CURRICULUM VITAE (Updated on August 13, 2011)

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EDUCATION

Ph.D., Analytical Chemistry, University of Colorado, 1981
Thesis Title: Metal Chelate Complexes as Nuclear Magnetic Resonance Shift Reagents, Paramagnetic Relaxation Reagents, and Fuel Additives

B.S., Chemistry, Northeastern University, 1976

EXPERIENCE

1997- : Charles A. Dana Professor of Chemistry, Bates College
2006-2010: Chair, Environmental Studies Program, Bates College
1996-1997: President, Council on Undergraduate Research
1994-1997: Professor of Chemistry, Bates College
1994-1996: Chair, Program in Biological Chemistry, Bates College
1992-1996, 2003: Chair, Department of Chemistry, Bates College
1989-1992, 1998: Chair, Division of Science and Mathematics, Bates College
1988-1989: Visiting Associate Professor of Chemistry, Duke University, Durham, North Carolina (Sabbatical leave with Prof. Charles Lochmuller)
1988-1994: Associate Professor of Chemistry, Bates College
1981-1988: Assistant Professor of Chemistry, Bates College, Lewiston, Maine

CURRENT RESEARCH INTERESTS

-Chiral nuclear magnetic resonance shift reagents
-Lanthanide ions as luminescent chromophores for liquid chromatographic detection
-Selective sorbents and stationary phases for gas chromatography

AWARDS AND HONORS

American Chemical Society
Award for Research at an Undergraduate Institution - 2010
Camille and Henry Dreyfus Scholar - 2003-2005
Council on Undergraduate Research Fellows Award - 2002
Analytical Division, American Chemical Society
J. Calvin Giddings Award for Excellence in Education - 1999
Carnegie Foundation Professor of the Year - State of Maine - 1997
Camille and Henry Dreyfus Scholar - 1990-1991
University of Colorado Award for Creative Research - 1981
National ACS Analytical Fellowship - Summer - 1980
Member of Phi Kappa Phi Honor Society - 1976

PUBLICATIONS (RESEARCH)

(Underlined names are those of undergraduate student assistants, double underlined are high school teachers.)

"Chiral Discrimination of Aliphatic Amines and Amino Alcohols Using NMR Spectroscopy," Wenzel, T.J.; Rollo, R.D.; Clark R.L.; *Magnetic Resonance in Chemistry*, in press.

"A Water-soluble Calix[4]resorcinarene with L-Pipecolinic Acid Groups as a Chiral NMR Solvating Agent", Pham, N.H.; Wenzel, T.J., *Chirality*, in press.

"A Sulfonated Calix[4]resorcinarene with L-Pipecolinic Acid Groups as a Water-soluble Chiral NMR Solvating Agent", Pham, N.H.; Wenzel, T.J., *Tetrahedron: Asymmetry*, **2011**, *22*, 1574-1580.

"Using NMR Spectroscopic Methods to Determine Enantiomeric Purity and Assign Absolute Stereochemistry," Wenzel, T.J.; Chisholm, C.D., *Progress in NMR Spectroscopy*, **2011**, *59*, 1-63.

"A Sulfonated Calix[4]resorcinarene with α-Methyl-L-prolinylmethyl Groups as a Water-soluble Chiral NMR Solvating Agent," Pham, N.H.; Wenzel, T.J., *Tetrahedron: Asymmetry*, **2011**, *22*, 641-647.

"Assignment of Absolute Configuration Using Chiral Reagents and NMR Spectroscopy," Wenzel, T.J.; Chisholm, C.D., *Chirality*, **2011**, *23*, 190-214.

"Enantiomeric Discrimination of Aromatic-containing Anionic Substrates Using Cationic Cyclodextrins", Chisholm, C.D.; Wenzel, T.J. *Tetrahedron: Asymmetry*, **2011**, *22*, 62-68.

"A Water-soluble Calix[4]resorcinarene with α-Methyl-L-prolinylmethyl Groups as a Chiral NMR Solvating Agent," Pham, N.H.; Wenzel, T.J., *Journal of Organic Chemistry*, **2011**, *76*, 986-989.

"Enantiomeric Discrimination of Cyclic β-Amino Acids Using (18-Crown-6)-2,3,11,12-tetracarboxylic Acid as a Chiral NMR Solvating Agent, Chisholm, C.D.; Fülöp, F.; Forró, E.; Wenzel, T.J., *Tetrahedron: Asymmetry*, **2010**, *21*, 2289-2294.

"Carboxymethylated Cyclodextrins and their Complexes with Pr(III) and Yb(III) as Water-soluble Chiral NMR Solvating Agents for Cationic Compounds," Provencher, K.A.; Weber, M.A.; Randall, L.A.; Cunningham, P.R.; Dignam, C.F.; Wenzel, T.J., *Chirality*, **2010**, *22*, 336-346.

"Water-soluble Calix[4]resorcinarenes as Chiral NMR Solvating Agents for Bicyclic Aromatic Compounds," O. Farrell, C.M.; Hagan, K.A.; Wenzel, T.J., *Chirality*, **2009**, *21*, 911-921.

"(18-Crown-6)-2,3,11,12-tetracarboxylic Acid as a Chiral NMR Solvating Agent for Determining the Enantiomeric Purity and Absolute Configuration of β-Amino Acids," Wenzel, T.J.; Bourne, C.E.; Clark, R.L., *Tetrahedron: Asymmetry*, **2009**, *20*, 2052-2060.

"Water-soluble Calix[4]resorcinarenes with Hydroxyproline Groups as Chiral NMR Solvating Agents for Phenyl- and Pyridyl-containing Compounds," Hagan,K.A.; O'Farrell, C.M.; Wenzel, T.J., *European Journal of Organic Chemistry*, **2009**, 4825-4832.

