# **GERALDINE L. RICHMOND**

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### **EDUCATION**

1976–1980	Ph.D. Chemistry, University of California, Berkeley, Advisor: George C. Pimentel
1971–1975	B.S. Chemistry, Kansas State University

#### EMPLOYMENT

2013- Presidential Chair of Science and Professor of Chemistry, University of Oregon

*Research Interests:* Understanding the molecular structure and dynamics of interfacial processes that have relevance to environmental remediation, biomolecular assembly, atmospheric chemistry and alternative energy sources.

*Teaching Interests:* Science literacy for nonscientists; career development courses for emerging and career scientists and engineers in the US and developing countries.

- 2001-2013 Richard M. and Patricia H. Noyes Professor of Chemistry, University of Oregon
- 1998-2001 Knight Professor of Liberal Arts and Sciences, University of Oregon
- 1991- Professor of Chemistry, University of Oregon
- 1991-1995 Director, Chemical Physics Institute, University of Oregon
- 1985-1991 Associate Professor of Chemistry, University of Oregon
- 1980-1985 Assistant Professor of Chemistry, Bryn Mawr College

### **AWARDS AND HONORS**

- 2015 National Medal of Science
- 2014 Pittsburgh Spectroscopy Award, Spectroscopy Society of Pittsburgh
- 2013 Davisson-Germer Prize for Atomic or Surface Physics, American Physical Society
- 2013 Charles L. Parsons Award, American Chemical Society (ACS)
- 2011 National Academy of Sciences (NAS) Member
- 2011 Joel Henry Hildebrand Award in the Theoretical and Experimental Chemistry of Liquids (ACS)
- 2011 American Chemical Society Fellow
- 2009 Society for Applied Spectroscopy Honorary Membership Award
- 2008 Bomem-Michelson Award, Coblentz Society
- 2008 Association for Women in Science (AWIS) Fellow
- 2008 Society for Applied Spectroscopy Fellow
- 2007 John S. Guggenheim Fellowship
- 2006 American Academy of Arts and Sciences Fellow

- 2006 Council on Chemical Research Diversity Award
- 2005 Award for Encouraging Women in the Chemical Sciences, American Chemical Society
- 2004 Spiers Medal, Royal Society of Chemistry (UK), Faraday Division
- 2004 American Association for the Advancement of Science (AAAS) Fellow
- 2002 Spectrochemical Analysis Award, Analytical Chemistry Division, American Chemical Society
- 2002 Women Chemists Committee Regional Award for Diversity, American Chemical Society
- 2001 Oregon Outstanding Scientist Award, Oregon Academy of Science
- 2001 ADVANCE Leadership Award, National Science Foundation
- 2000 Research Creativity Extension, National Science Foundation
- 1998 Soroptomist International, Women Helping Women Award, Eugene, OR
- 1997 Presidential Award for Excellence in Science and Engineering Mentoring, White House
- 1997 College of Arts and Sciences Alumni Award, Kansas State University
- 1996 Francis P. Garvan John M. Olin Medal of the American Chemical Society
- 1993 Agnes Faye Morgan Research Award (Iota Sigma Pi Honorary Society)
- 1993 American Physical Society Fellow
- 1991 Faculty Award for Women Scientists and Engineers, National Science Foundation
- 1991 Research Creativity Extension, National Science Foundation
- 1989 Coblentz Society Spectroscopy Award
- 1986 Chemistry Department Alumni Award, Kansas State University
- 1986 Camille and Henry Dreyfus Teacher-Scholar Award
- 1985 Presidential Young Investigator Award, National Science Foundation
- 1985 Alfred P. Sloan Research Fellow
- 1982 Rosalyn Schwartz Award, Bryn Mawr College
- 1983 Junior Faculty Research Award, Bryn Mawr College

#### **DISTINGUISHED LECTURESHIPS AND ADDRESSES**

- Tourtellotte Lecturer, Kalamazoo College, 2016 (upcoming)
- Edison Lecture, University of Notre Dame, 2016
- Tiekelmann Lecture, University of Buffalo, SUNY, 2016
- Ott Lecture, Grand Valley State University, 2015
- Fisher Sustainability Lecturer, University of Victoria, University of British Columbia and
  - Simon Fraser University, 2015
- Priestley Lectureship, Pennsylvania State University, 2015
- Franklin Lecture, Rice University, Houston, TX, 2015
- College Larson Lectureship, University of St. Thomas, St. Paul, MN, 2014
- McGavock Lectureship, Trinity University, San Antonio, TX, 2014
- William D. Smart Lectureship, University of West Florida, 2014

Lardy Lecture, South Dakota State University, 2014 Plenary Speaker, Royal Australian Chemical Institute, Physical Chemistry Conference, 2013 Frederick Kauffman Lecturer, University of Pittsburgh, 2013 Director's Special Colloquium, Argonne National Laboratory, 2013 Bold Aspirations Lecturer, University of Kansas, 2013 Eyring Lecturer, Arizona State University, 2013 Ouellette and Swenton Lectureship, Ohio State University, 2012 Nebraska Chemistry/ADVANCE Chair Lectureship, University of Nebraska, 2012 Trustees' Council of Penn Women Lecture in Chemistry, Univ. of Penn., 2011 Kent R. Wilson Lectureship, University of California, San Diego, 2011 Iota Sigma Pi Invited Lecturer, Purdue University, 2011 WST Distinguished Lectureship, Georgia Institute of Technology, 2011 Skidmore-Union Colleges Distinguished Scientist Lecturer, 2011 Campbell Lectureship, University of Southampton, UK, 2011 Danforth Lectureship, Grinnell College, 2010 Plenary Speaker, International Conference on Raman Spectroscopy, 2010 James D. and Julia P. Morrison Lectureship, Carleton College, 2010 Presidential Lectureship, Iowa State University, 2010 Henry Emmet Gunning Lecturer, University of Alberta, 2010 James and Jeanette Neckers Lecturer, Hope College, 2010 NSF MPS Distinguished Lecture, National Science Foundation, 2010 Arthur William Davidson Memorial Lectureship, University of Kansas, 2009 Frank T. Gucker Lectureship, Indiana University, Bloomington, 2009 Distinguished Guest Speaker, 11<sup>th</sup> Annual Beckman Scholars Symposium, 2009 Eberly College of Arts and Sciences Distinguished Lectureship, West Virginia University, 2009 AdvanceVT Distinguished Lectureship, Virginia Tech, 2009 L. Carroll King Memorial Lectureship, Northwestern University, 2008 Sr. Mary Thompson Scholar, College of St. Catherine, 2008 George C. Pimentel Memorial Lectureship, Univ. of California, Berkeley, 2008 "Science Without Limits" Lectureship, Lewis and Clark College, 2008 Leland Wilson Chemistry Lectureship, University of Northern Iowa, 2007 Fred M. Garland Lectureship, Texas A&M University, Knoxville, 2007 Distinguished Women in Science Speaker, Stanford University, 2007 Donna Russell Fox Lectureship, Cornell College, 2006 Keynote Address, 20<sup>th</sup> Anniversary of the Natl. Conference on Undergraduate Research, 2006 Howard S. Brode Memorial Lectureship, Whitman College, 2006 Charles H. Fisher Lecturer, Roanoke College, 2005

Keynote Address, Karen E. Wetterhahn Symposium, Dartmouth University, 2005 Swiss Research Lectureship, Conférence Universitaire de Suisse Occidentale, Switzerland, 2005 Keynote Address, Science Careers in Search of Women Conference, Argonne Natl. Lab., 2005 McElvain Lectureship, University of Wisconsin, 2004 Spiers Memorial Lecturer, Faraday Council of the Royal Society of Chemistry, Cambridge, UK 2004 H.H. King Lectureship, Kansas State University, 2004 Cottrell Scholars Lecturer, Research Corporation, 2004 Kolthoff Distinguished Lectureship, University of Minnesota, 2003 S. Dexter Squibb Distinguished Lectureship, North Carolina State, Asheville, 2002 Nakamoto Lectureship, Marquette University, 2002 Bergmann Lectureship, Yale University, 2002 Gerhard L. Closs Lectureship, University of Chicago, 2002 Directors Lectureship, Pacific Northwest National Laboratory, 2002 Distinguished Lectureship, American Physical Society Laser Science Topical Group, 1996–2000 Pittsburgh Conference Lectureship, Duquesne University, 2000 Frontiers in Chemical Research Lectureship, Texas A&M University, 2000 Clifford B. Purves Lectureship, McGill University, 1999 Lucy W. Pickett Lectureship, Mount Holyoke College, 1997 Phillips Distinguished Lectureship, Haverford College, 1995 Shell Lecturer, National Science Teachers Association, 1991

### **PROFESSIONAL APPOINTMENTS**

#### **CURRENT APPOINTMENTS**

2016 -	Secretary, American Academy of Arts and Sciences
2015-2016	U.S. Science Envoy, Department of State, Secretary Kerry Appointee, Lower Mekong Countries of Vietnam, Thailand, Cambodia, Myanmar, Laos
2014-2016	President-Elect (2014), President (2015), Chair of the Board of Directors (2016) American Association for the Advancement of Science (AAAS)
2015-2016	Search Committee Member, Editor for Science Magazine
2012-2018	National Science Board Member, Presidential Obama Appointee
1998-	<i>Chair and Founder</i> , COACh for the Advancement of Women Scientists and Engineers
2012-2016	Membership Canvassing Committee, Chemistry Section, National Academy of Sciences
2007-	Membership Committee, American Academy of Arts and Sciences
2015-	International Advisory Board of The Research Council of Oman, Muscat, Oman.
2015-	Special Advisor for the International Center for Advanced Phosphates (ICAP), University of Mohammed VI Polytechnic, Marrakech, Morocco

- 2015- International Research Advisory Panel Member, King Mongkut's University of Technology Thonburi, Bangkok, Thailand
- 2012- Advisory Board, Association of Pacific Rim University (APRU), Women in Leadership Program, Singapore.
- 2013-2016 Editorial Advisory Board, Journal of the American Chemical Society
- 2010-2015 Editorial Advisory Board Member of Chemical Reviews
- 2006-2016 Editorial Advisory Board Member of Accounts of Chemical Research

### **PREVIOUS APPOINTMENTS (SELECTED LIST)**

	2010-2015	Asst. Secretary for the Sciences, American Academy of Arts and Sciences
	2012-2015	Editorial Advisory Board Member of the Journal of Physical Chemistry
	2014	Search Committee Member, AAAS Chief Executive Officer
	2014	Search Committee Member, Director of Argonne National Laboratory
	2011-2013	Presidential Blue Ribbon Commission on Graduate Education in the Chemical Sciences, American Chemical Society
	2006-2013	Hydrogen and Fuel Cell Technical Advisory Committee Member, Office of the Secretary, Department of Energy
	2008-2012	Research Corporation Presidential Advisory Board Member
	2011-2012	Dept. of Energy Ames Laboratory Oversight Board Member
	2010-2012	Women of Color Advisory Board Member, Harvard University
	2010-2012	U.S. Council of Colleges of Arts and Sciences ADVANCE Advisory Board Member
	2011-2012	West Virginia University ADVANCE Advisory Board Member
	2009-2012	University of Washington On-Ramps ADVANCE Advisory Board Member
	2012	President Search Committee Member, University of Oregon
	2012	Director of Mathematical and Physical Sciences (MPS) Search Committee Member, National
Science Foundation		
	2008-2011	Chair-Elect, Chair, Former Chair Chemistry Section, AAAS
	2009-2010	<i>Chair</i> , Committee of Visitors, Workforce Development for Teachers and Scientists, Department of Energy
	2005-2010	Associate Editor, Annual Review of Physical Chemistry
	2006-2009	Biointerphases, Editorial Advisory Board Member
	2007-2010	Rice University ADVANCE Advisory Board Member
	2009	Helmholtz Association (Germany), Review Committee Member for
		Sponsored Programs in "Research with Photons, Ions and Neutrons"
	2008-2009	Presidential Search Committee Member, University of Oregon
	2006-2008	Journal of Chemical Physics, Editorial Advisory Board Member

- 2007-2008 *Chair*, Committee of Visitors (COV), Chemical Sciences, Geosciences, and Biosciences Division, Department of Energy, Basic Energy Sciences
- 2006-2008 Chair, Science Advisory Committee, Stanford Synchrotron Radiation Laboratory
- 2007-2008 Editor-in-Chief Search Committee Member, Journal of Chemical Physics
- 2007-2008 Steering Committee Member, NSF Sponsored Workshop on Recruitment and Retention of Minorities in the Chemical Sciences
- 2006-2007 Chair, Committee of Visitors (COV), Chemistry Division, NSF
- 1999-2006 State of Oregon, Board of Higher Education Member Gov. Kulongoski Appointee (2004-2006);
  Gov. Kitzhaber Appointee (1999-2003)
  Vice President and Interim President (2004)

Chair, Chancellor's Office Reorganization Committee (2004-2006)

- 2005-2006 COSEPUP Committee on Women in Academic Science and Engineering, NAS
- 2005-2006 Steering Committee, NSF, NIH & DOE Sponsored Workshop for Department Chairs on Gender Equity in the Chemical Sciences
- 2005 Research Corporation Presidential Advisory Panel
- 2004 Editor-in-Chief Search Committee Member, Journal of Physical Chemistry
- 2003-2007 Chemical Sciences Roundtable Member, NAS/NRC
- 2002-2005 Chemical and Engineering News Advisory Board Member
- 2001-2003 Langmuir, Editorial Advisory Board Member
- 1995-2003 Basic Energy Sciences Advisory Committee, Department of Energy *Chair* (1998-2003); Member (1995-1998)
- 1996-2001 Member, Council on Chemical Sciences, Department of Energy
- 1995-2000 Executive Committee, Physical Chemistry Division, ACS; Chair (1999); Program Chair (1998)
- 1992-2004 Chair, Women Faculty Resource Network, University of Oregon
- 1993-1996 Applied Spectroscopy Editorial Board Member
- 1993-1994 Chair, National Academy of Sciences Frontiers in Science Symposium
- 1993-1999 U.S. National Advisory Committee Member, IUPAC
- 1992-1995 Analytical Chemistry, Editorial Advisory Board Member
- 1991-1994 Accounts of Chemical Research, Editorial Advisory Board Member
- 1991-1994 Board on Solid State Sciences Member, NAS/NRC
- 1991-1995 Critical Reviews of Surface Science, Editorial Board Member
- 1990-1994 Vibrational Spectroscopy, Editorial Advisory Board Member

- 1990-1995 Laser Science Topical Group Advisory Committee Member, American Physical Society
- 1989-1994 Journal of Physical Chemistry, Editorial Board Member
- 1989-1992 Materials Science Advisory Board Member, National Science Foundation
- 1989-1992 Board on Chemical Science and Technology Member, NAS/NRC
- 1988-1991 Executive Committee Member, Coblentz Society (Spectroscopy)
- 1986-1989 Governor's Science Advisory Board Member, State of Oregon, Gov. Goldschmidt appointee
- 1986-1989 Chemistry Advisory Board Member, National Science Foundation
- 1986-1989 Executive Board Member, Western Spectroscopy Association

# **RECENT VIDEOS, PODCASTS AND MEDIA COVERAGE**

"U.S. Envoy Encourages Women To Study Sciences, Engineering, (English) http://www.voacambodia.com/content/us-envoy-encourages-women-to-study-sciencesengineering/3241811.html, (Khmer) http://khmer.voanews.com/content/us-expert-encouragesyouth-to-focus-on-science/3232478.html?nocache=1, Voice of American, Phnom Penh, Cambodia, March 2016.

