MELISSA C. KIDO SOULE
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EDUCATION

Ph.D. Physical Chemistry (2007) University of Oregon.
M.A. Chemistry (1999) University of California, Berkeley.
B.A. (1996) Carleton College.
Other:
Metabolomics Course (2011) ASMS National Meeting, Denver, CO.
Fundamentals of HPLC Course (2008) ACS National Meeting, Philadelphia, PA.
FT-ICR Mass Spectrometry Course (2008) ASMS National Meeting, Denver, CO.

RESEARCH EXPERIENCE/APPOINTMENTS

September 2007 - present: Research Associate III. Dept of Marine Chemistry & Geochemistry, WHOI, Woods Hole MA.
September 2007 - present: Manager, FT-MS facility. WHOI, Woods Hole, MA.
September 2000 - March 2007: Doctoral Candidate. Advisor: Geraldine Richmond, in the Department of Chemistry, University of Oregon, Eugene, OR.
September 1999 - June 2000: Visiting Professor of Chemistry. The Evergreen State College, Olympia, WA.
September 1997- January 1999: Masters Candidate. Advisor: Richard Saykally, in the Department of Chemistry, University of California, Berkeley.
Spring 1997: Research Assistant. Advisor: Tricia Ferrett, in the Department of Chemistry, Carleton College, Northfield, MN.
September 1995 - June 1996: Undergraduate Researcher. Advisor: Tricia Ferrett, in the Department of Chemistry Carleton College, Northfield, MN.

TEACHING EXPERIENCE

UNIV OF OREGON:
Graduate Teaching Assistant for Advanced General Chemistry Laboratory, Fall 2000-Spring 2001.

THE EVERGREEN STATE COLLEGE:
"Introduction to Natural Science", a year-long integrative course in chemistry, math, and biology (team-taught), September 1999-June 2000.

UC, BERKELEY:
Head Teaching Assistant for General Chemistry, Fall 1998.
Teaching Assistant for General Chemistry, Fall 1997 – Spring 1998.

AWARDS

2008 - Whalen Award, Department of Marine Chemistry and Geochemistry, WHOI
2005 - Mildred Braaten Archibald Scholarship in Science and Mathematics, University of Oregon
2002 - GAANN (Graduate Assistance in Areas of National Need) Teacher/Scholar Fellowship, University of Oregon
1996 - Phi Beta Kappa, Carleton College

PUBLICATIONS

Kujawinski, E. B., **M. C. Kido Soule**, D. L. Valentine, A. K. Boysen, K. Longnecker, M. C. Redmond. 2011. Fate of dispersants associated with the Deepwater Horizon oil spill. *Environmental Science and Technology*, 45: 1298-1306.

Kido Soule, M. C., K. Longnecker, S. J. Giovannoni and E. B. Kujawinski. 2010. Impact of instrument and experiment parameters on reproducibility and repeatability of peaks within ultrahigh resolution ESI FT-ICR mass spectra of natural organic matter. *Organic Geochemistry*. **41**: 725-733.

Kido Soule, M.C., Blower, P., and Richmond, G.L. 2007. Effects of atmospherically important solvated ions on organic adsorption at the surface of aqueous solutions. *Journal of Physical Chemistry A*. **49**: 13703-13713.

Kido Soule, M.C., Blower, P., and Richmond, G.L. 2007. Nonlinear vibrational spectroscopic studies of the adsorption and speciation of nitric acid at the vapor/acid interface. *Journal of Physical Chemistry A*.**111**: 3349-3357.

Kido Soule, M.C., Hore, D.K., Jaramillo-Fellin, D., and Richmond, G.L. 2006. Differing adsorption behavior of environmentally important cyanophenol isomers at the air-water interface. *Journal of Physical Chemistry B*. **110**: 16575-16583.

Kido, M. C., Kegley, S, Bothun, G., Marcy, G. 1999. What is in a Star? *John Wiley and Sons, Inc.,* New York.

PRESENTATIONS - ORAL (presenter in bold)

Kujawinski, E. B., M. C. Kido Soule, K. Longnecker. Comparison of Internal and External Metabolites Produced by a Diatom. Goldschmidt Conference, Prague, Czech Republic. August 2011. (Oral presentation given by Maya Bhatia due to travel restrictions for EK.)