"Selective Retention of Explosives and Related Compounds on Gas-Chromatographic Capillary Columns Coated with Lanthanide(III) β-diketonate Polymers," Harvey, S.D., Wenzel, T.J. *Journal of Chromatography A*, **2009**, *1216*, 6417-6423.

"Diamagnetic Lanthanide Tris β-Diketonates as Organic-soluble Chiral NMR Shift Reagents," Wenzel, T.J.; Wenzel, B.T., *Chirality*, **2009**, *21*, 6-10.

"Carboxymethylated Cyclodextrins and their Paramagnetic Lanthanide Complexes as Water-soluble Chiral NMR Solvating Agents," Provencher, K.A.; Wenzel, T.J., *Tetrahedron: Asymmetry*, **2008**, *19*, 1797-1803.

"Water-soluble Calix[4]resorcinarenes as Chiral NMR Solvating Agents for Phenyl-containing Compounds", O'Farrell, C.M.; Wenzel, T.J., *Tetrahedron: Asymmetry*, **2008**, *19*, 1790-1796.

"Selective Gas-phase Capture of Explosives on Metal β-diketonate Polymers," Harvey, S.D.; Wenzel, T.J., *Journal of Chromatography A*, **2008**, *1192*, 212-217.

"Water-soluble Calix[4]resorcinarenes with Hydroxyproline Groups as Chiral NMR Solvating Agents." O'Farrell, C.M.; Chudomel, J.M.; Collins, J.M.; Dignam, C.F.; Wenzel, T.J., *Journal of Organic Chemistry*, **2008**, *73*, 2843-2851.

"Chiral NMR Discrimination of Amines: Analysis of Secondary, Tertiary and Prochiral Amines using (18-Crown-6)-2,3,11,12-tetracarboxylic Acid," Lovely, A. E., Wenzel, T. J., *Chirality*, **2008**, *20*, 370-378.

"Chiral NMR Discrimination of Piperidines and Piperazines Using (18-Crown-6)2,3,11,12-tetracarboxylic Acid," Lovely, A.E.; Wenzel, T.J., *Journal of Organic Chemistry*, **2006**, *71*, 9178-9182.

"Chiral NMR Discrimination of Pyrrolidines Using (18-Crown-6)2,3,11,12-tetracarboxylic Acid," Lovely, A.E.; Wenzel, T.J., *Tetrahedron Asymmetry*, **2006**, *17*, 2642-2648.

"Chiral NMR Discrimination of Secondary Amines Using (18-Crown-6)2,3,11,12-tetracarboxylic Acid," Lovely, A.E.; Wenzel, T.J., *Organic Letters*, **2006**, *8*, 2823-2826.

"Carboxymethylated Cyclodextrin Derivatives as Chiral NMR Discriminating Agents," Dignam, C.F.; Randall, L.A.; Blacken, R.D.; Cunningham, P.R.; Lester, S.-K.G.; Brown, M.J.; French, S.C.; Aniagyei, S.E.; Wenzel, T.J., *Tetrahedron Asymmetry*, **2006**, *17*, 1199-1208.

"Water-Soluble Calix[4]resorcarenes as Enantioselective NMR Shift Reagents for Aromatic Compounds," Dignam, C. F.; Zopf, J. J.; Richards, C. J.; Wenzel, T. J., *Journal of Organic Chemistry*, **2005**, *70*, 8071-8078.

"An Enantioselective NMR Shift Reagent for Cationic Aromatics," Dignam, C. F.; Richards, C. J.; Zopf, J. J.; Wacker, L. S.; Wenzel, T. J., *Organic Letters*, **2005**, *7*, 1773-1776.

"Chiral Recognition in NMR spectroscopy Using Crown Ethers and their Ytterbium(III) Complexes," Wenzel, T. J.; Freeman, B. E.; Sek, D. C.; Zopf, J. J.; Nakamura, T.; Yongzhu, J.; Hirose, K.; Tobe, Y, *Analytical and Bioanalytical Chemistry*, **2004**, *378*, 1536-1547.

"Sulfated and Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Discriminating Agents," Wenzel, T. J.; Amonoo, E. P.; Shariff, S. S.; Aniagyei, S. E., *Tetrahedron: Asymmetry*, **2003**, *14*, 3099-3104.

"Calix[4]arene, Calix[4]Resorcarene, and Cyclodextrin Derivatives and their Lanthanide Complexes as Chiral NMR Shift Reagents," Smith, K. J.; Wilcox, J. D.; Mirick, G. E.; Wacker, L. S.; Ryan, N. S.; Vensel, D. A.; Readling, R.; Domush, H. L.; Amonoo, E. P.; Shariff, S. S.; Wenzel, T. J., *Chirality*, **2003**, *15*, S150-S158.

"Chiral Reagents for the Determination of Enantiomeric Excess and Absolute Configuration using NMR Spectroscopy," Wenzel, T. J.; Wilcox, J. D., *Chirality*, **2003**, 15, 256-270.

"The Utility of Crown Ethers Derived from Methyl β-D-Galactopyranoside and their Lanthanide Couples as Chiral NMR Discriminating Agents", Wenzel, T. J.; Thurston, J. E.; Sek, D. C.; Joly, J.-P.; *Tetrahedron: Asymmetry*, **2001**, *12*, 1125-1130.

"Lanthanide-Chiral Solvating Agent Couples as Chiral NMR Shift Reagents," Wenzel, T. J.; *Trends in Organic Chemistry*, **2000**, *8*, 51-64.