"Global Science Engagement", AAAS Presidential Plenary Address, AAAS Annual Meeting in Washington, DC, February 2016. <u>http://www.aaas.org/page/am16-videos</u>.

"Technology: Do Women Need More Encouragement and Guidance", Vietnam FBNC TV coverage of the Celebration of Women in Technology Conference, Science Envoy Program, HCMC, Vietnam, January 2016. <u>http://fbnc.vn/videos/31346#.VpdWukpEncs</u>

"Technology Starting with Females", Media coverage of the Celebration of Women in Technology in the Lower Mekong River Countries, Science Envoy Program, HCMC, Vietnam, January 2016. <u>http://thanhnien.vn/giao-duc/cong-nghe-bat-dau-tu-nu-gioi-656739.html</u>

"Women Have Not Been Appreciated in the Field of Tech", Media coverage of the Celebration of Women in Technology in the Lower Mekong River Countries, Science Envoy Program, HCMC, Vietnam, January 2016. <u>http://thanhnien.vn/doi-song/phu-nu-van-chua-duoc-danh-gia-dung-muc-trong-linh-vuc-cong-nghe-656592.html</u>.

"Improving the Position of Women in Science and Technology", Media coverage of the Celebration of Women in Technology in the Lower Mekong River Countries, Science Envoy Program, HCMC, Vietnam, January 2016. <u>http://ven.vn/vi-VN/vi/chuyen-muc-tin-tuc/xa-hoi/nang-cao-vi-the-cua-phu-nu-trong-cac-nganh-khoa-hoc-va-cong-nghe t114c440n63119</u>.

"UO prof Geri Richmond scores National Medal of Science", Eugene Weekly, December 22, 2015. <u>http://www.eugeneweekly.com/blog/uo-prof-geri-richmond-scores-national-medal-science</u>

"Women Leading in Research and Innovation", Gender Summit 6 Keynote Address, Seoul, Korea, August 2015. <u>https://www.youtube.com/watch?v=yU-HypaXsWI</u>

"Partnerships Help Women Break "Polycarbonate Ceiling", AAAS Presidential Interview, July 2015.

https://www.youtube.com/watch?v=u9XWNaOVda8&index=8&list=PLY1zaOaaYKDsMdNZ7 DTs\_vBjfRJnK\_Om0.

"Invitation to the 2016 AAAS Meeting in Washington, DC by President Geraldine Richmond", July 2015. <u>http://bcove.me/q566c5mx</u>

"Science Envoy Travels to Vietnam, Laos and Thailand", U.S. State Department, June 9, 2015, <u>http://www.state.gov/r/pa/prs/ps/2015/06/243312.ht</u>

"Improving Global Engagement", Proceedings of the National Academy of Science Podcast, May 2015. <u>http://www.podcastchart.com/podcasts/pnas-science-sessions/episodes/improving-global-scientific-engagement/pop</u>

"US Science Envoy Sees Tech Potential in Students", Voice of America: , March 2015. http://www.voacambodia.com/content/us-science-envoy-sees-tech-potential-in-cambodiastudents/2673055.html

"A Chat with Dr. Geraldine Richmond, U.S. Science Envoy, about women's roles in the sciences," U.S. Embassy of Bangkok, February 4, 2015: https://www.youtube.com/watch?v=jnYp5EyMdMM

VTC10 Broadcast Interview with Geraldine Richmond, U.S. Science Envoy – Vietnam Science and Technology Cooperation, Ho Chi Minh City, Vietnam, January 2015. https://www.youtube.com/watch?v=waL9UmJLh\_s

"Đặc sứ khoa học Hoa Kỳ: Giảng dạy và nghiên cứu phải song hành" Translation: "US science envoy : Teaching and research must be paralleled", FBNC Vietnam, January 2015. <u>https://www.youtube.com/watch?v=Rajh8TMN5B8&index=3&list=PLuPQZWAYfwNMQiL\_m</u> <u>NKB3S-aZiCMvODkN</u>

"Engaging with Southeast Asia on Science and Technology", Voice of America, January 2015. http://editorials.voa.gov/content/engaging-on-science-and-technology-with-southeastasia/2588071.html

"AAAS President Sees Desire for Global Collaboration", Science: 27 February 2015: Vol. 347 no. 6225 p. 959 DOI: 10.1126/science.347.6225.95 https://www.sciencemag.org/content/347/6225/959.full

"Đặc sứ khoa học Hoa Kỳ đến VN", Translate: "U.S. Science Envoy to Vietnam", Tuoi Tre online, January 12, 2015. <u>http://tuoitre.vn/tin/giao-duc/khoa-hoc/20150112/dac-su-khoa-hoc-hoa-ky-den-vn/697959.html</u>

"U.S. Science Envoy Works with Hue University", Hue University website, January 15, 2015.

http://hueuni.edu.vn/portal/index.php/vi/tintuc/detail/0/tintuc\_sukien/4080

"U.S. Science Envoy Works with Hue University, Thua Thien Hue Party Committee website, January 14, 2015. <u>http://tinhuytthue.vn/tin-tuc-trong-tinh/giao-duc/dac-su-khoa-hoc-hoa-ky-lam-viec-tai-dai-hoc-hue.htm</u>

"Surf, Sink or Swim: Understanding Environmentally Important Processes at Water Surfaces", The IHMC Evening Lecture Series, Pensacola, Florida, January 2014. https://www.youtube.com/watch?v=sAPp9e5P06g

"U.S. Science Envoy Visits Vietnam", Voice of Vietnam, January 2014. http://english.vov.vn/Politics/US-Science-Envoy-visits-Vietnam/286832.vov

"UO Chemistry Prof Named President-Elect of the American Association for the Advancement of Science", Eugene Weekly, Fanuary 28, 2014. <u>http://www.eugeneweekly.com/blog/uo-</u> chemistry-prof-named-president-elect-american-association-advancement-science

#### LEGISLATIVE TESTIMONY

- Oregon State House of Representatives, Subcommittee on Education, "Faculty Appointments and Hiring", Salem, OR, April 2007.
- Oregon State House of Representatives, Subcommittee on Education, "Excellence in Research in the Oregon University System", Salem, OR, March 2005.
- United States Senate, Committee on Science, Technology and Space on the issue of "Title IX and Women in Science", Washington, DC, October 2002.
- United States House of Representatives, Subcommittee on Energy of the Committee on Science on "The Department of Energy Office of Science – Issues and Opportunities", Washington, DC, May 2001.

Oregon State House of Representatives, Subcommittee on Higher Education, "Science and Engineering Opportunities in Higher Education in Oregon", Salem, OR, November 2001.

#### MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

National Academy of Sciences (Member)

American Academy of Arts and Sciences (Fellow)

Organization for Women Scientists in the Developing World (Associate Member)

American Association for the Advancement of Science (Fellow)

American Chemical Society (Fellow)

American Physical Society (Fellow)

Society for Applied Spectroscopy (Fellow)

American Association for Women in Science (Fellow)

International Women's Forum (Elected Member)

Oregon Women's Forum (Elected Member)

National Organization for the Advancement of Black Chemists and Chemical Engineers – NOBCChE - (Member)

Society for the Advancement of Chicanos and Native American Scientists – SACNAS - (Member)

#### **PUBLICATIONS**

- (207) "Computational Vibrational Sum-Frequency Spectra of Formaldehyde and Hydroxymethanesulfonate at Aqueous Interfaces", N. Valley and G.L. Richmond, submitted.
- (206) "An Exploration of Women Academic Scientists' Experiences with Gender in North Africa and the United States", J. Greene and G.L. Richmond, *International Journal of Gender, Science and Technology*, in press.
- (205) "Global Science Engagement", G.L. Richmond, Science, 351 (427) 2016.
- (204) "Morphology and Growth Behavior of O<sub>2</sub>-free Chemical Bath Deposited ZnS Thin Films", K. Jet Meitzner<sup>a</sup>, B. M. Tillotson<sup>a</sup>, A. T. Siedschlag<sup>a</sup>, F. G. Moore<sup>b</sup>, S. D. Kevan, G. L. Richmond, Thin Solid Films 593 (131-136) 2015.
- (203) "Solvation Station: Microsolvation for Modeling Vibrational Sum-Frequency Spectra of Acids at Aqueous Interfaces", N.A. Valley and G.L. Richmond, J. Chem. Theory Comput., 11 (4780-4790) 2015.
- (202) "A Means to an Interface: Investigating Methanolamine Behavior at an Aqueous Surface", L.E. McWilliams, N.A. Valley, S.N. Wren and G.L. Richmond, Phys. Chem. Chem. Phys. 17, (21458-21469) 2015.
- (201) "Hydration, Orientation and Conformation of Methylglyoxal at the Air-Water Interface", S.N. Wren, B. P. Gordon, N. A. Valley, L. E. McWilliams, G. L. Richmond, J. Phys. Chem. A 119, (6391–6403) 2015.
- (200) "Twist & Turn: Effect of Stereoconfiguration on Interfacial Assembly of Polyelectrolytes", N. Valley, E. J. Robertson and G.L. Richmond, Langmuir, *30* (14226–14233) 2014.
- (199) "Molecular Insights in the Structure and Layered Assembly of Polyelectrolytes at the Oil/Water Interface", E.J. Robertson and G.L. Richmond, Feature Article for *J. Phys. Chem. 118* (28331–28343) 2014.
- (198) "Assembly and Molecular Order of Two-Dimensional Peptoid Nanosheets at the Oil-Water Interface", E.J. Robertson, G.K. Olivier, M. Qian, R. Pizano, C. Prouix, R. N. Zuckerman and G.L. Richmond, *PNAS*, 111 (13284-13289) 2014.
- (197) "Metal Ion Induced Adsorption and Ordering of Charged Macromolecules at the Aqueous/Hydrophobic Liquid Interface", E. J. Robertson, A. P. Carpenter, C. M. Olson, and G. L. Richmond, *J. Phys. Chem. C*, 118 (15260-15273) 2014.
- (196) "Double Down: Delving in the Details of Diacid Adsorption at Aqueous Surfaces", P. G. Blower, N.A. Valley, S.R. Wood, K. L. Plath and G.L. Richmond, *J. Phys. Chem. A*, 118 (4778-4789) 2014.

- (195) "Computational Modeling of Lauric Acid at the Organic-Water Interface", L. K. Holte, B. A. Kuran, G.L. Richmond and K.E. Johnson, *J. Phys. Chem. C*,118(10024–10032) 2014.
- (194) "Designated Driver: The Differing Roles of Divalent Metal Ions in Surfactant Adsorption at the Oil-Water Interface", E.J. Robertson, D.K. Beaman and G.L. Richmond, *Langmuir*, 29 (15511–15520) 2013.
- (193) "Ion Induced Reorientation and Distribution of Pentanone in the Air-Water Boundary Layer", K. L. Plath, N.A. Valley and G.L. Richmond, *J. Phys. Chem. A*, 117 (11514-11527) 2013.
- (192) "Time-resolved Measurement of Free Carrier Absorption, Diffusivity, and Internal Quantum Efficiency in Silicon", J. Meitzner, F. Moore, B. Tillotson, S. D.Kevan, and G.L. Richmond, *Appl. Phys. Lett.*, 103 (92101) 2013.
- (191) "Science Unlimited: Diversity Breeds Creativity", G. L. Richmond, *Chemistry World*, *Royal Society of Chemistry*, Invited Editorial, August 22, 2013.
- (190) "Chunks of Charge: Effects at Play in the Assembly of Macromolecules at Liquid Surfaces", E. J. Robertson and G.L. Richmond, *Langmuir*, 29 (10980–10989) 2013.
- (189) "Sink or Surf: Atmospheric Implications for Succinic Acid at Aqueous Surfaces", P. A. Blower, S. T. Ota, N. Valley S. Wood and G.L.Richmond, J. Phys. Chem. A, 117 (7887-7903) 2013.
- (188) "Work-Life Balance", C. M. Rohlfing and G.L. Richmond, *Chem. and Engin. News Editorial*, 19 (3) May 13, 2013.
- (187) "Staying Hydrated: The Molecular Journey of Gaseous Sulfur Dioxide to a Water Surface", E.S. Shamay, N. Valley, F. G. Moore and G.L. Richmond, *Physical Chemistry-Chemical Physics*, 15 (6893-6902) 2013.
- (186) "Surface Behavior of Malonic Acid Adsorption at the Air/Water Interface", P.G. Blower, E. Shamay, L. Kringle, S. T. Ota and G.L. Richmond, J. Phys. Chem. A, 117 (2529-2542) 2013.
- (185) "The Water/Hydrophobic Interface: Neutral and Charged Solute Adsorption at Fluorocarbon and Hydrocarbon SAMs", A.J. Hopkins and G.L. Richmond, *Appl. Spec.*, 67 (261-273) 2013.
- (184) "Metal Ions: Driving the Orderly Assembly of Polyelectrolytes at Hydrophobic Surfaces", D. K. Beaman, E. J. Robertson and G.L. Richmond, *Langmuir*, 28 (14245-53) 2012.
- (183) "Uptake of SO<sub>2</sub> at Aqueous Formaldehyde Surfaces", S. Ota and G.L. Richmond, *J. Am. Chem. Soc.*, 134 (9967–9977) 2012.
- (182) "Ordered Polyelectrolyte Assembly at the Oil-Water Interface", D.K. Beaman, E. J. Robertson and G.L. Richmond, *PNAS*, 109 (3226-3231) 2012.

