scientists Fellowship August 2008-August 2010
International Association of Geochemistry Faure Award October 2008
Undergraduate Thesis Award, Dartmouth College Earth Sciences June 2008
Phi Beta Kappa June 2008

SERVICE

Reviewer, *Geochimica et Cosmochimica Acta*, *Energy & Fuels*, *Advances in Water Resources* 2011-2013
Representative, Energy Frontier Research Center Congressional Outreach, Washington, D.C. May 2011
Chair, Geochemistry Society of Berkeley, Student Reading Group October 2010-December 2011
Mentor, Refugee Transitions June 2009-June 2011
Co-organizer, UC Berkeley Dept. of Earth and Planetary Science Seminar Series September 2010-December 2010

PEER REVIEWED PUBLICATIONS

1. Watkins, J. M., Nielsen, L. C., Ryerson, F. J. & DePaolo, D. J. (2013) The influence of kinetics on the oxygen isotope composition of calcium carbonate. *Earth and Planetary Science Letters*. **375**. p. 349-360.
2. Nielsen, L. C. & DePaolo, D. J. (2013) Ca isotope fractionation in a high-alkalinity lake system: Mono Lake, California. *Geochimica et Cosmochimica Acta*. **118**. p 276-294.
3. Nielsen, L. C., DeYoreo, J. J. & DePaolo, D. J. (2013) General model for calcite growth kinetics in the presence of impurity ions. *Geochimica et Cosmochimica Acta*. **115**. p. 100-114.
4. Nielsen, L. C., Bourg, I. C. & Sposito, G. (2012) Predicting CO₂-water interfacial tension under pressure and temperature conditions of geologic CO₂ storage. *Geochimica et Cosmochimica Acta* **81**. p. 28-38.
5. Nielsen, L. C., DePaolo D. J. & DeYoreo, J. J. (2012) Self-consistent ion-by-ion growth model for kinetic isotope fractionation during calcite precipitation. *Geochimica et Cosmochimica Acta* **86**. p. 166-181.
6. Nielsen, L. C., Druhan, J., Yang, W., Brown, S. & DePaolo, D. (2011) Ca isotopes as tracers of biogeochemical processes. In *Handbook of Environmental Isotope Geochemistry* (ed. M. Baskaran). Springer-Verlag, New York. p. 105-124.

SELECTED PRESENTATIONS

1. Nielsen, L. C. (2013) Uptake of biogeochemical tracers at mineral-fluid interfaces. *Stanford GES Departmental Seminar*, Stanford, CA., and *U.C. Berkeley ESPM Departmental Seminar*, Berkeley, CA. *Invited*.
2. Nielsen, L. C., Maher, K., Brown, G., Bird, D., Johnson, N., Thomas, B. & Rosenbauer, B. (2012) Abiotic CO₂ reduction during geologic carbon sequestration facilitated by Fe(II)-bearing minerals. *AGU Fall Meeting*. San Francisco, CA.

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3. DePaolo, D., Nielsen, L. C., Hofmann, A., DeYoreo, J., Gagnon, A., Watkins, J., Ryerson, R., Brown, S. & Richter, F. (2012) Isotopic and impurity element probes of mesoscale chemical dynamics at mineral fluid interfaces. *AGU Fall Meeting*. San Francisco, CA.
4. Nielsen, L. C., Bourg, I. C., & Sposito, G. (2012) Predicting CO₂-water interfacial tension under geologic CO₂ storage conditions. *Global Climate and Energy Project Student Energy Lecture Series*. Stanford, CA. *Invited*.
5. Nielsen, L., DeYoreo, J. & DePaolo, D. (2012) Thermodynamic feedbacks in kinetic trace metal-calcite solid solution formation. *Goldschmidt Conference*. Montreal, Canada.
6. Nielsen, L., DePaolo, D. & DeYoreo, J. (2011) Molecular model of kinetic isotope fractionation during surface-controlled growth of CaCO₃ from aqueous solution. *Goldschmidt Conference*. Prague, Czech Republic.
7. Nielsen, L. C., Bourg, I. C. (2011) Predicting carbon dioxide-water interfacial tension under geologic CO₂ storage conditions using molecular dynamics simulations. *European Center of Atomic and Molecular Calculation (CECAM) Workshop: Microscopic-scale view of CO₂ sequestration*. Lausanne, Switzerland.
8. Nielsen, L. C. & DePaolo, D. J. (2010) The influence of solution stoichiometry on surface-controlled Ca isotope fractionation during Ca carbonate precipitation from Mono Lake, California. *AGU Fall Meeting*. San Francisco, CA.
9. Nielsen, L. C., Bourg, I. C. & Sposito, G. (2010) Molecular modeling of carbon dioxide-water mixtures under geologic sequestration conditions. *Geological Society of America Meeting*. 42(5), 346. Denver, CO.
10. Nielsen, L., Bourg, I. & Sposito, G. (2010) Molecular dynamics simulations of CO₂-brine interfacial tension and mutual solubility. *Goldschmidt Conference*. Knoxville, TN.
11. Nielsen, L. C. & DePaolo, D. J. (2009) Ca isotope fractionation accompanying precipitation of carbonate minerals from alkaline lake water. *AGU Fall Meeting*. San Francisco, CA.
12. Nielsen, L. & Bostick, B. C. (2008) Integrating aquifer geochemistry and sediment properties into modeling subsurface uranium retention at the Nuclear Metals, Inc. Superfund site. *Geological Society of America Meeting*. 239-7. Houston, TX.