"Enantiomeric Discrimination in the NMR Spectra of Underivatized Amino Acids and α-Methyl Amino Acids Using (+)-(18-Crown-6)-2,3,11,12-Tetracarboxylic Acid," Wenzel, T. J.; Thurston, J. E., *Tetrahedron Letters*, **2000**, *41*, 3769-3772.

"Lanthanide-Chiral Carboxylate and Chiral Ester Mixtures as NMR Shift Reagents," Wenzel, T. J.; Brogan, K. L.; *Enantiomer*, **2000**, *5*, 293-302.

"(+)-(18-Crown-6)-2,3,11,12-Tetracarboxylic Acid and its Ytterbium(III) Complex as Chiral NMR Discriminating Agents," Wenzel, T. J.; Thurston, J. E., *Journal of Organic Chemistry*, **2000**, *65*, 1243-1248.

"Dysprosium(III)-Diethylenetriaminepentaacetate complexes of Aminocyclodextrins as Chiral NMR Shift Reagents," Wenzel, T.J.; Miles, R.D.; Zomlefer, K.; Frederique, D.E.; Roan, M.A.; Troughton, J.S.; Pond, B.V.; Colby, A.L., *Chirality*, **2000**, *12*, 30-37.

"Solid-Phase Lanthanide Luminescence Detection in Liquid Chromatography," Wenzel, T.J., Evertsen, R., Perrins, B.E., Light, Jr., T.B., Bean, A.C., *Analytical Chemistry*, **1998**, *70*, 2085-2091.

"Chiral NMR Shift Reagents: Mixtures of Lanthanide Tris(β-Diketonates) with Chiral Carboxylate Anions," Wenzel, T.J.; Bean, A.C.; Dunham, S.L.; *Magnetic Resonance in Chemistry*, **1997**, 35, 395-402.

"Lanthanide-Crown Ether Mixtures as Chiral NMR Shift Reagents for Amino Acid Esters, Amines, and Amino Alcohols," Weinstein, S.E., Vining, M.S., Wenzel, T.J., *Magnetic Resonance in Chemistry*, **1997**, *35*, 273-280.

"Chiral NMR Shift Reagents: Lanthanide Mixtures with 1-(1-Naphthyl)ethylurea derivatives of Amino Acids," Wenzel, T.J., Miles, R.D.; Weinstein, S.E., *Chirality*, **1997**, *9*, 1-9.

"Lanthanide Luminescence Detection of Bleomycins and Nalidixic Acid," Wenzel, T.J.;Zomlefer, K.; Rapkin, S.B.; Keith, R.H.; *Journal of Liquid Chromatography*, **1995**, *18*, 1473-1486.

"Lanthanide-Cyclodextrin Complexes as Probes for Elucidating Cyclodextrin-Substrate Interactions and Optical Purity by NMR Spectroscopy," Wenzel, T.J.; Bogyo, M.S.; Lebeau, E.L.; *Journal of the American Chemical Society*, **1994**, *116*, 4858-4865.

"Supercritical Fluid Extraction of Metal-Containing Selective Sorbents," Wenzel, T.J.; Townsend, K.J.; Frederique, D.E.; Baker, A.G.; *Journal of Chromatography*, **1993**, *637*, 187-194.

"Lanthanide-Chiral Resolving Agent Mixtures as Chiral NMR Shift Reagents," Wenzel, T.J.; Morin, C.A.; Brechting, A.A.; *Journal of Organic Chemistry*, **1992**, *57*, 3594-3599.

"Lanthanide Shift NMR Studies of Bile Salt Aggregates," Meyerhoffer, S.M.; Wenzel, T.J.; McGown, L.B.; *Journal of Physical Chemistry*, **1992**, *96*, 1961-1967.

"Luminescence Spectrometric Studies of Silica-Bound and Adsorbed Molecules," Lochmuller, C.H.; Kersey, M.T.; Wenzel, T.J., in *Chemically Modified Oxide Surfaces*, Volume 3, D.E. Leyden, Ed., Gordon & Breach Publishers, NY, **1990**, pp. 109-126.

"Spectroscopic Studies of Pyrene at Silica Interfaces," Lochmuller, C.H.; Wenzel, T.J.; *Journal of Physical Chemistry*, **1990**, *94*, 4230-4235.

"NMR Shift Reagents for Organic Salts: Shift Mechanism, Bound Shifts, and Structural Analysis," Wenzel, T.J.; Cameron, K.; *Magnetic Resonance in Chemistry*, **1989**, *27*, 734-739.

"Application of Metal Beta-diketonate Polymers as Selective Sorbents in Complex Mixture Analysis and for Sulfur-Containing Compounds," Wenzel, T.J.; Bonasia, P.J.; Brewitt, T.; *Journal of Chromatography*, **1989**, *463*, 171-176.

"Liquid Chromatographic and Flow Injection Analysis of Tetracycline Using Sensitized Europium(III) Luminescence Detection," Wenzel, T.J.; Collette, L.M., Dahlen, D.T., Hendrickson, S.M., Yarmaloff, L.W., *Journal of Chromatography*, **1988**, *433*, 149-158.

"Lanthanide Ions as Luminescent Chromophores for the Liquid Chromatographic Detection of Polynucleotides and Nucleic Acids," Wenzel, T.J.; Collette, L.M., *Journal of Chromatography*, **1988**, *436*, 299-307.

"The Shift Mechanism of Binuclear Lanthanide(III)-Silver(I) NMR Shift Reagents," Wenzel, T.J.; Russett, M.D., *Journal of Magnetic Resonance*, **1987**, *75*, 493-501.