- (181) "Dancing on Water: The Choreography of Sulfur Dioxide Adsorption on Water Surfaces", E. S. Shamay, K.E. Johnson and G.L. Richmond, J. Phys. Chem. C, 115 (25304-25314) 2011.
- (180) "From Head to Tail: Understanding the Structure, Solvation and Hydrogen Bonding of Carboxylate Surfactants at the Organic/Water Interface", D.K. Beaman, E. J. Robertson and G.L. Richmond, *J. Phys. Chem. C*, 115 (12508-12516) 2011.
- (179) "SAMS Under Water: The Impact of Ions on the Behavior of Water at Soft Hydrophobic Surfaces", A.J. Hopkins, C. McFearin and G.L. Richmond, J. Phys. Chem. C, 115 (11192-11203) 2011.
- (178) "Addressing Gender Equity in the Physical Sciences: Replications of a Workshop Designed to Change the Views of Department Chairs", J. Greene, P. Lewis, G.L. Richmond and J. Stockard, J. of Women and Minorities in Sci. and Eng., 17 (97-109) 2011.
- (177) "Chilling Out: Molecular Insights into the Enhanced Adsorption of SO<sub>2</sub> Gas at the Vapor/Water Interface at Low Temperatures", S. Ota and G. L. Richmond, J. Amer. Chem. Soc., 133 (7497–7508) 2011.
- (176) "Reflections on the 100<sup>th</sup> Anniversary of Marie Curie's Nobel Prize in Chemistry", G.L. Richmond, Invited Editorial for *J. Chem. Ed.*, 88 (679–680) 2011.
- (175) "Changing the Chairs: Impact of Workshop Activities in Assisting Chemistry Department Chairs in Achieving Racial and Ethnic Diversity", G.L. Richmond, J. Stockard; J. Green and P. Lewis, J. Chem. Ed,. 88 (721–725) 2011.
- (174) "The Unique Assembly of Macromolecules at Water/Hydrophobic Liquid Interfaces", D. K. Beaman, E. J. Robertson and G.L. Richmond, *Langmuir*, 27 (2104-2106) 2011.dn
- (173) "The Sporting Nature of Science" G.L. Richmond, Invited Editorial for *Anal. and Bioanal. Chem.*, 399 (153) 2011.
- (172) "Promoting Mentoring Among and For Women in Chemistry: The Experiences of COACh", J. Stockard, J. Green, P. Lewis and G.L. Richmond, in <u>Mentoring Strategies to</u> <u>Facilitate the Advancement of Women Faculty</u>, ed. K.K. Karukstis, B. L. Gourley, M. Rossi, L. L. Wright, American Chemical Society, 1057 (153-163) 2010.
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Optical Second Harmonic Generation", G. L. Richmond, *Chem. Phys Lett.*, 113 (359-363) 1985.

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- "Spectrophotometric-Kinetic Determination of Thio Ketones, G. Richmond, C. Rainey, C. E. Meloan, *Anal. Lett.*, 9 (105-107) 1976.

### **BOOK REVIEWS**

- "Being a Scientist and a Mother", Book Review of "<u>Motherhood: The Elephant in the</u> <u>Laboratory</u>" Edited by Emily Monosson, G. L. Richmond, *Chemical and Engineering News*, 86 (64-65) 2008.
- "Women in Science", Book review of "<u>Are Women Achieving Equity in Chemistry</u>" edited by C.H. Marzabadi, V.J. Kuck, S.A. Nolan, and J.P. Buckner; G. L. Richmond, *Chemical and Engineering News*, 84 (35) 2006.
- "Women in Science", Book review of "<u>Every Other Thursday</u>: <u>Stories and Strategies from</u> <u>Successful Women Scientists</u>" edited by Ellen Daniell, G. L. Richmond, *Chemical and Engineering News*, 84 (34) 2006.

#### SCIENTIFIC MEETINGS ORGANIZED

"Laos Developmental Neuroscience and Stunting Workshop", Luang Prabang, Laos, March 2016. Funded by the U.S. State Department; Co-organized with Prof. Jeff Measelle, Univ. of Oregon.

"Women in Tech Workshop for Scientists in the Lower Mekong Countries", Intel Vietnam Plant, Ho Chi Minh City, Vietnam, January 2016. Funded by Intel and U.S. State Department.

"Summit for Women Scientists and Engineers in the DOE Laboratories", Argonne National Laboratory, October 2015. Funded by DOE and COACh.

"Research Partnership Workshop on Water Resources for Women Scientists from the U.S. and Africa", Windhoek, Namibia, May 2015.

"Developing Sustainable Networks of Women Scientists for Addressing Issues of Disasters Related to Weather and Changing Climate", Montego Bay, Jamaica, October 2014. Funded by NSF.

"Research Partnership Workshop on Water, Energy and the Environment for Women Scientists from the U.S. and North Africa," Casablanca, Morocco, March 2013. Funded by the U.S. State Department.

"Developing Sustainable Networks of Women Scientists for Addressing Issues of Hydrologic Events and Hazards," Buenos Aires, Argentina, November 2013. Funded by NSF.

"Developing Sustainable Networks of Women Scientists for Addressing Issues of Tectonic Hazards", Santiago, Chile, March 2013. Funded by NSF.

"Building Research Partnerships Between Women Scientists and Engineers in the U.S. and Brazil," Boston, MA, February 12-14, 2013. Funded by NSF and CAPES.

"Networking Women Chemistry Researchers in the U.S. and China", Bejing, China, October 2011. Funded by US NSF and China NSF.

#### WORKFORCE DEVELOPMENT ACTIVITIES

#### Founder and Chair of COACh

COACh is a grass-roots organization formed to assist women scientists and engineers in achieving success in their research and leadership in the scientific enterprise. As Founder and Chair of COACh, Richmond has led the organization since 1997 and has been integrally involved in the design and implementation of professional skills and leadership workshops (see list below) for scientists and engineers. Initially developed for women faculty, they have since grown to include workshops for male, female and minority graduate students, postdocs, faculty and administrators. Over 15,000 scientists and engineers have participated in these workshops at over 60 colleges and universities, and at professional meetings including the American Chemical Society (ACS), American Physical Society (APS), the Society for Industrial and Applied Mathematics (SIAM), National Organization of Professional Black Chemists and Chemical Engineers (NOBCCHE), Society for the Advancement of Native Americans and Chicanos (SACNAS), American Geophysical Union (AGU), International Combustion Institute Meeting, the Environmental Mutagen Society (EMS), the American Society for Microbiology (ASM) and Council on Chemical Research (CCR). For a full description, see http://coach.uoregon.edu.

# Professional Skills Workshops Developed for Scientists and Engineers

Basic Workshops for Women Faculty in Science and Engineering

"COAChing Strong Women in the Art of Strategic Persuasion"

"COAChing Strong Women in the Art of Strategic Performance"

"The Chemistry of Leadership"

"COAChing Strong Minority Women in the Art of Strategic Persuasion and Performance"

"Why Not? Planning and Leading Change in Your Career or Organization" "Developing a Balanced Career Portfolio"

Advanced Workshops for Women Faculty in Science and Engineering

"Uses of Influence, Power and Conflict Resolution in Negotiation"

"The Art of a Powerful Presence and Presentation"

"Workshop for Women Faculty in Leadership Roles"

"COAChing Women to be Effective Change Agents"

Workshops for Underrepresented Minority Groups

"COAChing Strong Minority Women in Negotiation, Communication and Leadership" "Professional Skills Training for Minority Graduate Students and Postdocs"

Workshops for Postdocs and Graduate Students (For female or mixed gender groups)

"Professional Skills Training for Graduate Students"

"Powerful Postdocs: Maximizing your Potential in the Transition to an Academic Job"

"Professional Skills Training for Minority Graduate Students and Postdocs"

"Career Launch and Acceleration"

"Selling Your Science: The Art of Effective Proposal Writing"

"Publishing Research Results in Peer Reviewed Journals"

Leadership Workshops (For female and or mixed gender faculty groups)

"Leadership Skills Workshop for New Chairs "

"When Invention Requires Intervention: Leading Academic Departments through Change"

"Basic Training in Negotiation and Conflict Resolution"

"Steering a Course: Making Change in Uncertain Waters"

### **Professional Skills Workshops Developed for COACh International**

Basic Workshops for Graduate Students, Postdoctoral Associates and Faculty

(Available in French and English)

"Selling Your Science: The Art of Effective Proposal Writing"

"Publishing Research Results in Peer Reviewed Journals"

"Effective Leadership Skills for Women"

"Effective Negotiation for Career Advancement"

"Persuasive Communication Technique"

"Career Launch and Acceleration"

"Persuasive Scientific Presentations"

"Successful Mentoring"

# INVITED TALKS AND LECTURESHIPS ON SCIENTIFIC RESEARCH

#### Meetings, Events and Symposia

- "Surf, Sink or Swim: Understanding Environmentally Important Processes at Liquid Surfaces", 2016 Tourtelotte Lecture, Kalamazoo College, Kalamazoo, MI, May 2016.
- "Oil on Water: Calming the Seas but not the Science", 2016 Tiekelmann Lectureship, Department of Chemistry, SUNY Buffalo, Buffalo, NY, April 2016.
- "Mulling Over Emulsions: Molecular Assembly at Oil-Water Interfaces", 2016 Edison Lectureship, Notre Dame University, Notre Dame, Indiana, February 2016.
- "A Molecular Picture of Environmentally Important Processes at Water Surfaces", Hue University of Sciences, Hue City, Vietnam, December 2015.
- "Surf, Sink or Swim: Understanding Environmentally Important Processes at Water Surfaces", 2015 Ott Lectureship, Grand Valley State University, Allendale, MI, October 2015.
- "Going Nonlinear to Study Molecular Assemblly at Oil-Water Interfaces", 2015 Ott Lectureship, Grand Valley State University, Allendale, MI, October 2015.
- "Molecular Assembly at Oil Water Interfaces", Frontiers in Chemistry, Weizmann Institute, Rehovot, Israel, May 2015.
- "Methylglyoxal at the Air/Water Interface". S. N. Wren and G.L. Richmond, 249<sup>th</sup> National ACS Meeting, Denver, CO, March 2015. Given by S. Wren.
- "Molecular Characterization of Surfactant Adsorption at the Surface of Emulsion Particles", J. Hensel and G. L. Richmond, 249<sup>th</sup> National ACS Meeting, Denver, CO, March 2015. Given by J. Hensel
- "Spectroscopic Studies of the Nanoemulsion Surfaces", J. Hensel and G.L. Richmond, Pittsburgh Spectroscopy Conference, New Orleans, LA, March 2015. Given by J. Hensel.
- "Strengthening Research and Educational Partnerships with Scientists in Developing Countries: It's Good for Everyone", 248<sup>th</sup> National ACS Meeting, San Francisco, CA, Aug. 2014.

- ""Combining experiment and theory: Atmospheric Organics at the Air-Water Interface", 248<sup>th</sup> National ACS Meeting, San Francisco, CA, Aug. 2014. (given by Dr. Sumi Wren).
- "Novel Peptoid Nanosheet Assembly at the Oil-Water Interface ", 248<sup>th</sup> National ACS meeting, San Francisco, CA, Aug 2014. (given by Dr. Clive Kittredge)
- "Line 'Em All Up: Macromolecular and Nanoparticle Assembly at Oil/Water Interfaces", PittCon, Chicago, IL, March 2013.
- "Molecular Insights into Surfactant, Nanoparticle, and Polymer Assembly at Planar and Spherical Oil/Water Interfaces", 247<sup>th</sup> National ACS Meeting, Dallas, TX, March 2014.
- "Assembly at Complex Interfaces", 7<sup>th</sup> International Meeting of the Africa Materials Research Society, Addis Ababa, Ethiopia, December 2013.
- "Line 'Em All Up: Macromolecular Assembly at Liquid Surfaces", Plenary Lecture, Royal Australian Chemical Institute Physical Chemistry Conference, Hobart, Tasmania, December 2013.
- "Macromolecular Assembly at Liquid Surfaces", Symposium in Honor of Isiah Warner, 245th ACS National Meeting, New Orleans, LA, April 2013.
- "Line 'Em All Up: Macromolecular Assembly at Liquid Surfaces", Award Symposium, American Physical Society Meeting, Baltimore, MD, March 2013.
- "Molecular Processes at the Water's Edge", Dreyfus Foundation Teacher-Scholar Symposium on Research Frontiers in the Chemical Sciences", Camille and Henry Dreyfus Foundation, October 2012.
- "Line "Em All Up: Surfactant, Polymer and Nanoparticle Adsorption at Liquid Surfaces", European Molecular Liquids Group/Japanese Molecular Liquids Group Meeting, Eger, Hungary, September 2012.
- "Doorman, Barrier or Temptress: What Role does a Water Surface Play in Gaseous Adsorption", 243<sup>rd</sup> National ACS Meeting, Philadelphia, PA, August 2012.
- "Molecular Processes Underlying the Structure and Assembly of Thin Films and Nanoparticles at Liquid Interfaces", Department of Energy, Materials Research Division Investigator Meeting, Annapolis, MD, July 2012.
- "Particle and Nanoparticle Assembly at Liquid Surfaces", Korean Chemical Society Meeting, Seoul, Korea, April 2012.
- "Nanoparticle Assembly at Oil/Water Interfaces", Joint China-U.S. Workshop for Women Researchers in Chemistry", Beijing, China, October 2011.
- "Fundamental Studies of Materials Growth and Assembly at Fluid Interfaces", South Africa Council for Scientific and Industrial Research /U.S. Dept of State & Joint Services S&T Workshop, Pretoria, South Africa, September 2011.
- "Chilling Out: Understanding the Adsorption and Uptake of Atmospheric Gases At Cold Aqueous Surfaces", 242<sup>nd</sup> ACS National Meeting, Denver, CO, August 2011.
- "At the Water's Edge", 10<sup>th</sup> International Conference on the Structure of Surfaces (ICSOS), Hong Kong, August 2011.

- "Oil-on-Water: Insights into the Fascinating Properties and Opportunities for Discovery at this Unique Interface", IUPAC International Congress on Analytical Sciences, Kyoto, Japan, May 2011.
- "Oil on Water: Calming the Seas but Not the Science", Physical Chemistry Division Awards Symposium, 241<sup>st</sup> ACS National Meeting, Anaheim, CA, March 2011.
- "Water at Hydrophobic Soft Surfaces: Molecular Structure, Bonding, Adsorption and Penetration", 241<sup>st</sup> ACS National Meeting, Anaheim, CA, March 2011.
- "Oil on Water: Calming the Seas but Not the Science", Plenary Lecture, ICORS 2010, Boston, MA, August 2010.
- "Going Nonlinear to Study Environmental Processes at Liquid Surfaces", Spectroscopy Society of Pittsburgh, Duquesne University, Pittsburgh, PA, November 2009.
- "Molecular Behavior of Fluorocarbon Surfaces in Reactive Aqueous Environments", ASME/STLE International Joint Tribology Conference, Memphis, TN, October 2009.
- "Understanding Structure and Dynamics of Surfactant Adsorption at Mineral/Water Interfaces", Pacific Northwest American Vacuum Society Meeting, Portland, OR, September 2009.
- "Going Nonlinear to Study Environmental Processes at Liquid Surfaces", 2009 Beckman Scholars Symposium, Beckman Center, Irvine, CA, July 2009.
- "At the Water's Edge: Understanding Environmentally Important Processes at Aqueous Surfaces", 237<sup>th</sup> National American Chemical Society Meeting, Salt Lake City, UT, March 2009.
- "To Charge or Not to Charge: Ions at Aqueous Interfaces", FACSS 2008 Meeting, Reno, NV, October 2008.
- "Spectroscopic Studies of Environmentally Important Processes at Aqueous Surfaces", FACSS 2008 Meeting, Reno, NV, October 2008.
- "Taking Charge: The Role of Water in Mediating Ion Distribution at Water/Organic Interfaces", 236<sup>th</sup> National American Chemical Society Meeting, Philadelphia, PA, August 2008.
- "Water at Hydrophobic Surfaces: Insights Gained from a Combined Experimental and Theoretical Approach", International Meeting on Aqueous Solutions and their Interfaces", Heraklion, Crete, June 2008.
- "Going Nonlinear to Study Environmental Processes at Liquid Surfaces", Northwest Regional ACS Meeting, Park City, Utah, June 2008.
- "Where Oil and Water Mix: Molecular Properties of the Interface between Aqueous Solutions and Hydrocarbon Solvents", 235<sup>th</sup> National American Chemical Society Meeting, Boston, MA, March 2008.
- "The Magic and Mysteries of Water", Lewis and Clark College Science Without Limits Lecture Series, Portland, OR March 2008.
- "Going Nonlinear to Study the Structure and Dynamics of Molecular Assembly at Complex Interfaces", 2008 Bomem – Michelson Award Symposium, Pittsburgh Spectroscopy Conference, New Orleans, LA, March 2008.