Kujawinski, E. B., K. Longnecker, M. C. Kido Soule. Sources of variability in ultrahigh resolution mass spectra of natural organic matter – and their impact on comparative analyses. Humic Sciences & Technology XII, Northeastern University. March 2009. (invited)

Kujawinski, E. B., K. Longnecker, M. C. Kido Soule. Sources of variability in ultrahigh resolution mass spectra of natural organic matter. 7th North American FT-MS Conference, Key West FL. April 2009. (invited)

Kujawinski, E. B., K. Longnecker, M. Bhatia, M. C. Kido Soule. Molecular-level resolution of natural organic matter in aquatic environments by ultrahigh resolution mass spectrometry. CoSMoS Conference on Small Molecule Science, Boston MA. August 2009. (invited)

M. Kido Soule and G. Richmond. Going nonlinear in probing molecular adsorption, bonding, and orientation at liquid interfaces. Pacifichem 2005 Congress, Honolulu, HI. December 2005. (invited)

M. Kido Soule and G. Richmond. Going nonlinear in probing adsorption at aqueous surfaces of environmental importance. American Physical Society Meeting, Los Angeles, CA. March 2005.

M. Kido Soule and G. Richmond. Structure and adsorption of organics at salt and acid aqueous interfaces. 231st meeting of the American Chemical Society, Atlanta, GA. March 2006.

M. Kido Soule, D. Hore, D. Jaramillo-Fellin, G. Richmond. Nonlinear investigations of atmospherically-relevant aqueous-organic-vapor interfaces. 230th meeting of the American Chemical Society, Washington, DC. August 2005.

M. Kido, S. Kegley, G. Bothun, G. Marcy. "What is in a star?" Teaching Workshop at the 219th meeting of the American Chemical Society, San Francisco, CA. March 2000.

PRESENTATIONS – POSTER (presenter in bold)

Kujawinski, E. B., M. C. Kido Soule. Organic material released by coastal microbial consortia upon incubation with glucose: Preliminary identification of novel biomarkers for bacterial physiology. 58th ASMS Conference on Mass Spectrometry, Salt Lake City, Utah. June 2010.

Longnecker, K., M. C. Kido Soule, E. B. Kujawinski. Composition of dissolved organic matter produced by marine phytoplankton. 13th International Symposium on Microbial Ecology, Seattle, WA. August, 2010.

Kujawinski, E. B., K. Longnecker, M. C. Kido Soule, A. Boysen, D. Valentine. Temporal and spatial variability in composition of polar components of oil and dispersants during and after the deepwater horizon oil spill. American Geophysical Union Fall Meeting, San Francisco, CA. December 2010.

Kujawinski, E. B.*,* K. Longnecker, M. C. Kido Soule. Changes in microbial diversity and DOM composition after uniformly-13C-labeled glucose addition to a coastal microbial consortium. ASLO Aquatic Sciences meeting, Nice, France. January 2009.

M. Kido, D. Jaramillo-Fellin, D. Hore, G. Richmond. Mid-IR spectroscopic investigations of 3- and 4-cyanophenol at the air/water interface. 52nd meeting of the Western Spectroscopy Association, Pacific Grove, CA. January 2005.

J. King, **M. Kido**, D. Hore, D. Jaramillo-Fellin, F. Moore, G. Richmond. "Extending the possibility for vibrational sum-frequency spectroscopy: exploring the mid-IR." 50th meeting of the Western Spectroscopy Association in Pacific Grove, CA. January 2003.

OTHER PROFESSIONAL ACTIVITIES

JOURNAL REVIEWER:
Geochimica et Cosmochimica Acta
Environmental Science and Technology

PROFESSIONAL SOCIETY MEMBERSHIPS:
American Chemical Society
American Society for Mass Spectrometry

EDUCATION:
Chemistry Curriculum Author, NSF Systemic Change Initiative in Chemical Education Reform. Modular Chemistry Consortium at the University of California, Berkeley (1998-1999).

ADVISING:
Co-advised WHOI undergraduate research assistants: Angela Boysen, 2010 (Stanford University); Lauren Brin, 2009 (St. Catherine's College).

COLLABORATORS (*present affiliation provided*)

David Valentine: Univ California Santa Barbara; **Angela Boyson**: Smithsonian Environmental Research Center; **Molly Redmond**: Univ California Santa Barbara **Stephen Giovannoni**: Oregon State Univ; **Elizabeth B. Kujawinski:** WHOI**; Krista Longnecker:** WHOI; **Geraldine Richmon**d: Univ of Oregon; **Dennis Hore:** Univ of Oregon (*Univ of Victoria*); **Donna Jaramillo-Fellin**: Univ of Oregon (*Univ California, Merced*); **Patrick Blower**: Univ of Oregon