"Metal Beta-Diketonate Polymers as Selective Sorbents for Gas Chromatography," Wenzel, T.J.; Yarmaloff, L.W.; St.Cyr, L.Y.; O'Meara, L.J.; Donatelli, M.; Bauer, R.W.; *Journal of Chromatography*, **1987**, *396*, 51-64.

"Organic-Soluble Lanthanide Nuclear Magnetic Resonance Shift Reagents for Sulfonium and Isothiouronium Salts," Wenzel, T.J.; Zaia, J.; *Analytical Chemistry*, **1987**, *59*, 562-567.

"Binuclear Lanthanide(III)-Silver(I) NMR Shift Reagents: Investigations of New Achiral and Chiral Analogs," Wenzel, T.J.; Ruggles, A.C.; Lalonde, D.R., Jr.; *Magnetic Resonance in Chemistry*, **1985**, *23*, 778-783.

"Lanthanide Ions as Luminescent Chromophores for Liquid Chromatographic Detection," DiBella, E.E.; Weissman, J.B.; Joseph, M.J.; Schultz, J.R., Wenzel, T.J.; *Journal of Chromatography*, **1985**, *328*, 101-109.

"Lanthanide Tetrakis(beta-diketonates) as Effective NMR Shift Reagents for Organic Salts," Wenzel, T.J.; Zaia, J.; *Journal of Organic Chemistry*, **1985**, *50*, 1322-1324.

"Metal Chelates of 2,2,7-Trimethyl-3,5-Octanedione, H(tod)," Wenzel, T.J.; Williams, E.J.; Sievers, R.E.; *Inorganic Synthesis*, **1985**, *23*, 144-149.

"Studies of Metal Chelates With the Novel Ligand 2,2,7-Trimethyl-3,5-Octanedione," Wenzel, T.J.; Williams, E.J.; Haltiwanger, R.C.; Sievers, R.E.; *Polyhedron*, **1985**, *4*, 369-378.

"A Better Solvent for Binuclear Lanthanide(III)-Silver(I) NMR Shift Reagent Studies," Wenzel, T.J.; *Journal of Organic Chemistry*, **1984**, *49*, 1834-1835.

"Secondary Deuterium Isotope Effects with Lanthanide(III)-Silver(I) NMR Shift Reagents," Wenzel, T.J.; *Spectroscopy Letters*, **1984**, *17*, 77-84.

"New Binuclear NMR Shift Reagents for Olefins and Aromatics," Wenzel, T.J.; Lalonde, D.R., Jr.; *Journal of Organic Chemistry*, **1983**, *48*, 1951-1954.

"Binuclear Shift Reagents for Nuclear Magnetic Resonance Spectrometry of Aromatic and Polycyclic Aromatic Compounds," Wenzel, T.J.; Sievers, R.E.; *Analytical Chemistry*, **1983**, *54*, 1602-1606.

"Water-Soluble Paramagnetic Relaxation Reagents for Carbon-13 Nuclear Magnetic Resonance Spectroscopy," Wenzel, T.J.; Ashley, M.E.; Sievers, R.E., *Analytical Chemistry*, **1982**, *54*, 615-621.

"Nuclear Magnetic Resonance Studies of Terpenes with Chiral and Achiral Lanthanide(III)-Silver(I) Binuclear Shift Reagents," Wenzel, T.J.; Sievers, R.E.; *Journal of the American Chemical Society*, **1982**, *104*, 382-388.

"Liquid Hydrocarbon-Soluble Rare Earth Chelates Prepared from the Novel Ligand 2,2,7-Trimethyl-3,5-Octanedione and Fuels Containing Same," Sievers, R.E.; Wenzel, T.J.; U.S.Patent 4,251,233, **1981**.

"Binuclear Complexes of Lanthanide(III) and Silver(I) and Their Function as Shift Reagents for Olefins, Aromatics, and Halogenated Compounds," Wenzel, T.J.; Sievers, R.E.; *Analytical Chemistry*, **1981**, *53*, 393-399.

"New Binuclear Lanthanide NMR Shift Reagents Effective for Aromatic Compounds," Wenzel, T.J.; Bettes, T.C.; Sadlowski, J.E.; Sievers, R.E.; *Journal of the American Chemical Society*, **1980**, *102*, 5903-5904.

PUBLICATIONS (BOOKS)

Discrimination of Chiral Compounds Using NMR Spectroscopy, Wiley Press, **2007**, ISBN 978-0-471-76352-9, 549 pp.

Research in Chemistry at Primarily Undergraduate Institutions, Fifth Edition, Wenzel, T.J., Editor, Council on Undergraduate Research, **1993**. ISBN 0-941933-09-1, 346 pp.

NMR Shift Reagents, Wenzel, T.J.; CRC Press, Uniscience Series, **1987**, ISBN 0-8493-5298-3, 286 pp.

PUBLICATIONS (RESEARCH-RELATED BOOK CHAPTERS, ENCYCLOPEDIA ARTICLES)

"Determination of Enantiomeric Purity and Absolute Configuration by NMR Spectroscopy," Wenzel, T.J., in *Stereoselective Synthesis of Drugs and Natural Products*," Wiley, in press.

Spectroscopic Analysis: NMR and Shift Reagents, Wenzel, T.J., in *Comprehensive Chirality*, Elsevier, in press.

"Receptors for Chiral Recognition," Wenzel, T.J.; Pham, N.H., in *Artificial Receptors for Chemical Sensors*," Wiley, **2011**, 191-248.

"Lanthanide Enolates as Nuclear Magnetic Resonance Shift Reagents," Wenzel, T. J.; Provencher, K. A., in *The Chemistry of Metal Enolates*, Wiley, **2009**, 787-822.