- "Wet Interfaces: Developing a Molecular Framework for Understanding the Behavior of Materials in Aqueous Solutions", Bio Molecular Materials Contractors' Meeting, Department of Energy, Warrenton, VA, November 2007.
- "Going Nonlinear to Study Surfaces of Environmental Importance", Frontiers in Optics 2007/Laser Science XXIII Conference, San Jose, CA September 2007.
- "The Surface of Nitric Acid Solutions: Insights Gained from a Combined Experimental and Computational Approach", 234<sup>th</sup> National American Chemical Society Meeting, Boston, MA, August 2007.
- "How Nitric Acid Adsorption at an Aqueous Surface Alters its Acidity", Dynamics at Surfaces Gordon Research Conference, Andover, NH, August 2007.
- "Surface Nonlinear Spectroscopy and Molecular Dynamics Simulations to Understand Molecular Structure and Bonding at a Series of Liquid-Liquid Interfaces", G. L. Richmond, International Conference on Solution Chemistry, Perth, Australia, July 2007.
- "The Magic and Mysteries of Water", Oregon Museum of Science and Technology Pub Talk Series, Portland, OR, May 2007.
- "Combining Surface Nonlinear Spectroscopy and Molecular Dynamics Simulations to Understand Molecular Structure and Bonding at a Series of Liquid-Liquid Interfaces", G. L. Richmond, 233rd National American Chemical Society Meeting, Chicago, IL, March 2007.
- "Molecular Adsorption, Ion Solvation and Hydrogen Bonding at Aqueous Surfaces," Conference on Liquid Systems Under Extreme Conditions, Environmental Molecular Liquids Group, Barcelona, Spain, September 2006.
- "The Surface of Aqueous Solutions: A Combined Experimental and Theoretical Approach", 232nd National American Chemical Society Meeting, San Francisco, CA, September 2006.
- "Understanding the Surface Composition and Structure of Nitric Acid Solutions", 232nd National American Chemical Society Meeting, San Francisco, CA, September 2006.
- "Molecular Structure and Bonding at Organic/Water Interfaces", 232nd National American Chemical Society Meeting, San Francisco, CA, September 2006.
- "Acids at Aqueous Interfaces and their Effect on Adsorption", Telluride Workshop on Molecular Aspects of Solvation in Hydrogen Bonded Systems", Telluride, CO, August 2006.
- "Going Nonlinear in Studying Water Surfaces", Partners in Science Program, Murdock Foundation, Vancouver, WA, August 2006.
- "Understanding Molecular Interactions at Fluid Interfaces", Pittsburgh Spectroscopy Conference, Orlando, FL, March, 2006.
- "Franklin and the Future: From Franklin's Oil Drop Experiment to Self-Assembled Monolayer Structures", American Vacuum Society Meeting, San Francisco, CA, November 2006.
- "Recent Advances in Measuring Molecular Structure and Adsorption at Liquid Surfaces with Vibrational Sum Frequency Spectroscopy", Federation of Analytical Chemistry and Spectroscopy Societies, Quebec City, Canada, October 2005.
- "Applications of Vibrational Sum Frequency Spectroscopy to the Study of Environmentally Important Processes at Liquid Surfaces", 230th National American Chemical Society Meeting, Washington, DC, August 2005.

- "Ions in Complex Physical, Chemical and Biological Systems", 230th National American Chemical Society Meeting, Washington, DC, August 2005.
- "Understanding Molecular Structure and Bonding at Monolayer Surfaces Adsorbed at Solid and Liquid Surfaces", 230th National American Chemical Society Meeting, Washington, DC, August 2005.
- "Going Nonlinear in Probing Adsorption at Aqueous Surfaces of Environmental Importance", (given by M.Kido) American Physical Society Meeting, Los Angeles, CA, March 2005.
- "Understanding the Structure and Bonding of Water at Aqueous Surfaces and Interfaces", 229th National American Chemical Society Meeting, San Diego, CA, March 2005.
- "Going Nonlinear in Understanding Aqueous Surfaces", 229th National American Chemical Society Meeting, San Diego, CA, March 2005.
- "Advances in Molecular Characterization of Liquid/Liquid Interfaces", Faraday Discussion. The Dynamics and Structure of the Liquid-Liquid Interface, Cambridge University, Cambridge, UK, September 2004. (Spiers Lecturer).
- "Water Structure and Bonding at Hydrophobic Surfaces", Symposium on Aqueous Surfaces, 228th National American Chemical Society Meeting, Philadelphia, PA, August 2004.
- "Nonlinear Optical Studies of Aqueous Interfaces", Water and Aqueous Solutions Gordon Research Conference, Holderness School, Holderness, NH, August 2004.
- "Understanding Molecular Bonding and Adsorption at Liquid Interfaces", Chemistry at Interfaces Gordon Research Conference, Kimball Academy, New Hampshire, August 2004.
- "Molecular Structure and Orientation at Liquid/Liquid Interfaces" 37<sup>th</sup> Heyrovsky Discussion Meeting, Trest, Czech Republic, June 2004.
- "Advancing our Understanding of Interfacial Structure with VSFS", Vibrational Spectroscopy Gordon Research Conference, Bristol, RI, July 2004.
- "Going Nonlinear in Probing Surfaces with Vibrational Spectroscopy", 227th National American Chemical Society Meeting, March 2004.
- "Probing Adsorption and Molecular Structure at Aqueous Interfaces with Vibrational Sum Frequency Spectroscopy", 227th National American Chemical Society Meeting, March 2004.
- "Hydrogen Bonding at Water Surfaces", German Chemical Society Meeting, Munich, Germany, October 2003.
- "Water Structure and Bonding at Hydrophobic Liquid Surfaces", Deutsche Bunsen Discussion Meeting on Interfacial Water in Chemistry and Biology, Schloss Velen, Germany, Sept. 2003.
- "Molecular Interactions at Aqueous Surfaces", Electronic Spectroscopy and Dynamics Gordon Research Conference, Bates College, ME, July 2003.
- "Understanding Molecular Interactions at Liquid Surfaces: Spectroscopy and Simulation," 225<sup>th</sup> National American Chemical Society Meeting, New Orleans, LA, March 2003.
- "Adsorption at the CaF<sub>2</sub>/H<sub>2</sub>O Interface by Vibrational Sum Frequency Spectroscopy", 225<sup>th</sup> National American Chemical Society Meeting, New Orleans, LA, March 2003.
- "Vibrational Spectroscopy of Liquid Surfaces: Going Nonlinear", 224<sup>th</sup> National American Chemical Society Meeting, Boston, MA, August 2002.

- "Water-Surfactant Interactions at Liquid Surfaces Structure and Hydrogen Bonding of Water at Hydrophobic Liquid Surfaces", 224<sup>th</sup> National American Chemical Society Meeting, Boston, MA, August 2002.
- "Structure and Hydrogen Bonding of Water at Hydrophobic Liquid Surfaces", 224<sup>th</sup> National American Chemical Society Meeting, Boston, MA, August 2002.
- "Understanding Molecular Structure at Liquid Surfaces", Pittsburgh Spectroscopy Conference, New Orleans, LA, March 2002.
- "Water Surfaces; New Insights and Discoveries", Dynamics at Surfaces, Gordon Research Conference, Andover, NH, August 2001.
- "Structure and Hydrogen bonding of Water at Liquid Surfaces", Gordon Research Conference on Chemical Reactions at Surfaces", Ventura, CA, February 2001.
- "Hydrogen Bonding at Water Surfaces: Some Surprisingly Weak Interactions", Gordon Research Conference on Electrochemistry, Ventura, CA, January 2001.
- "Structure and Hydrogen Bonding of Water at Surfaces: Some New Insights and Surprises", 220<sup>th</sup> National American Chemical Society Meeting, Washington, DC, August 2000.
- "Surprising Discoveries of How Water Hydrogen Bonds and Orients at Hydrophobic Surfaces", Gordon Research Conference on Water and Aqueous Solutions, Holderness, NH, August 2000.
- "Structure and Hydrogen Bonding of Water at Hydrophobic Surfaces", Spring National American Physical Society Meeting, Minneapolis, MN, March 2000.
- "Adsorption and Monolayer Formation at Liquid Surfaces by Vibrational Sum Frequency Spectroscopy", 219<sup>th</sup> American Chemical Society Meeting, San Francisco, CA, March 2000.
- "Vibrational Sum Frequency Spectroscopy of Aqueous Surfaces: H-Bonding and Solvation", Western Spectroscopy Association, Asilomar, CA, January 2000.
- "Molecular Structure and Bonding at Liquid Surfaces as Probed by VSFS" 26<sup>th</sup> Annual Conference of Analytical Chemistry and Spectroscopy Societies, Vancouver, Canada, October 1999.
- "Hydrogen Bonding of Water Molecules at Liquid Surfaces as Probed by Vibrational Sum Frequency Spectroscopy", Gordon Research Conference on Liquids, Holderness, NH, August 1999.
- "Molecular Structure and Adsorption at Liquid Interfaces", 217<sup>th</sup> American Chemical Society Meeting, Anaheim, CA, March 1999.
- "Molecular Structure and Adsorption Dynamics at Liquid Surfaces and Interfaces", Canadian Society for Chemistry Conference, June 1998.
- "Studies of Molecular Adsorption at Liquid Surfaces and Interfaces by VSFS", 23<sup>rd</sup> Annual Informal Conference on Photochemistry, Pasadena, CA, May 1998.
- "Molecular Structure and Adsorption Dynamics of Phospholipids at Liquid/Liquid Interfaces", Electrochemical Society Meeting, San Diego, CA, May 1998.
- "Structure and Hydrogen Bonding of Water at Liquid Interfaces as Studied by Vibrational Sum Frequency Spectroscopy", 215<sup>th</sup> American Chemical Society Meeting, Dallas, TX, March 1998.

- "Molecular Structure and Hydrogen Bonding of Water Molecules at Liquid Surfaces and Interfaces", Pittsburgh Spectroscopy Conference, New Orleans, LA, March 1998.
- "Vibrational Spectroscopy of Liquid Surfaces and Interfaces", Federation of Analytical Chemistry and Spectroscopy Societies 24<sup>th</sup> Annual Meeting, Providence, RI, October 1997.
- "Molecular Structure and Bonding at Liquid/Liquid Interfaces", 214<sup>th</sup> American Chemical Society Meeting, Las Vegas, NV, September 1997.
- "Vibrational Spectroscopy of Molecules at Liquid Surfaces and Interfaces", 214<sup>th</sup> American Chemical Society Meeting, Las Vegas, NV, September 1997.
- "Spectroscopy of Molecules at Liquid/Liquid and Liquid/Air Interfaces", Chemistry at Interfaces Gordon Research Conference, New Hampshire, July 1996.
- "Spectroscopic Studies of Surfactants at Liquid Surfaces and Interfaces", Photons and Chemistry Symposium, Estes Park, CO, April 1996.
- "Molecular Structure and Ordering at Oil/Water Interfaces", American Physical Society Meeting, St. Louis, MO, March 1996.
- "Photocorrosion and Passivation of n-GaAs: A Comparison of the (100), (110) and (111)B Faces", E.A. Miller and G.L. Richmond, 211th National American Chemical Society Meeting, New Orleans, LA, March 1996.
- "Molecular and Ionic Interactions at Liquid/Liquid Interfaces", 211th National American Chemical Society Meeting, New Orleans, LA, March 1996.
- "Vibrational Spectroscopy of Surfactants at Oil/Water Interfaces", 210th American Chemical Society Meeting, Chicago, Ill, August 1995.
- "Molecular and Ionic Interactions at the Oil/Water Interace as Measured by Surface Second Harmonic Generation and Sum-Frequency Generation", Electrochemical Society Meeting, Reno, Nevada, May 1995.
- "Dynamics of Photoinduced Processes at the n-GaAs/Electrolyte Interface", NSF Japan US Conference of Semiconductor Surfaces, San Diego, CA, April 1995.
- "Nonlinear Optical Studies of Oil/Water Interfaces", Western Spectroscopy Association Conference, Asilomar, CA, February 1995.
- "Nonlinear Optical Studies of Liquid/Liquid Interfaces", Electrochemistry Gordon Research Conference, Ventura, CA, January 1995.
- "Sum Frequency Generation of Surfactants at Oil/Water Interfaces", SPIE Meeting, San Diego, CA, July 1995.
- "Nonlinear Optical Studies of Surfaces and Interfaces", Surface Studies by Nonlinear Optical Spectroscopies, Kassel, Germany, May 1994.
- "Second Harmonic Generation Studies of Liquid Interfaces", 27th Heyrovsky Discussions, Trest, Czech Republic, June 1994.