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"Europium, *tris*[3-[2,2,3,3,4,4,4-heptafluoro-1-(oxo-kO)butyl]-1,7,7-trimethyl[2.2.1]heptan-2-onato-kO]", Wenzel, J. J.; Ciak, J. M., *Electronic Encyclopedia of Reagents for Organic Synthesis*, Wiley, UK, **2004**, 8 pp, (www.mrw.interscience.wiley.com/eros/doc/00001/00003546.htm).

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"Magnetic Resonance: Enantiomeric Purity Studies Using NMR," Wenzel, T.J., in *Encyclopedia of Spectroscopy and Spectrometry*, Academic Press, **2000**, Vol. 1, pp. 411-421.

"Liquid Chromatography," Lochmuller, C.H.; Wenzel, T.J.; in *Physical Methods in Chemistry*, Wiley, **1993**, pp. 85-161.

"Binuclear Lanthanide(III)-Silver(I) NMR Shift Reagents," Wenzel, T.J.; Chapter 5 in *Lanthanide Shift Reagents in Stereochemical Analysis*, Verlag Chemie, **1986**, 151-173.

PUBLICATIONS (EDUCATION)

"Role of Undergraduate Research in an Excellent and Rigorous Undergraduate Chemistry Curriculum", Wenzel, T.J.; Larive, C.K.; Frederick, K, *Journal of Chemical Education*, in press.

"Active Learning Materials for Equilibrium Chemistry and Separation Science," Wenzel, T.J., *Analytical and Bioanalytical Chemistry*, **2011**, *400*, 637-640.

"Obtaining Equipment Through Curriculum Development Grants," Wenzel, T.J., *Journal of Chemical Education*, **2010**, *87*, 1128-1130.

"Collaborative and Project-based Learning in Analytical Chemistry," Wenzel, T.J., in *Active Learning: Models from the Analytical Sciences*, American Chemical Society, Washington, DC, **2007**, pp. 54-68.

"Cooperative Learning and Project-based Laboratories as a Way to Broaden Learning Outcomes," Wenzel, T.J., in *Developing and Sustaining a Research-Supportive Curriculum: A Compendium of Successful Practices*, Council on Undergraduate Research, Washington, DC, **2007**, 21-39.

"Evaluation Tools to Guide Students' Peer-Assessment and Self-Assessment in Group Activities for the Lab and Classroom," Wenzel, T. J., *Journal of Chemical Education*, **2007**, *84*, 182-186.

"General Chemistry: Expanding the Learning Outcomes and Promoting Interdisciplinary Connections through the Use of a Semester-long Project," Wenzel, T. J., *CBE Life Sciences Education*, **2006**, *5*, 76-84.

"Systemic Reform of the Undergraduate Science Curriculum," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2004**, *25*, 59-61.

"The Teaching Learning Process in Analytical Chemistry," Wenzel, T. J.; *Microchimica Acta*, **2003**, *142*, 161-166.

"Controlling the Climate in Your Classroom," Wenzel, T. J.; *Analytical Chemistry*, **2003**, *75*, 311A-314A.

"Using Mistakes as Learning Opportunities," Wenzel, T. J.; *Analytical Chemistry*, **2002**, *74*, 439A-440A.

"Community-Based Projects in Analytical Chemistry Courses," Wenzel, T. J.; *Analytical Chemistry*, **2002**, *74*, 279A-280A.

"General Chemistry: Expanding the Goals Beyond Content and Lab Skills," Wenzel, T. J.; in *Gender, Science and the Undergraduate Curriculum: Building Two Way Streets*, Association of American Colleges and Universities, **2001**, 29-46.

"Problem-Based Learning: A Teaching Method in Need of Supporting Materials," Wenzel, T. J.; *Analytical Chemistry*, **2001**, *73*, 501A-502A.

"The Influence of Modern Instrumentation on the Analytical and General Chemistry Curriculum at Bates College," Wenzel, T. J.; *Journal of Chemical Education*, **2001**, *78*, 1164-1165.

"Environmental Chemistry in the Undergraduate Laboratory," Wenzel, T. J.; Austin, R.N.; *Environmental Science and Technology*, **2001**, *35*, 326A-331A.

"The Limits of Written Tests," Wenzel, T. J., *Analytical Chemistry*, **2001**, *73*, 43A-44A.

"Defining Course Goals," Wenzel, T. J., *Analytical Chemistry*, **2000**, *72*, 659A-660A.

"Undergraduate Research as a Capstone Learning Experience," Wenzel, T. J., *Analytical Chemistry*, **2000**, *72*, 547A-549A.

"Practical Tips for Cooperative Learning," Wenzel, T. J., *Analytical Chemistry*, **2000**, *72*, 359A-361A.

"Cooperative Student Activities as Learning Devices," Wenzel, T. J., *Analytical Chemistry*, **2000**, *72*, 293A-296A.

"All the World's a Sample," Wenzel, T. J., Award Address: J. Calvin Giddings Award for Excellence in Education, American Chemical Society, *Division of Analytical Chemistry Newsletter*, **2000**, Spring Issue, p. 1, 10-12.

"The Lecture as a Learning Device," Wenzel, T. J., *Analytical Chemistry*, **1999**, *71*, 817A-819A.

"Does Problem-Based Learning Sacrifice Content and Fundamentals?," Wenzel, T.J., *Analytical Chemistry*, **1999**, *71*, 693A-695A.

"Cooperative Group Learning in Undergraduate Analytical Chemistry," Wenzel, T.J., *Analytical Chemistry*, **1998**, *70*, 790A-795A.

"A New Approach to Undergraduate Analytical Chemistry," Wenzel, T.J.; *Analytical Chemistry*, **1995**, *67*, 470A-475A.

"Isomerization of Dimethyl Maleate to Dimethyl Fumarate: An Undergraduate Experiment Utilizing High Performance Liquid Chromatography," Ledlie, D.B.; Wenzel, T.J.; Hendrickson, S.M.; *Journal of Chemical Education*, **1989**, *66*, 781-782.

"Analysis of Xylene Mixtures Using Binuclear Lanthanide(III)-Silver(I) NMR Shift Reagents," Wenzel, T.J.; Russett, M.D., *Journal of Chemical Education*, **1987**, *64*, 979-980.

PUBLICATIONS (OTHER)

"Why Should Undergraduates and Undergraduate Institutions be Involved in Transformative Research?," Wenzel, T. J., in *Transformative Research at Predominately Undergraduate Institutions*, Council on Undergraduate Research, Washington, DC, **2010**.

"Obtaining Instructional Equipment through the National Science Foundation," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2006**, *26*, 192.

"It's Time to Roam the Sidelines," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2005**, *25*, 104-105.

"Tips for Writing Competitive Proposals to the NSF-RUI Program," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2004**, *25*, 82-85.

"CUR Loses a Friend," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2004**, *25*, 61.

"Outcomes from the Undergraduate Research Summit," Wenzel, T. J., *Cell Biology Education*, **2004**, 3, 150-151.

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"CUR National Conference Report: Funding Opportunities," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2004**, 25, 28-29.

"Institutional Support for Sponsored Research," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2004**, 25, 5.

"Creating Time for Research with no Additional Resources," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2004**, 24, 147.

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"Research Involving NMR Spectroscopy at Undergraduate Institutions in the United States," Wenzel, T. J., *Analytical and Bioanalytical Chemistry*, **2004**, *378*, 1411-1413.

"Support Staff for Multidisciplinary Science Departments," Wenzel, T. J., *Council on Undergraduate Research Quarterly*, **2003**, *24*, 78.

"A Time of Opportunity," *Council on Undergraduate Research Quarterly*, **2003**, *24*, 5.

"CUR 2004. Crossing Boundaries: Innovations in Undergraduate Research," Bettison-Varga, L.; Husic, D., Wenzel T.; *Council on Undergraduate Research Quarterly*, **2003**, *24*, 40-42.

"A Reviewer's Perspective on the NSF REU Program," *Council on Undergraduate Research Quarterly*, **2003**, *23*, 162-164.

From the Editor-in-Chief in *Council on Undergraduate Research Quarterly*, **2003**, *23*, 151.

"News Item: Art Ellis Begins Term as Director of the Division of Chemistry of the National Science Foundation," in *Council on Undergraduate Research Quarterly*, **2002**, *23*, 99.

"Report from CUR 2002: Workshops and Funding Opportunities," in *Council on Undergraduate Research Quarterly*, **2002**, *23*, 6-7.

"Posters on the Hill: How One Person's Vision and Persistence Paid Off," in *Council on Undergraduate Research Quarterly*, **2002**, *22*, 178.

"The NSF Course, Curriculum, and Laboratory Improvement Program," in *Council on Undergraduate Research Quarterly*, **2002**, *22*, 100.

"New Features for the *CUR Quarterly*," in *Council on Undergraduate Research Quarterly*, **2001**, *22*, 52.

Review of the book "Academic Excellence: The Role of Research in the Physical Sciences at Undergraduate Institutions" in *Council on Undergraduate Research Quarterly*, **2001**, *22*, 24-26.

"What is an Appropriate Teaching Load for a Research-Active Faculty Member at a Predominantly Undergraduate Institution?," Wenzel, T.J., *Council on Undergraduate Research Quarterly*, **2001**, *21*, 104-107.

Review of the textbook "Analytical Chemistry" in *Analytical Chemistry*, **1999**, *71*, 212A-213A.

"What is Undergraduate Research," President's Column, *Council on Undergraduate Research Quarterly*, **1996**, *17*, 163.

President's Column, *Council on Undergraduate Research Quarterly*, **1996**, *17*, 111.

"New Directions for CUR," President's Column, *Council on Undergraduate Research Quarterly*, **1996**, *17*, 59.

"Highlights: CUR's Sixth National Conference," Wenzel, T.J.; Gaddini, S., *Council on Undergraduate Research Quarterly*, **1996**, *17*, 30-31.

President's Column, *Council on Undergraduate Research Quarterly*, **1996**, *17*, 7.

"The Fifth National CUR Conference. The Bottom Line: Creating and Maintaining a Healthy Undergraduate Research Environment," Wenzel, T.J.; Mateja, J., *Council on Undergraduate Research Quarterly*, **1993**, *14*, 87-92.

"Sources of Research Funding Primarily for Chemists," *Council on Undergraduate Research Newsletter*, **1991**, *12*, 83-93.

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"Sources of Research Funding Primarily for Chemists," *Council on Undergraduate Research Newsletter*, **1989**, *10*, 82-92.