- "Nonlinear Optical Studies of Surfaces and Interfaces", American Vacuum Society Meeting, Seattle, WA, November 1993.
- "Electrode/Electrolyte Interactions as Probed by Nonlinear Optical Methods", 206th National American Chemical Society, Chicago, Ill, August 1993.
- "Picosecond Studies of Photoinduced Processes at N-GaAs/Electrolyte Interfaces" International Laser Science/Optical Science Association Meeting, Toronto, October 1993.
- "Surface Science Under Water: Probing the GaAs/Electrolyte Interface", Gordon Research Conference on Analytical Chemistry, August 1993.
- "Surface Science Under Water", Iota Sigma Pi Convention, Cleveland, OH, June 1993.
- "Surface Science Under Water", Department of Education Fellowship Workshop, University of Southern California, February 1993.
- "What Can SHG Tell Us About Surface Atomic and Electronic Structure of Metal Electrode Surfaces", Deutsche Bunsengesellschaft fur Physikalische Chemie, Mainz, Germany, Oct. 1992.
- "Wavelength Dependent Studies of Noble Metal Surfaces by SHG", 204th National American Chemical Society Meeting, Washington, DC, Aug. 1992.
- "Comparison of Surface Properties in Solution and in UHV by Second Harmonic Generation", 18th Annual FACSS Meeting, Anaheim, CA, October 1991.
- "What Can SHG Tell Us About Surface Atomic and Electronic Structure of Metal Surfaces", 178th National Meeting of the Electrochemical Society, Phoenix, AZ, October, 1991.
- "Lasers in Chemistry", NSTA National Meeting, Shell Lecture, Houston, TX, March 1991.
- "Surface Science Under Water", Gordon Research Conference on Electrochemistry, January 1991, Ventura, CA.
- 17th Annual FACSS Meeting, Cleveland, OH, "What Can SHG Tell Us About the Electrochemical Double Layer?", October 1990.
- "What Can SHG Tell Us About the Electrochemical Double Layer?", 17th Annual FACSS Meeting, Cleveland, OH, October 1990.
- "Linear and Nonlinear Laser Interactions and Molecular Dynamics", USSR-USA Joint Workshop on Laser Spectroscopy, Moscow - Leningrad, USSR, June 1990.
- "Nonlinear Optics as a Probe of Buried Interfaces", Gordon Research Conference on High Temperature Chemistry, August 1990.
- "Comparison of SHG from Metals in Solution and UHV", SPIE Meeting, Los Angeles, CA, January 1990.(given by R. Georgiadis)
- "Probing Interfacial Structure and Dynamics by SHG", LASST-ACSIS Workshop on Interfacial Phenomena, Campabello Island, New Brunswick, Canada, August 1989.
- "Optical Second Harmonic Generation as a Probe of Dynamics In Situ", 198th National ACS Meeting, Miami, FL, Sept. 1989.(Given by J. Robinson)

- "Second Harmonic Generation and the Solid/Liquid Interface", Frontiers of Molecular Spectroscopy and Dynamics Workshop, Princeton, NJ, June 1989
- "Second Harmonic Generation and the Single Crystal Electrode Surface", 42nd Annual Summer Symposium on Analytical Chemistry, Blacksburg, VA, July 1989.
- "Surface Second Harmonic Generation: What Have We Learned?", Columbus Spectroscopy Conference, Columbus, OH, June 1989.
- "Recent Advances in the Use of Second Harmonic Generation to Monitor Thin Film Electrodeposition", 175th National Meeting of the Electrochemical Society, Los Angeles, CA, May 1989.
- "Examining the Structure and Dynamics of Thin Film Deposition by SHG", Pittsburgh Conference, Atlanta, GA, March 1989.
- "Second Harmonic Generation as a Probe of Solid\Liquid Interfacial Processes", 197th National ACS Meeting, Dallas, Texas, April 1989.
- "Probing the Structure and Dynamics of Thin Film Growth by Nonlinear Optical Methods", 197th National ACS Meeting, Dallas, Texas, April 1989.
- "Nonlinear Optics as a Probe of the Solid/Liquid Interface", Bunsen-Kolloquim, Heidelberg, West Germany, April 1989.
- "The Structure and Dynamics of Thin Film Deposition on Crystalline Metal Electrode Surfaces by Optical Second Harmonic Generation", 1989 Materials Research Society Meeting, San Diego, CA, April 1989.
- "Nonlinear Optical Probes of Electrochemical Interfaces", International Meeting on the Chemistry and Physics of Electrified Interfaces, Bologna, Italy, August 1988.
- "Second Harmonic Generation as Probe of Interfacial Structure and Dynamics at the Solid/Liquid Interface", ILS-IV Conference, Atlanta, GA, October 1988.
- "What Can SHG Tell Us About the Structure of the Solid/Liquid Interface?" Gordon Research Conference on Vibrational Spectroscopy, Wolfeboro, NH, Aug. 1988.
- 195th National ACS Meeting/Joint 3rd North American Chemical Congress, Toronto, Canada, "Nonlinear Optics as a Probe of Interfacial Structure and Dynamics at Buried Interfaces", June 1988.
- "Measurements of the Structure and Dynamics of Film Growth on Metal Electrode Surfaces by Second Harmonic Generation", 41st Annual Summer Symposium on Analytical Chemistry, Stanford University June 1988.
- "SHG as an In-Situ Probe of Surface Structure During Thin Film Deposition", 173rd Meeting of the Electrochemical Society, Atlanta, GA, May 1988.
- "Electrochemical Studies Using Second Harmonic Generation", 14th Annual FACSS Meeting, Detroit, MI September 1987.
- "Interactions at the Solid-Liquid Interface as Measured by Second Harmonic Generation", Gordon Research Conference on The Physics and Chemistry of Liquids, Plymouth, NH, August 1987.

- "Probing the Solid-Liquid Interface with Nonlinear Optics" Gordon Research Conference on Analytical Chemistry, New Hampton School, NH, August 1987.,
- "Probing Interfacial Structure and Dynamics Using Second Harmonic Generation," 194th National ACS Meeting, New Orleans, August, 1987.
- "In-Situ Characterization of Interfacial Phenomena", Chemically Modified Surfaces Symposium, Ft. Collins, CO, June 1987.
- "In-Situ Characterization of Solid/Liquid Interfaces by Optical Second Harmonic Generation", Electrochemical Society Meeting, Philadelphia, PA May 1987.
- "Nonlinear Optical Studies of Electrochemical Interfaces", 13th Annual FACSS Meeting, St. Louis, MO September 1986.
- "Nonlinear Optics: A Probe of Interfacial Structure and Dynamics", Joint DEAP/DCP Meeting of the APS, Eugene, OR, June 1986.
- "Nonlinear Optics as Probe of Electrochemical Interfaces", National Research Council, Denver CO, October 1985.
- "Optical Studies of Electrochemical Surfaces by Second Harmonic Generation and Photoacoustic Spectroscopy", 190<sup>th</sup> National ACS Meeting, Miami, FL, May 1985.
- "Optical Studies of Electrochemical Interfaces", Materials Science Symposium, Corvallis, OR, March 1985.
- "Laser Spectroscopic Studies of Molecular Adsorption at Electrochemical Interfaces", Western Spectroscopy Conference, Asilomar CA, January 1985.

### Research Seminars and Colloquia have also been given at:

Kalamazoo College, Department of Chemistry, Kalamazoo, MI, May 2016. SUNY Buffalo, Department of Chemistry, Buffalo, NY, April 2016. Notre Dame University, Department of Chemistry, Notre Dame, IN, February 2016. Grand Valley State University, Department of Chemistry, Allendale, MI, October 2015. The Pennsylvania State University, State College, Pennsylvania, April 2015 Rice University, Department of Chemistry, Houston, TX, February 2015 University of Victoria, Department of Chemistry, Victoria, Canada, January 2015 Simon Fraser University, Department of Chemistry, Vancouver, Canada, January 2015 University of British Columbia, Department of Chemistry, Vancouver, Canada, January 2015 Dominican University, Department of Chemistry, San Rafael California, May 2014 University of California, Davis, Department of Chemistry, April 2014 South Dakota State University, Department of Chemistry and Campus-wide, Brookings, SD, April 2014. University of Pittsburgh, Department of Chemistry, Pittsburgh, PA, November 2013 Argonne Director's Special Collogium, Argonne National Laboratory, May 2013 University of Kansas, Department of Chemistry, Lawrence, KS, March 2013 Montana State University, Department of Chemistry, Bozeman, MT, March 2013 Arizona State University, Department of Chemistry, Tempe, AZ, February 2013 (2 lectures)

Ewha University, Department of Chemistry, Seoul, Korea, April 2012 Ohio State University, Department of Chemistry, Columbus, OH, April 2012 University of Arizona, Department of Chemistry, Tucson AZ, February 2012 University of Nebraska, Department of Chemistry, Lincoln, NE, January 2012 (3 lectures) University of Pennsylvania, Department of Chemistry, Philadelphia, PA, November 2011 (3 lectures) Purdue University, Department of Chemistry, West Lafayette, IN, April 2011 University of California, San Diego, Department of Chemistry, San Diego, CA, April 2011 Skidmore College, Department of Chemistry, Saratoga Springs, NY, March 2011 Grinnell College, Department of Chemistry, Grinnell IA, September 2010 (2 lectures) Carleton College, Department of Chemistry, Northfield, MN, April 2010 Iowa State University, Department of Chemistry, Ames, IA, April 2010 (2 lectures) University of Alberta, Department of Chemistry, Alberta, Canada, March 2010 (3 lectures) Hope College, Department of Chemistry, Holland, MI, January 2010 University of Kansas, Department of Chemistry, Lawrence, KS, November 2009 University of Indiana, Department of Chemistry, Bloomington, IN, September 2009. The Pennsylvania State University, Department of Chemistry, State College, PA, April 2009 West Virginia University, Department of Chemistry, March 2009 Virginia Tech, Department of Chemistry, Blacksburg, VA, February 2009 California Institute of Technology, Department of Chemistry, Pasadena, CA, February 2009 Northwestern University, Department of Chemistry, Evanston, IL, September 2008 Pacific University, Department of Chemistry, Forest Grove, OR, October 2008 California State University, Los Angeles, Dept. of Chemistry, LA, CA, October 2008 California State University, San Luis Obispo, Dept. of Chemistry, San Luis Obispo, CA, October 2008 University of California, Berkeley, Department of Chemistry, Berkeley, CA, March 2008. Rohm and Haas Company, Spring House, PA, March 2008 Lewis and Clark College, Department of Chemistry, Portland, OR, March 2008 College of St. Catherine, Department of Chemistry, St. Paul, MN, March 2008 Washington State University, Departments of Chemistry & Physics, Pullman, WA, January 2008 University of Denver, Department of Chemistry, Denver, CO, October 2007 University of Northern Iowa, Department of Chemistry, Cedar Falls, IA, October 2007 University of Delaware, Department of Chemistry, Newark, DE, September 2007 Texas A&M University, Department of Chemistry, Kingsville, Texas, April 2007 University of Illinois, Chicago, Chicago, IL, March 2007 Stanford University, Department of Chemistry, Palo Alto, CA, February 2007 George Fox University, Department of Chemistry, December 2006 Linfield College, Department of Chemistry, McMinnville, OR, November 2006 University of Colorado, Department of Chemistry, Boulder, CO, November 2006 Seattle University, Department of Chemistry, Seattle, WA, November 2006 Whitman College, Department of Physics, Walla Walla, Washington, March 2006 Cornell College, Department of Chemistry, Mt. Vernon, Iowa, February 2006

Georgia Institute of Technology, Department of Chemistry, Atlanta, GA, October 2005 L'Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Chemical Sciences and Engineering, Switzerland, April 2005 University of Berne, Department of Chemistry and Biochemistry, Berne, Switzerland, April 2005 University of Neuchâtel, Institute of Chemistry, Neuchâtel, Switzerland, April 2005 University of Geneva, Department of Chemical Physics, Geneva, Switzerland, April 2005 University of Wisconsin, Department of Chemistry, November 2004 Harvard University, (Joint Harvard-MIT colloquium), Department of Chemistry, Cambridge, MA, March 2004 Columbia University, Department of Chemistry, Cambridge, MA, March 2004 Western Washington University, Department of Chemistry, Bellingham, WA, January 2004 University of Illinois, Department of Chemistry, Urbana, IL, May 2003 Joint Institute for Laboratory Astrophysics (JILA), University of Colorado, Boulder, CO, May 2003 University of Minnesota, Department of Chemistry, April 2003 North Carolina State University, Department of Chemistry, Asheville, NC, November, 2002 Oregon State University, Department of Chemistry, Corvallis, OR, November 2002 University of Pennsylvania, Department of Chemistry, Philadelphia, PA, April 2002 Marquette University, Department of Chemistry, Milwaukee, WI, February 2002 Yale University, Department of Chemistry, New Haven, Conn., January 2002 University of Chicago, Department of Chemistry, Chicago, IL, January 2002 Director's Lectureship, Pacific Northwest National Laboratory, January 2002 University of Washington, Department of Chemistry, Seattle, May 2001 Stanford University, Department of Chemistry, April 2001 University of British Columbia, Department of Chemistry, Vancouver, BC, March 2001 Naval Research Laboratory Colloquium Series, Arlington, VA, February 2001 Carleton College, Department of Chemistry, November 2000 University of Maryland, Chemical Physics Program, College Park, MD, October 2000 University of Idaho, Department of Chemistry, September 2000 Cornell University, Department of Chemistry, Ithaca, NY, April 2000 Univ. of Wisc., Oshkosh, Department of Chemistry, WI, April 2000 Texas A&M Univ., Department of Chemistry, College Station, TX, Feb. 2000 University of Pittsburgh, Department of Chemistry, Pittsburgh, PA, February 2000 Duquesne University, Department of Chemistry, Pittsburgh, PA, February 2000. Portland State University, Department of Chemistry, Portland, OR, January 2000 California State San Luis Obispo, Department of Chemistry, December 1999 McGill University, Department of Chemistry, Montreal, Canada, November 1999 Pennsylvania State University, Department of Chemistry, State College, PA, April 1999 Cal State University, Department of Chemistry, Fresno, March 1999 Central Washington University, Department of Chemistry, Ellensburg, WA, February 1999 University of Delaware, Department of Chemistry, Newark, DE, February 1999

Gonzaga College, Spokane, Department of Chemistry, WA, February 1999 Western Washington University, Department of Chemistry, Bellevue, WA, October 1998. Willamette University, Department of Chemistry, Salem, OR, November 1998. Western Washington University, Department of Chemistry, Bellevue, WA, October 1998. Los Alamos National Laboratory, Los Alamos, NM, May 1998. Univ. of California, Irvine, Department of Chemistry, April 1998. University of Indiana, Department of Chemistry, Bloomington, IN, March 1998. University of Tennessee, Department of Chemistry, Knoxville, TN, February 1998. University of Utah, Department of Chemistry, Salt Lake City, UT, February 1998. Mount Holyoke College, Department of Chemistry, November 1997. Naval Research Laboratory, Washington, DC, April 1997 National Institute of Standards and Technology, Gaithersburg, MD, April 1997. Furman University, Department of Chemistry, Greenville, SC, April 1997. Pomona College, Department of Chemistry, Claremont, CA, March 1997. Kansas State University, Department of Chemistry, Manhattan, KS, February 1997. Carroll College, Department of Chemistry, WI, February, 1997. University of Minnesota, Department of Chemistry, Minneapolis, MN, December 1996. University of North Dakota, Department of Chemistry, Fargo, ND, December 1996. University of Missouri, Department of Chemistry, Columbia, MO, November 1996. Reed College, Department of Chemistry, Portland, OR, November 1996. SUNY Buffalo, Graduate Symposium, Buffalo, NY, May 1996. Olin Chemical, Cheshire, Conn., May 1996. University of California, Department of Chemistry, Los Angeles, CA, April 1996. Princeton University, Department of Chemistry, Princeton, NJ, April 1996. Michigan State University, Department of Chemistry, February 1996. University of Michigan, Department of Chemistry, Ann Arbor, MI, February 1996. University of California, Berkeley, Department of Chemistry, Berkeley, CA, October 1995. University of Colorado, Department of Chemistry, Boulder, CO, November 1995. Haverford College, Department of Chemistry, Haverford, PA, February 1995. University of California, Department of Chemistry, Santa Cruz, CA, June 1995. Purdue University, Department of Chemistry, West Lafayette, IN, March 1995. Lewis and Clark College, Department of Chemistry, Portland, OR, April 1994. University of British Columbia, Department of Chemistry, Vancouver, BC, November 1994. University of Arizona, Department of Chemistry, Tucson, AZ, June 1994. California Institute of Technology, Department of Chemistry, Pasadena, CA, November 1993. Washington State University, Department of Physics, Pullman, WA, February 1993. Pomona College, Department of Chemistry, Pomona, CA, February 1991. University of Arizona, Department of Chemistry, Tucson, AZ, April 1991. University of Utah, Department of Chemistry, Salt Lake City, UT, April 1991. University of Toronto, Department of Physics, Toronto, Canada, April 1991.