"Research in Analytical Chemistry at Bates College," Wenzel, T.J., *Council on Undergraduate Research Newsletter*, **1988**, *9*, 27-33.`

GRANTS - EXTERNAL

2011-2015 National Science Foundation - $600,000
“Development of E-Learning Modules for Analytical Chemistry”

2010 Research Corporation - $5,000
“American Chemical Society Research at an Undergraduate Institution Award”

2008 National Science Foundation - $99,278 ($200,000 total – with UC Riverside)
“Collaborative Research: Development of Contextual E-Learning Modules for Analytical Chemistry”

2008 Beckman Foundation, Beckman Scholars Program - $77,200

2007-2012 National Science Foundation - $204,000
“Chiral NMR Shift Reagents”

2003 National Science Foundation - $185,000
“Chiral NMR Shift Reagents”

2002 Camille and Henry Dreyfus Foundation - $105,000
“Scholar/Fellow Program”

2002 National Science Foundation -$78,630
“Undergraduate Research Summit: Bates College, Lewiston, ME; Summer 2003"

2001 National Science Foundation - $246,700
“Acquisition of a High Field Nuclear Magnetic Resonance Spectrometer for Use in Chemistry Research” (Partially matched by Bates)

2001 – Pfizer Pharmaceutical - $5,000
“Chiral Calixarenes as NMR Shift Reagents”

2000 – National Science Foundation - $134,250
“Chiral NMR Shift Reagents”

1999 – National Science Foundation - $74,404
“General Chemistry in the Study of the Environment” (Matched by Bates)

1998 – National Science Foundation - $21,789
“Capillary Electrophoresis in the Undergraduate Curriculum in Chemistry and Biological Chemistry” (Matched by Bates)

1997 – National Science Foundation - $128,500
"Chiral NMR Shift Reagents"

1997 – Pfizer Pharmaceutical - $5,000
"Lanthanide-Cyclodextrin Complexes as Chiral NMR Shift Reagents"

1996 – Pfizer Pharmaceutical - $5,000
"Mixed Lanthanide β-Diketonate-Resolving Agent Complexes as Chiral NMR Shift Reagents"

1996 – Auburn Manufacturing - $3,000
"Support for the Executive Committee Meeting, Council of Undergraduate Research"

1995 – National Science Foundation - $7,890
"Chiral NMR Shift Reagents" - Supplement to purchase equipment

1995 – Pfizer Pharmaceutical - $5,000
"Crown Ethers as Chiral NMR Shift Reagents"

1994 – National Science Foundation $124,700
"Chiral NMR Shift Reagents"

1994 – National Science Foundation - $74,875
"Instrumentation for Geochemical Study of Water, Soil, and Rock in an Undergraduate Curriculum" [Co-PI] (Matched by Bates College)

1994 – Kraft General Foods - $36,350
"Data System for Gas Chromatograph-Mass Spectrometer"

1993 – New England Consortium for Undergraduate Science Education - $1,160
"Travel support to the National Conference on Undergraduate Research - Two Students"

1993 – New England Consortium for Undergraduate Science Education - $10,000
“Support for Speakers at the Fifth National Conference of the Council on Undergraduate Research"

1992 – National Science Foundation - $5,000
“Chiral NMR Shift Reagents - Research Experience for Undergraduates"

1992 - Camille and Henry Dreyfus Foundation - $15,000
"Summer Research Program for High School Teachers"

1992 – Pfizer Pharmaceutical - $5,000
"Chiral NMR Shift Reagents"

1992 – Council on Undergraduate Research (AIURP Program) - $2,500
"Chiral NMR Shift Reagents"

1992 – Auburn Manufacturing - $2,500

"Support for the Fifth National Conference on Undergraduate Research"

1991 – National Science Foundation - $88,800
"Chiral NMR Shift Reagents"

1991 – American Chemical Society - $300
"Selective Sorbents for Gas Chromatography" (ACS Polymer Division)

1991 – Pfizer Pharmaceutical - $4,000
"Selective Sorbents for Gas Chromatography"

1991 – Briston-Myers Squibb Company - $1,500
"Lanthanide Luminescence Detection of Bleomycins"

1990 – Camille and Henry Dreyfus Foundation - $45,000
"Grant Program in Chemistry for Liberal Arts Colleges" (Post-doctoral mentor program)

1990 – National Science Foundation - $140,800
"High Field Nuclear Magnetic Resonance Spectrometer" [Co-PI] (Partially matched by Bates College)

1990 – Research Corporation - $21,500
"Lanthanide-Cyclodextrin Complexes as Chiral NMR Shift Reagents"

1987 – National Science Foundation - $27,710
"Gas Chromatograph-Mass Spectrometer" (Matched by Bates College)

1986 – National Science Foundation - $11,000
"Spectrofluorometer for Biochemical Research" (Matched by Bates College)

1986 – Research Corporation - $9,000
Lanthanide Ions as Luminescent Chromophores for Liquid Chromatographic Detection"

1985 – National Science Foundation - $12,592
"Gradient High Performance Liquid Chromatograph" (Matched by Bates College)

1985 – Petroleum Research Fund - $15,000
"Polymeric Metal Chelates as Selective Sorbents and Stationary Phases for Gas Chromatography"

1985 – American Chemical Society - $750
"Project SEED Program" (To hire a high school student for the summer)

1984 – Petroleum Research Fund - $2,000
"American Chemical Society-Petroleum Research Fund Summer Research Fellowship" (to hire a visiting student fellow)

1983 – Research Corporation - $5,875
"Lanthanide Ions as Fluorescent Probes in Liquid Chromatographic Detection"

1983 – Petroleum Research Fund - $15,000
"Polymeric Metal Chelates as Selective Sorbents and Stationary Phases for Gas Chromatography"

1983 – National Science Foundation - $21,425
Gas Chromatograph for the Study of Polymeric Metal Chelates as Sorbents and Stationary Phases"

1982 – Pittsburgh Conference - $2,000
"R.K. Scott Memorial Award" (To purchase equipment to update the instructional laboratory in analytical chemistry.