Oberlin College, Department of Chemistry, Oberlin, OH, April 1991. IBM Almaden Research Laboratories, San Jose, CA, May 1991. Oakridge National Laboratory, Division of Analytical Chemistry, Oak Ridge, TN, October 1990. University of Chicago, Department of Chemistry, Chicago, IL, November 1990. Oregon Graduate Institute, Department of Chemistry, Portland, OR, October 1990. Iowa State University, Department of Chemistry, Ames, IA, February 1990. Cornell University, Department of Chemistry, Ithaca, NY, March 1990. University of Wisconsin, Department of Chemistry, Madison, WI, April 1990. University of Heidelberg, Department of Chemistry, Heidelberg, GDR, April 1989 Fritz-Haber Institute, Physical Chemistry Division, Berlin GDR, April 1989. University of Pittsburgh, Department of Chemistry, Pittsburgh, PA, February 1989. University of Akron, Department of Chemistry, Akron, OH, February 1989. University of California, Department of Chemistry, Berkeley, CA, April 1988. University of Texas, Department of Chemistry, Austin, TX, March 1988. AT & T Bell Laboratories, Murray Hill, NJ, April 1988. Exxon Laboratories, Clinton, NJ, April 1988. University of Rochester, Department of Chemistry, Rochester, NY, October 1988. Fort Lewis College, Department of Chemistry, Durango, CO, November 1988. Reed College, Department of Chemistry, Portland, OR, November 1988. Polaroid Corporation, Boston, MA, November 1988. University of California, Department of Chemistry, Davis, CA, November 1988. University of California, Department of Chemistry, Irvine, CA, 1988. Oregon State University, Department of Chemistry, Corvallis, OR, 1988. DuPont de Nemours, Central Research Laboratories, Wilmington, DE, 1988. University of Cincinnati, Department of Chemistry, Cincinnati, OH, October 1987 National Bureau of Standards, Chemistry Division, Gaithersburg, MD, October 1987. Harvard University, Department of Chemistry, Cambridge, MA, November 1987. University of California, Department of Chemistry, Riverside, CA, June 1987. Brigham Young University, Department of Chemistry, Provo, UT, February 1987. IBM Almaden Research Laboratories, San Jose, CA, March 1987. Stanford Research Institute, Department of Chemistry, Palo Alto, CA, March 1987. Standard Oil Research Laboratories, Cleveland, OH, April 1987. University of Virginia, Department of Chemistry, Richmond, VA, April 1987. Portland State University, Department of Chemistry, Portland, OR, May 1987. Dow Chemical Company, Midland, MI, October 1986. University of Illinois, Department of Chemistry, Urbana, November IL, 1986 University of Washington, Department of Chemistry, Seattle, WA, December 1986. Polaroid Corporation, Cambridge, MA, March 1986. University of Nevada, Department of Chemistry, Reno, NV, March 1986. University of California, Department of Chemistry, Santa Cruz, CA, May 1986.

Oregon State University, Department of Chemistry, Corvallis, OR, March 1986. E. I. DuPont de Nemours, Central Research, Wilmington, DE, December 1985. Duke University, Department of Chemistry, Raleigh, NC, October 1985. Argonne National Laboratories, Chemistry Division, Argonne, IL, December 1985. Allied Corporation, Murray Hill NJ, April 1985. Kansas State University, Department of Chemistry, Manhattan, KS, December 1985. A T & T Bell Laboratories, Murray Hill, NJ, February 1985. University of California, Department of Chemistry, Los Angeles, February 1985. Texas A & M University, Department of Chemistry, College Station, TX, March 1985. University of Pennsylvania, Department of Chemistry, Philadelphia, PA, November 1985. University of Oregon, Department of Chemistry, Eugene, OR, January 1985. Naval Research Laboratory, Arlington, VA, July 1984. Exxon Research Center, Clinton, NJ, June 1984. The Pennsylvania State University, Department of Chemistry, November 1984. Purdue University, Department of Chemistry, November 1984. University of California, Los Angeles, December 1984. Temple University, Department of Chemistry, April 1983. University of Delaware, Department of Chemistry, Wilmington, DE, March 1983

#### TALKS ON EDUCATION AND SCIENTIFIC WORKFORCE RELATED TOPICS

- Presentations for USAID-PEER Research Conference, Amman, Jordan, March 2016: "International Science Collaborations: Ingredients for Success" "The Art of Effective Negotiation"
- "Effective Negotiation Techniques for Graduate Students", Notre Dame University, Notre Dame, Indiana, February 2016.
- "Why I Love Being a Scientist", Cambodian Science and Engineering Festival, Phnom Penh, Cambodia, March 2016.
- "Global Scientific Engagement", Presidential Plenary Address, AAAS Annual Meeting, Washington, DC. February 2016.

### *Presentations for* Women in Tech Workshop for Scientists in the Lower Mekong Countries, Intel Vietnam Plant, Ho Chi Minh City, Vietnam, January 2016. Presentations:

"The Importance of Women as Leaders in Science and Technology"

"Career Launch - Elements of a Successful Job Search"

"Introduction to Mentoring for Success: Best Practices"

# *Presentations for* Elsevier Early Scholars Workshop for Tunisian Women Scientists, Tunis, Tunisia, November 2015: (with Prof. Nora Berrah, U. of Connecticut)

"Career Launch and Acceleration"

"Effective Leadership and Networking Skills for Women Scientists and Engineers"

"Persuasive Scientific Presentations"

"Publishing your Research"

"Key Elements of Effective Negotiation"

"Mentoring for Success"

"Selling your Science: The Art of Effective Proposal Writing"

"The Unexpected Challenges, Opportunities and Rewards of a Career in Science", American Center, Ho Chi Minh City, Vietnam, December 2015.

"Persuasive Conversations and Scientific Presentations", Danang University of Technology, Danang, Vietnam, December 2015.

"The Unexpected Challenges, Opportunities and Rewards of a Career in Science", University of Education, Danang, Vietnam, December 2015.

"Science as a Career", Hue Learning Resource Center, Hue City, Vietnam, December 2015.

"Importance of Women as Leaders in the Science and Engineering Enterprise", Gender Equity Conference, University of Limerick, Limerick, Ireland, November 2015.

*Presentations for* COACh - The Research Council of Oman Workshops for Faculty and Students: Muscat, Sohar, Salalah and Nizwa Oman, October 4-14, 2015. (With Prof. Laura Greene, National Magnet Lab, Prof. Jean Stockard, Univ. of Oregon, Prof. Diane Souvaine, Tufts University and Prof. Hilary Godwin, UCLA)

"Selling your Science: The Art of Effective Proposal Writing"

"Publishing in Peer Reviewed Journals"

*Presentations for* Career Building Workshops for Women Scientists and Engineers: Pune, India (Sept. 1-3, 2015) and Guwhati, India (5-7, September 2015). (With Prof. Laura Greene, National Magnet Lab, and Prof. Pushpa Murthy, Michigan Tech)

"Career Launch and Acceleration"

"Leadership and Networking Skills"

"The Art of Effective Communication"

"Persuasive Scientific Presentations"

"Publishing your Research"

"Key Elements of Effective Negotiation"

"Mentoring for Success"

"Selling your Science: The Art of Effective Proposal Writing"

"Women Leading in Research and Innovation", Gender Summit 6 Keynote Address, Seoul, Korea, August 2015. <u>https://www.youtube.com/watch?v=yU-HypaXsWI</u>

- "Career Launch and Acceleration for Postdoctoral Associates", 250<sup>th</sup> National ACS Meeting, Boston, MA, August 2015.
- "Effective Negotiation in the Scientific Workplace", USAID-NSF PEER Forum, Lima, Peru, March 2015.
- "Exploring the Unknown with the REU Program at the University of Oregon," 249<sup>th</sup> National ACS Meeting, Denver, CO, March 2015.
- "Life as a Scientist", Faculty of Engineering, National University of Laos", Vientiane Laos, March 2015.
- "The Exciting World of Science", University of South-East Asia, American Corner, Siem Reap, Cambodia, March 2015.
- "Life as a Scientist", Institute of Technology, Phnom Penh, Cambodia, March 2015.
- "Working to Advance the Science Enterprise through Partnerships between U.S. and Vietnam Scientists", Hue City, Vietnam, January 2015.
- "Persuasive Communication Techniques and Scientific Presentations", for Vietnamese high school and university science students, American Center, U.S. Consulate General, Ho Chi Minh City, January 2015.
- "Launching a Successful Career in Science", Hanoi University of Science and Technology, Hanoi, Vietnam, January 2015.
- "Strengthening Bonds Between U.S. Scientists and those in Developing Countries", Can Tho University, Can Tho, Vietnam, January 2015.
- "Launching a Successful Career in Science", Excellence Center, Danang University of Technology, Danang, Vietnam, January 2015.
- "Pursuing S&T Careers to Help Address Pressing Social and Environmental Issues", Microsoft Imagine Cup Mentoring Event, Bangkok, Thailand, January 2015.
- "Life as a Scientist", Chiang Mai University Satit Demonstration School, "Science Classroom Program, Chiang Mai, Thailand, January 2015.
- "Science and Technology Developments Geared Toward Saving the Environment", presentation for students at the American Corner, Mahasarakham, Thailand, January 2015
- "The Art of Effective Negotiation", Arab-U.S. Frontiers of Science Meeting, Muscat, Oman, December 2014.

### *Presentations for* Career Building Workshops for Women Scientists and Engineers: Delhi, India (Sept. 1-5, 2014) and Bangalore India (Sept. 6-11, 2014).

"Career Launch and Acceleration"

- "Leadership and Networking Skills"
- "The Art of Effective Communication"
- "Persuasive Scientific Presentations"

"Publishing your Research"

"Key Elements of Effective Negotiation"

"Mentoring for Success"

"Selling your Science: The Art of Effective Proposal Writing"

- "Career Launch and Acceleration for Postdoctoral Associates", 248<sup>th</sup> National ACS Meeting, San Francisco, CA, August 2014.
- "The Art of Effective Negotiation", PEER Participants' Conference 2014, Nelson Mandela African Institute of Science and Technology, Arusha, Tanzania, August 2014.
- "Selling Your Science: The Art of Effective Proposal Writing" and "Publishing Research Results in Peer Reviewed Journals", 4<sup>th</sup> Indonesian-American Kavli Frontiers of Science Symposium, Medan, Indonesia, June 2014.
- "Quilting Together the Stories of Women Scientists in the Developing World." South Dakota State University, Brookings, SD, April 2014.
- "Selling Your Science: The Art of Effective Proposal Writing" and "Career Launch and Acceleration", Ecole Normale Superieure, Marakech, Morocco, April 2014.
- Effective Leadership Skills for Women" and "Selling Your Science: The Art of Effective Proposal Writing", Faculte des Sciences, Rabat, Morocco April 2014.
- "Selling Your Science: The Art of Effective Proposal Writing" and "Publishing Research Results in Peer Reviewed Journals", Faculte des Sciences Ben M'Sik, Casablanca, Morocco, April 2014.
- "Women as Leaders in the Scientific Enterprise", 247th ACS National Meeting, Dallas, Texas, March 2014.
- "COACh: Going Global to Help Scientists in the Developing World", 247th ACS National Meeting Dallas, Texas, March 2014.
- "Quilting Together the Stories of Women Scientists in the Developing World." USAID, Washington DC, February 2014.

"Leadership Workshop for Women Scientists in India", IIT Delhi, Delhi, India, January 2014.

*Presentations for* Career Building Workshops for Women Scientists and Engineers, Thailand Science Park, Pathum, Thailand, January 2014: (with Profs. S. Seraphin (Arizona) and L. Greene (Illinois))

"Effective Leadership Skills for Women Scientists"

"The Art of Effective Negotiation"

"Selling Your Science: The Art of Effective Proposal Writing"

"Publishing Research Results in Peer Reviewed Journals"

"The Power of Persuasion"

Career Building Workshops for African Graduate Students given at the 7<sup>th</sup> International Africa

Materials Research Society Meeting, Addis Ababa, Ethiopia: (with Prof. Clare Muhoro, Towson), August 2013.

- "Career Launch: Making the Most of Your Talents"
- "Writing Successful Technical Proposals: Understanding the Process"
- "Publishing Your Research in Peer-Reviewed Journals: The Basics of Writing a Good Manuscript"
- "Leadership Skills for Women Scientists", Hydrologic Events & Hazards Conference, Buenos Aires, Argentina, November 2013.
- "The Art of Strategic Negotiation", International Society of Environmental Mutagens, Iguassu Brazil, November 2013.
- "COACh as a Model for Effective Mentoring Practices", USAID-NSF PEER Science Participants' Conference, Bangkok, Thailand, October 2013.
- "Negotiation 101 for Graduate Students in Science", Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, November 2013.
- "Selling Your Science: The Art of Effective Proposal Writing", USAID-NSF PEER Science Participants' Conference, Bangkok, Thailand, October 2013.
- "Powerful Postdocs: Landing that First Academic Job", 245<sup>th</sup> National ACS Meeting, Indianapolis, IN, Sept. 2013.
- "Powerful Postdocs: The Nuts and Bolts of Effective Negotiation", 245<sup>th</sup> National ACS Meeting, Indianapolis, IN, Sept. 2013.

#### *Presentations for* Career Building Workshops given at the Indonesia-American Kavli Frontiers of Science Symposium, Bali, Indonesia, June 2013: (with Prof. Laura Greene, Univ. of Illinois)

"Career Launch: Making the Most of Your Talents"

- "Writing Successful Technical Proposals: Understanding the Process"
- "Publishing Your Research in Peer-Reviewed Journals: The Basics of Writing a Good Manuscript"

## *Presentations for* Career Building Workshops given at Kenyatta University, Nairobi, Kenya, June 2013: (with Prof. Clare Murhoro, Towson University)

"Publishing in Peer Reviewed Journals"

"Career Launch and Acceleration"

"The Art of Effective Negotiation"

"Selling Your Science: The Art of Effective Proposal Writing"

"Persuasive Scientific Presentations"

"Empowering Women and Men to be Effective Leaders in Science and Technology"

"Empowering Women to be Leaders in Higher Education", University of Tokyo, June 2013.

"The Nuts and Bolts of Effective Negotiation", Argonne National Laboratory, Argonne, IL, May 2013.

"Quilting Together the Voices of Women Scientists in the Developing World", Parsons Award

Address, American Chemical Society Meeting, New Orleans, LA, April 2013.

"Effective Leadership Skills for Women Scientists and Engineers", Ecole Superieure Privee d"Ingeniereie et de Technologies (ESPRIT), Tunis, Tunisia, March 2013. (with Prof. Nora Berrah, Western Michigan University)

Presentations for Career Building Workshops for Faculty and Students given at the University of Tunis and the Optical Society of Tunisia, March 2013. (with Prof. Nora Berrah, W. Michigan Univ.)

"Publishing Research Results in Peer Reviewed Journals"

"Career Launch and Acceleration"

"Art of Effective Proposal Writing"

"Effective Leadership Skills for Women Scientists and Engineers

"Persuasive Scientific Presentations"

- "Career Launch and Acceleration for Early Career Scientists and Engineers", COACh-Universite Hassan II Mohammedia Partnership Workshop, Casablanca, Morocco, March 2013. (with Prof. Nadia Saoula)
- "The Art of Effective Negotiation and Communication", COACh-Universite Hassan II Mohammedia Partnership Workshop, Casablanca, Morocco, March 2013. (with Prof. Nora Berrah)
- "Network Building for Scientific Advancement in the Sciences and Engineering: What we have Learned from COACh", Research Partnership Workshop on Water, Energy and the Environment for Women Scientists from the U.S., Algeria and Tunisia", Casablanca, Morocco, March 2013.
- ""COACh: Working to Increase the Number and Success of Women Scientists and Engineers Around the Globe", Centre National pour la Recherche Scientifique et Technique (CNRST), Rabat, Morocco, March 2013.
- "Selling Your Science: The Art of Effective Proposal Writing", Kenyatta University, Nairobi, Kenya, January 2013. (with Prof. Clare Muhoro)
- "COACh: Working to Increase the Number and Success of Women Scientists and Engineers Around the Globe", Women in Science Group, University of Nairobi, Nairobi, Kenya, January 2013.
- "International COACh Programs for Research Collaborations, Education and Capacity Building in STEM Fields", Jomo Kenyatta University and Kenyatta University, Nairobi, Kenya, January 2013.
- "Building Research Collaborations between Women Scientists in the U.S. and in Africa through COACh Programs", Materials Research Society Meeting, Boston, MA, November 2012.
- "Negotiation 101: For Graduate Students and Postdoctoral Associates in Biomedical Engineering Fields", Biomedical Engineering Society Annual Meeting, Atlanta, October 2012.
- "Launching Your Career: Tips and Tactics for Success", ICRAF World Agroforestry Centre, Yaounde, Cameroon, October 2013.

- "Giving Persuasive Scientific Presentations", ICRAF World Agroforestry Centre, Yaounde, Cameroon, October 2013.
- "COACh: Developing Partnerships for Water Research between Women Scientists and Engineers in the U.S. and Africa", South Africa – United States Science and Technology Exchange Meeting, Cape Town, South Africa, September 2012.
- "Effective Communication: The Art of Getting Your Message Across", 243rd National ACS Meeting, Philadelphia, PA, August 2012.
- "Launching your Career: Tips and Tactics for Success for Postdocs", 243<sup>rd</sup> National ACS Meeting, Philadelphia, PA, August 2012.
- "Effective Negotiation and Communication Skills for Women", CeCAGe (Centro de Coordenacao dos Assuntos do Genero), Universidade Eduardo Mondlane, Maputo, Mozambique, July 2012.
- "Women as Leaders in Science, Business and Communities", CeCAGe (Centro de Coordenacao dos Assuntos do Genero), Universidade Eduardo Mondlane, Maputo, Mozambique, July 2012.
- "COACh: Empowering Women to be Leaders in Research Fields and Higher Education", Association of Pacific Rim University, Session on Developing Women Leaders in Higher Education in Pacific Rim Universities, Eugene, OR, July 2012.
- "Developing Bonds between Women Scientists in the U.S. and Korea", Korean Chemical Society Meeting, Seoul, Korea, April 2012
- "Women in Science Panel", The National Council for Scientific and Technological Development (CNPq), Science Center, Brasilia, Brazil, March 2012.
- "The Nuts and Bolts of Effective Negotiation", 242nd National American Chemical Society Meeting, San Diego, March 2012.
- "Effective Communication: The Art of Getting Your Message Across", 242nd National American Chemical Society Meeting, San Diego, March 2012.
- "Networking for Women Scientists: Successes of the COACh Program", Brazil-U.S. Joint Commission Meeting on Science and Technology, Brasilia, Brazil, March 2012.
- "Gender Equity Data from Department Chairs of Top Research Universities", ADVANCE Program, University of Nebraska, Lincoln, NE, January 2012.
- "Don't Ask, Don't Get: Negotiation Skills for Career Advancement", ADVANCE Program, University of Nebraska, Lincoln, NE, January 2012.
- "Career Building: Making the Most of your Talents", Women Graduate Students in Chemistry, University of Pennsylvania, Philadelphia, November 2011.
- "Removing Gender Hurdles that Hinder the Pace and Success of Women Faculty in Higher Education", Penn Forum for Women Faculty, University of Pennsylvania, Philadelphia, November 2011.
- "Women as Leaders in the Scientific Enterprise", 42<sup>nd</sup> Annual Meeting of the Environmental Mutagen Society, Montreal, Canada, October 2011.
- "Don't Ask Don't Get: Women and Negotiation", Women Scientists Group, Faculty of Sciences, University of Yaounde, Yaounde, Cameroon, October 2011.

- "Women as Leaders in the Science", Women Scientists Group, Faculty of Sciences, University of Yaounde, Yaounde, Cameroon, October 2011.
- "COACh: Advancing the Careers of Women in Technical Fields", South Africa Council for Scientific and Industrial Research /U.S. Dept of State & Joint Services S&T Workshop, Pretoria, South Africa, September 2011.
- "Women in Science: Breaking Through the Plexiglass Ceiling", Osher Living and Learning Institute, Eugene, OR, May 2011.
- "Effective Communication and Powerful Scientific Presentations", Women Graduate Students, Purdue University, Department of Chemistry, West Lafayette, IN, April 2011.
- "Persuasive Conversations and Presentations", Conference for Women Undergraduates in Physics in the Northwest, Portland, OR, April 2011.
- "Women as Leaders in the Scientific Enterprise", Campbell Lectureship, University of Southampton, Southampton, UK, March 2011.
- "Making the Most of the Moment: The Art of Getting Your Message Across", 241<sup>st</sup> ACS National Meeting, Anaheim, CA, March 2011.
- "Potholes and Speed Bumps on the Road to Diversity in STEM Fields: COACh Efforts to Smooth the Ride", ADVANCE Distinguished Lectureship, Skidmore/Union Colleges, Saratoga Springs, NY, March 2011.
- "Making the Most of the Moment: The Art of Getting Your Message Across", ADVANCE Distinguished Lectureship, Skidmore/Union Colleges, Saratoga Springs, NY, March 2011.
- "Potholes and Speed Bumps on the Road to Diversity in STEM Fields: COACh Efforts to Smooth the Ride", Women in Science and Technology Distinguished Lectureship, Georgia Institute of Technology, February 2011.
- "Negotiation 101: What They Left Out of the Lab Manual", Women Graduate Student Organization, Georgia Institute of Technology, February 2011.
- "The Nuts and Bolts of Effective Negotiation", Graduate Women in Science, Washington State University, Pullman, WA, January 2011.
- "Effective Communication: The Art of Getting Your Message Across", Graduate Women in Science, Washington State University, Pullman, WA, January 2011.
- "Launching Your Career: Tips and Tactics", Graduate Women in Science, Washington State University, Pullman, WA, January 2011.
- "Career Advancement Tips & Techniques: What They Left out of the Lab Manual", St. Louis Section of the ACS, Women Chemists Dinner, St. Louis, MO, November 2010.
- "Don't Ask Don't Get: Women and Negotiation", Southern Illinois University, Edwardsville, IL, November 2010.
- "Diversity in Science and Engineering: Why is it so Important? Why is it so Difficult to Achieve?", Southern Illinois University, Edwardsville, IL, November 2010.
- "Battling Biases and Barriers: Necessary Steps our Academic Institutions Must Take to Assure a Strong Science and Engineering Workforce", Southern Illinois University, Edwardsville,

IL, November 2010.

- "Assembling a Successful Scientific Career with a Full Tool-Box", Best Practices Conference on Teaching and Learning, San Juan, Puerto Rico, October 2010.
- "Empowering Women to be Leaders in Science and Engineering in the U.S.", International Symposium for Gender Equal Participation and Female Researchers' Empowerment, Tokyo City University, Tokyo, Japan, October 2010.
- "Potholes and Speedbumps on the Road to Diversity: COACh Efforts to Smooth the Ride", Heritage and Hope Conference on Women's Education in a Global Context, Bryn Mawr College, September 2010.
- "Professional Skills Training for Graduate Students: What They Left Out of the Lab Manual", Department of Chemistry, Iowa State University, April 2010.
- "Women: We've Come A Long Way Maybe?" Eugene City Club, Eugene, OR, February 2010.
- "Diversity in Science and Engineering: Why is it so important? What can we do about it?" Department of Chemistry, Hope College, January 2010.
- "Potholes and Speed Bumps on the Road to Diversity: COACh Efforts to Smooth the Ride", National Science Foundation, Mathematical and Physical Science Division, Distinguished Lecture Series, Arlington, VA, January 2010.
- "Science Savvy Women: Breaking through the Plexiglass Ceiling", Science Savvy Month of Events, UO Portland, Portland, OR, October 2009.
- "Diversity in Science and Engineering: Why is it so important? Why is it so difficult to achieve?", Department of Chemistry, University of Indiana, Bloomington, IN, September 2009.
- "COACh Strategies for Increasing Minority Players on the Chemistry Professional Roster", 235<sup>th</sup> National American Chemical Society Meeting, Washington, DC, August 2009.
- "Battling Bias and Barriers: Necessary Steps our Academic Institutions Must Take to Assure a Strong Science and Engineering Workshops", Eberly College of Arts and Sciences Distinguished Lecturer, West Virginia University, March 2009.
- "Don't Ask, Don't Get", Women in Technology, Invitrogen, Eugene, OR, April 2009.
- "Quilting Together a Professional Career in Science", AWIS Chapter, Virginia Tech, Blacksburg, VA, March 2009.
- "Powering Up: Women as Leaders in the Scientific Enterprise, ADVANCE Virginia Tech Distinguished Lecture, Virginia Tech, Blacksburg, VA, March 2009.
- "COAChing for Better Science Workshops for Graduate Students, Faculty and Administrators", ADVANCE Program, University of North Carolina at Charlotte, February 2009.
- "When Scientific Brilliance Isn't Enough", Carroll King Memorial Lecture, Northwestern University, September 2008.
- "COAChing STEM Women Graduate Students in Effective Negotiation and Communication Techniques", Washington State University, October 2008.

- "Professional Skills Development for STEM Faculty", Clare Booth Luce Professors and Postdoctoral Associates Meeting, Washington, DC, August 2008.
- "Professional Skills for Pursuing a Career in Academia", Clare Booth Luce Graduate Fellows Meeting, Washington, DC, August 2008.
- "Gender Equity Workshops for Chairs of the Top Physics and Chemistry Departments in the U.S.: What's the Impact?" Society for Industrial and Applied Mathematics Annual Meeting, San Diego CA, July 2008.
- "Beyond Bias and Barriers: Necessary Steps Federal Agencies Must Take to Assure a Strong Science and Engineering Workforce", 2008 Federal Interagency Title IX Symposium: Gender Equity in Science, Technology, Engineering and Mathematics, Washington, DC, July 2008.
- "COAChing for Better Science: Lessons Learned from our Toils in the Trenches", NSF Annual ADVANCE Meeting, Alexandria, VA, May 2008.
- "Quilting Together a Professional Life in Science", Girl Scouts Western Rivers Council Annual Meeting, Springfield, OR, April 2008.
- "The Common Thread between Scientists and Quilters", Eugene Rotary Club, Eugene, OR, April 2008.
- "What they Left Out of the Lab Manual: Professional Skills Training for Graduate Students, Postdocs - and Maybe Even a Few Faculty", 233<sup>nd</sup> National American Chemical Society Meeting, Boston, MA, New Orleans, LA, April 2008.
- "Winning ACS Awards: The Good, the Bad and the Unknown", 233<sup>nd</sup> National American Chemical Society Meeting, Boston, MA, April 2008.
- "Quilting Together a Professional Life in Science", Sr. Mary Thompson Scholar Lectureship, College of St. Catherine, St. Paul, MN, March 2008.
- "Don't Ask Don't Get: Effective Communication and Negotiation Tactics for Career Advancement", Rohm and Haas Company, Spring Hill, PA, March 2008.
- "Negotiating for What You Need for a Successful Scientific Career", Women in Science Luncheon, Washington State University, Pullman, WA, January 2008.
- "Beyond Bias and Barriers: Necessary Steps Academic Institutions Must Take To Assure and Strong Science and Engineering Workforce," Washington State University, Pullman, WA, January 2008.
- "Women as Leaders in the Scientific Enterprise", Assembly Meeting VI of the Association of Women Investigators and Technologists, Madrid, Spain, November 2007.
- "The Magic and Mysteries of Water", Leland Wilson Lectureship, University of Northern Iowa, Cedar Falls, IA, October 2007.
- "Quilting Together a Professional Life in Science", Women in Technology and Science Luncheon, University of Oregon, Eugene, October 2007.
- "Beyond Bias and Barriers: Necessary Steps Academic Institutions Must Take To Assure and Strong Science and Engineering Workforce, WISE Program, University of Delaware, Newark, DE, September 2007.

- "Powering Up: Women as Leaders in the Scientific Enterprise", Conference on Women in Science: The Way Forward, Heidelberg, Germany, May 2007.
- "Beyond Bias and Barriers: Necessary Steps Academic Institutions Must Take To Assure and Strong Science and Engineering Workforce", WISE Seminar Program, University of Southern California, March 2007.
- "Beyond Bias and Barriers: Necessary Steps Academic Institutions Must Take To Assure and Strong Science and Engineering Workforce", Leadership Seminar Series, University of Illinois, Chicago, March 2007.
- "Be Smart: Negotiating for What You Need to Achieve Your Personal and Professional Goals", Graduate Student Mentoring Seminar, Stanford University, Palo Alto, CA, February 2007.
- "Beyond Bias and Barriers: Necessary Steps Academic Institutions Must Take To Assure and Strong Science and Engineering Workforce", University of Southern California, Los Angeles, CA, February 2007.
- "Coaching Women to Succeed in Academic Science", University of Colorado, Boulder, CO, November 2006.
- "Women in Science and Engineering in Higher Education", 199<sup>th</sup> Annual National Association of State Universities and Land Grant Colleges (NASULGC), Houston, Texas, November 2006.
- "COACh: Leveling the Field for Women in Science", XXVII Latin American Chemistry Congress and the VI International Congress on Chemistry and Chemical Engineering, Havana, Cuba, October 2006.
- "Negotiating for What You Need to Achieve Your Personal and Professional Goals", Department of Chemistry, University of Virginia, September 2006.
- "Women in Academic Science and Engineering: Challenges and Opportunities", Science and Society, Joint Workshop Between U.S. and Iranian Scientists, Triellis, France, June 2006.
- "COAChing Women to be Successful in the Sciences", Council on Chemical Research, Tucson, AZ, May 2006.
- "COAChing Women to Succeed in Science", Stanford Think Tank Meeting on Title IX, Stanford University, April 2006.
- "Career in Science: Things I Wish I'd Known Before Morphing into a Lab Rat", Keynote Speaker, National Conference on Undergraduate Research, Asheville, NC, April 2006.
- "Quilting Together a Professional Life in Science", Brode Lectureship, Whitman College, Walla, Walla, WA, March 2006.
- "Negotiating for What You Need to Achieve Your Personal and Professional Goals" 231<sup>st</sup> National American Chemical Society Meeting", Atlanta, GA, March 2006.
- "Quilting Together a Professional Life in Science: A Female Faculty Perspective", Donna Fox Lectureship, Cornell College, Mount Vernon, Iowa, February 2006.
- "The Fascinating Properties of Water", Learning in Retirement Group, Eugene, OR, November 2005.

- "Quilting Together a Professional Life in Science", American Association of University Women, Eugene, OR, November 2005.
- "Quilting Together Professional Career in Science", Keynote Speaker, Karen Wetterheim Symposium, Women in Science Program, Dartmouth College, Hanover, NH, May 2005.
- "The Impact of COACh on Women Faculty in Academic Science", Joint meeting of the XXXV International Congress of Physiological Sciences and Experimental Biology, San Diego, CA, April 2005.
- "COACh: Working to Level the Playing Field for Women Chemists in Academia", 229th National American Chemical Society Meeting, San Diego, CA, March 2005.
- "Quilting Together a Professional Life in Science", Science Careers in Search of Women Conference, Argonne National Laboratory, Argonne, IL, February 2005.
- "COAChing Women in Leadership Roles in Academia", Women's Leadership Alliance Meeting, University of California, San Diego, January 2005.
- "What is COACh", "A Chemistry Ph.D? Why Bother?", Presidential Symposium on Changing Needs in Doctoral Education, 228th National American Chemical Society Meeting, August 2004.
- "Taking the Sigh out of Science", Tenth Cottrell Scholar Conference, Research Corporation, Tucson, AZ, July 2004.
- "Women in the Chemical Workforce: Comparing the US and European Countries", panel discussion, German Chemical Society Meeting, Munich, Germany, October 2003.
- "COACH: Advancing the Careers of Women Scientists", Department of Chemistry, University of Minnesota, April 2003.
- "RSECs: Providing Leadership Opportunities for All Participants", 224<sup>th</sup> National American Chemical Society Meeting, Boston, MA, August 2002.
- "Quilting Together a Professional Life in Science", Department of Chemistry, Women in Science Group, University of Pennsylvania, Philadelphia, PA, April 2002.
- "COACh: Assisting Women Faculty", Department of Chemistry, University of Washington, Seattle, WA, April 2001.
- "COAChing Women for Successful Careers in the Chemical Sciences", 220<sup>th</sup> National American Chemical Society Meeting, Washington, DC, August 2000.
- "Teaching Science to Nonscientists", APS Distinguished Lectureship, University of Wisconsin, Oshkosh, Oshkosh, WI, April 2000.
- "Taking the Sigh Out of Science: Teaching Science to Nonscientists", Frontiers in Science Lectureship, Texas A&M University, College Station, TX, February 2000.
- "Striving for a Healthy Equilibrium Between Work and Home", Women in Science and Engineering Conference, Texas A&M University, College Station, TX, February 2000.
- "Teaching Science to Nonscientists", Clifford B. Purves Lectureship, McGill University, Montreal Canada, November 1999.
- "Quilting Together a Professional Life in Chemistry" Women Chemists Committee, California Section, Mills College, Oakland, CA, October 1999.
- "Taking the Sigh Out of Science: Demonstrations for K-12 Science Classes", 4-J Teachers In Service Day Workshop, Eugene, OR, October 1999.

- "Taking the Sigh Out of Science" Northwest Regional American Chemical Society Meeting, Portland, OR, June 1999.
- "Quilting Together a Professional Life in Science", 54<sup>th</sup> Northwest Regional American Chemical Society Meeting, Portland, OR, June 1999. (Women's Luncheon)
- "Mentoring and Recruiting Women Chemistry Faculty and Students", Western Chemistry Chair Conference, Western Washington University, October 1998.
- "Quilting Together a Professional Life in Science", Emeritus Faculty Meeting, University of Oregon, Eugene, November 1998.
- "Taking the Sigh out of Science", Portland Alumni Lecture Series, Multnomah Club, Portland, OR, April 1998.
- "Striving for a Healthy Balance Between Work and Home", 215<sup>th</sup> American Chemical Society Meeting, Dallas, TX, March 1998.
- "Quilting Together a Professional Life in Science", Mount Holyoke College, November 1997.
- "Women in Science: A Quilting Perspective", Sweet Briar College, Conference on Supporting Women in Science, April 1997.
- "Women Scientists of Today", Symantec Corporation, Eugene, OR, June 1996.
- "Quilting Together a Professional Life", Women's Chemist Luncheon, American Chemical Society Meeting, St. Louis, MO, March 1996.
- "Importance of Undergraduate Research", NSF Sponsored Symposium for Undergraduate Science Majors, Corvallis, OR, March 1995, October 1995, October 1996.
- "Tenure and Tots", Younger Chemist Committee Panel Discussion, American Chemical Society Meeting, American Chemical Society Meeting, Chicago, Ill, August 1995.
- "Balancing a Science Career and Children", Panel Discussion, Western Spectroscopy Association, Asilomar, CA, January 1995.
- "Taking the Sigh Out of Science", University of Oregon Alumni, Portland, OR, October 1994.
- "Communicating Science: Bonding with the NonScientist", Women's Chemist Luncheon, American Chemical Society Meeting, Washington DC, August 1994.
- "Women in Science", Banquet speaker for the Saturday Academy, Portland Oregon, March 1991.
- "Women in Science: We've Come a Long Way, Maybe?, Luncheon speaker at Women in Action Meeting, Vancouver, WA, March 1988.
- "Lasers in Chemistry" Dinner speaker at the Cincinnati Division of the American Chemical Society, Cincinnati, OH, October 1987.
- "Teaching about Lasers in Chemistry", Dinner speaker at annual meeting of Science Teachers in the Eugene School District, Eugene, OR November 1987.
- "Careers in Chemistry: Laser Research", "Expanding Your Horizons" symposium for female high school science students, Eugene, OR, Feb. 1986.
- "Education and Employment of Scientists and Engineers in Academia", Consultant for Office of Technology programs, Congress of the United States, Washington, DC, 1985-1986.

- "Women and Minorities in Science", Workshop panelist for the Conference on the Utilization of Science Ph.D.'s in the Eighties, Cornell University, April 1985.
- "Can Women Scientists Make a Difference?", Seminar series sponsored by the Educators for Social Responsibility, Philadelphia, PA, March 1985.

\*\* Numerous talks have also been given at local high schools, grade schools and to K-12 teacher groups in the area and in the state about chemistry, lasers in chemistry, career options in chemistry, women in chemistry and teaching chemistry.

#### **Research Personnel**

#### **CURRENT PARTICIPANTS**

Dr. Jennifer Hensel – Postdoctoral Associate Laura McWilliams – Ph.D. Candidate Brandon Schabes – Ph.D. Candidate Regina Ciszewski – Ph. D. Candidate Andrew Carpenter – Ph.D. Candidate Brittany Gordon – Ph.D. Candidate

#### PREVIOUS POSTDOCTORAL RESEARCH ASSOCIATES AND VISITING FACULTY

Dr. Sumi Wren - Environmental Canada, Toronto Dr. Nicholas Valley - CNU, College of Health Sciences, Sacramento Dr. Clive Kittredge – University of Oregon Dr. Katy Plath - Moscow, Idaho Dr. Hristina Staleva – Prague, Czech Republic Dr. Stephanie Ota - Teacher, Oregon City High School Dr. Simon Schrodle, BASF, Germany Prof. Davida Brown - Linfield College Prof. Dennis Hore - University of Victoria, Canada Prof. Christy Landes – Rice University Prof. Robert Walker - Montana State University Prof. Donna Jaramillo-Fellin – University of California, Merced (Laboratory Coordinator) Prof. Heather Allen – Ohio State University Prof. Marie Messmer – Lehigh University Prof. Barbara Balko - Lewis and Clarke College Prof. John Kauffman - FDA, Division of Pharamceuticals Prof. Andreas Friedrich – Institut fur Energieverfahrenstechnik Prof. Rosina M. Georgiadis – Boston University Dr. Michael Brindza, NIST Dr. Mac Brown - Los Alamos National Laboratory Dr. Beth Smiley – Brown University Dr. John Daschbach - Pacific Northwest National Laboratory Dr. Jeanne M. Robinson - Los Alamos National Laboratories Dr. Victoria Shannon - Novellus, Portland, Santa Jose (formerly Tektronix)

Dr. Hossein Rojhantalab - Intel Corporation, Portland, OR

#### PREVIOUS PH.D AND MS GRADUATE STUDENTS

Dr. Karl Meitzner - Tech Company, Bay Area Dr. Ellen Robertson - Postdoctoral Associate, LBNL Dr. Stephanie Ota – Teacher, Oregon City High School Dr. Patrick Blower - Radience Corporation, Petaluma, CA Dr. Cathryn McFearin – UC Berkeley Dr. Eric Shamay – Microsoft Dr. Dan Beaman - Intel Corporation, Beaverton, OR Dr. Adam Hopkins - Alakai Defense Systems, Tampa, FL Dr. Dave Walker - Triquint, Portland, OR Dr. Melissa Kido - Boston, MA Prof. Mark Watry - Spring Hill College Prof. Theresa Tarbuck - Spring Hill College Prof. Betsy Raymond - Western Washington University Dr. Larry Scatena – University of Oregon (Laser Laboratory Director) Dr. Kevin Becraft - Lam Research, Fremont, CA Dr. Travis Abshere - Triquint, Portland, OR Prof. John Conboy – University of Utah Dr. Eric Miller - Wachter Siltronic, Portland OR Prof. Derek Gragson - California Polytechnic State University Dr. Pam Fischer - Intel Corporation, Portland, OR Prof. Paul Bunson – Lawrence University Dr. Eric Wong - Intel Corporation, Portland Dr. Richard Bradley - Flex Products, Santa Clara Dr. Daniel Koos - Motorola, France (formerly Tektronix) Dr. Luanne Rolly - Hewlett Packard, Corvallis Dr. Susan Fitzpatrick - Merck Sharpe and Dohm Matt Hamamato - (MS) Radience Corporation, Petaluma, CA Megan Leich – (MS) – Northern California High School (Teacher) Prof. Safwan Arekat – University of Bahrain (jointly with Prof. Kevan) Jennifer King – (MS) – Sun River High School (Teacher) Steve Stuckmeyer – (MS) – University of Oregon Bayrn McCarty – Texas (MS) Roseanne Kozlowski – (MS) Jay O'Brien – Boulder, CO (MS) Ms. Joanne Maule-Schmidt, (MS) Philadelphia School System (Teacher)

#### **PREVIOUS VISITING FACULTY**

Prof. Kevin Johnson, (Pacific University) Prof. Fred Moore (Whitman College) Prof. Lee Sharpe (Grinnell College) Prof. Shane Ohline (Wellesley College) Prof. Ron Swisher (Oregon Institute of Technology)

#### PREVIOUS UNDERGRADUATE RESEARCH STUDENTS

#### (REU = RESEARCH EXPERIENCE FOR UNDERGRADUATES)

Courtney Olson (NSF REU 2013) Brock Tillotson (2012-2013) Kyle Hite – (NSF REU 2012) Grace Conte (NSF REU 2011) Phillip Cox (NSF REU 2010) Nathan Campbell (NSF REU 2009) Abigail Wagner (NSF REU 2008) Ellen Robertson – (NSF REU 2007) Elizabeth Surano – (NSF REU 2005) Libby MacKinnon – (NSF REU 2005) Dan Parks (NSF REU 2004) Hillary Van Anda (NSF REU 2003) Brittany Lee - (NSF REU 2001) Dan Solis (NSF REU 2000) Allison Veitruba – (NSF-REU 1999) Theresa Hannon (NSF-REU 1997) Betsy Raymond (NSF-REU 1996) Stephanie Laska (NSF-REU 1994) Doug Demarest (NSF-REU 1994) Vince Woldt (NSF-REU 1991-1992) Hannah Morris (NSF-REU 1990) Scott Kellar (U of Oregon, 1988-1989, NSF-REU) Pauline Tan (U of Oregon, 1986-1987) Peggy Mares (U of Oregon, 1986-1987) Pam Chu (Bryn Mawr College, 1983-1985) Susan Emlen (Bryn Mawr College, 1983-1985) Ishita Mukerji (Bryn Mawr College, 1983-1984) Margaret Schulz(Brvn Mawr College, 1982-1983) Sally Hair(Bryn Mawr College, 1981-1982) Penny Peterson (Bryn Mawr College, 1981-1982) Swee Lian Tan (Bryn Mawr College, 1980-1981) Joann Neth (Bryn Mawr College, 1980-1981) Patricia Angueira (Bryn Mawr College, 1980-1981)

Amanda Siedschlag (NSF REU 2013) Lonnie Kringle (NSF REU 2011) Suzanne Wood (NSF REU 2012) Maira Amezcua –(NSF REU 2011) Jacqueline Burgher (NSF REU 2010) Laura Sofen (NSF REU 2009) Brittany Willis (NSF REU 2007) Rachel Pollock (NSF REU 2006) Scott Wren (NSF REU 2004) Gregory Dyer (NSF REU 2003) Jessie Marcum (NSF REU 2002) Tran Phang - (NSF REU 2000) Ben Paxton – (U of Oregon, 1999-2000) Cindy Regal – (NSF-REU 1999) Dave Walker (NSF-REU 1998) Julie Gruetzmacher (NSF-REU 1996) Mark Culley - (U of Oregon, 1994) Henry Ajo (NSF-REU 1994) David DeGraw (NSF-REU 1993) Grace Neff (NSF-REU, 1989) Lisa Pansov (U of Oregon, 1988-1989, NSF-REU) Dalibar Smetke (U of Oregon, 1987-1988) Todd Wagner (U of Oregon, 1985-1986)

Tammy Maeda (Bryn Mawr College, 1983-1985) Michele Donovan (Bryn Mawr College, 1984-1985) Mindy Fleisher (Bryn Mawr College, 1982-1983) Dana Tribula (Bryn Mawr College, 1982-1983) Helen Collins (Bryn Mawr College, 1981-1982) Kyong Mi Chang (Bryn Mawr College, 1980-1981) Julia Yang (Bryn Mawr College, 1980-1981)