1981 - Research Corporation - $10,000
"Lanthanide Ions as Fluorescent Probes in Liquid Chromatographic Detection"

GRANTS - INTERNAL

Roger C. Schmutz Faculty Grants:

1981	($500)	"Selective Sorbents for the Simplification of Complex Gas Chromatograms"
1982	($500)	"Improved Chiral Nuclear Magnetic Resonance Shift Reagents for Olefins"
1983	($1,000)	"Selective Sorbents for Gas Chromatography"
1984	($1,000)	"NMR Shift Reagents for Organohalides and Organosulfides"
1985	($1,000)	"Lanthanide Ions as Luminescent Detection Chromophores"
1986	($1,000)	"Structural Studies with Binuclear Shift Reagents"
1989	($1,000)	"Metal Chelate Polymers as Selective Sorbents for Gas Chromatography"
1994	($700)	"Solid Phase Lanthanide Luminescence Detection in Liquid Chromatography"

President's Discretionary Award:

1985	($2,500)	"Book entitled NMR Shift Reagents"

1988 ($2,500) "Support for Sabbatical Leave at Duke University"

1992 ($2,500) "Summer Student Stipend Support"

Dana Apprentice Program:

1986 ($2,500) "Structural Analysis of Chemical Compounds"

Mellon Summer Research Grant:

1991 ($3,000) "Dietary Reconstruction from Chemical Residues on Prehistoric Pottery"

1993 ($3,000) "Lanthanide Luminescence Detection in Liquid Chromatography"

Mellon Professional Development Grant:

1991 ($2,000) "Lanthanide Luminescence Detection in Liquid Chromatography (to undertake research at the Free University in Amsterdam during a Short Term leave)"

Hughes Grant:

1994 ($8,000) "Lanthanide Luminescence Detection in Liquid Chromatography"

2000 ($15,000) "Lanthanide-Crown Ether Couples as Chiral NMR Shift Reagents"

2001 ($14,475) "High Performance Liquid Chromatography in the Chemistry Curriculum"

2003 ($13,540) "Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Shift Reagents"

2004 ($11,000) "Curriculum Development – Capillary Electrophoresis"

2005 ($975) "Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Shift Reagents"

2005 ($7,000) "Calix[4]resorcarenes as Chiral NMR Shift Reagents"

2006 ($7,000) "Crown Ethers as Chiral NMR Shift Reagents"

2007 ($10,000) "Calix[4]resorcarenes as Chiral NMR Shift Reagents"

Faculty Development Grant:

1997 ($10,000) To develop a new introductory course entitled "Chemical Structure and its Importance in the Environment"

2010 ($2,000) To support visits to two other laboratories during an upcoming sabbatical leave

Phillip J. Otis Faculty Curricular Development Grant:

1997 ($2,500) To develop a new introductory course entitled "Chemical Structure and its Importance in the Environment."

Merck Grant:

1999 ($5,500) "Calixarenes and Resorcarenes as Chiral NMR Shift Reagents"

Student Research Apprenticeship:

2000 ($3,000) "Gendered Language in the Presentation of Acid-Base Chemistry"

PRESENTATIONS

"Development of Contextual E-Learning Modules for Analytical Chemistry," Gordon Research Conference, Chemistry Education Research and Practice, Davidson College, June 26-July 1, **2011** (Invited).

"Writing More Competitive Research and Curriculum Grant Proposals," Quinnipiac University, April 26, **2011** (Invited)

"Creating an Institutional Culture of Research," Iona College, April 19, **2011** (Invited)

"Writing More Competitive Research Grant Proposals," State University of New York, Pottsdam, April 5, **2011** (Invited)

"NMR Spectroscopy at an Undergraduate Institution: From Undergraduate Research to its Use in Courses,"American Chemical Society National Meeting, Anaheim, CA, Mar. 27-30, **2011**.

"What is Undergraduate Research and Why do Research at a Predominantly Undergraduate Institution," American Chemical Society National Meeting, Anaheim, CA, Mar. 27-30, **2011** (Invited)

"Writing More Competitive Grant Proposals," American Chemical Society National Meeting, Anaheim, CA, Mar. 27-30, **2011** (Invited)

"Components of a Research-Supportive Undergraduate Chemistry Curriculum," Pittsburgh Conference, Atlanta, GA, Mar. 13-17, **2011** (Invited).

"Writing More Competitive Proposals to the National Science Foundation Research at Undergraduate Institutions Program," CUR Dialogue, Washington, DC, February 24-26, **2011** (Invited)

"Development of E-Learning Modules for Analytical Chemistry," National Science Foundation CCLI Meeting for PIs, Washington, DC, Jan. 24-25, **2011** (Invited).

"The Use of NMR Spectroscopy for Chiral Discrimination," University of Texas, Arlington, Dec. 8, **2010** (Invited).

"Succeeding as a Faculty Member at a Primarily Undergraduate Institution," University of California, Riverside, Nov. 10, **2010** (Invited).

"Chiral Receptor Compounds as Enantioselective NMR Shift Reagents and Catalysts for Curricular Reform," University of California, Riverside, Nov. 4, **2010** (Invited).

"Conceptual Issues about Undergraduate Research," International Perspectives on Undergraduate Research and Inquiry, Liverpool, England, Oct. 19, **2010** (Opening plenary address - invited).

"National Science Foundation – Transforming Undergraduate Education in STEM (TUES) Program," Bethel College, June 3-4, **2010** (Invited).

"Creating Time for Scholarly Work", Bethel College, June 3-4, **2010** (Invited).

"Funding for Scholarly Work and Curriculum Development", Bethel College, June 3-4, **2010** (Invited).

"Calix[4]resorcinarenes as Water-Soluble Enantioselective NMR Shift Reagents (and Asymmetric Catalysts?)", NSF-sponsored Workshop in Inorganic Chemistry, Santa Fe, NM, May 18-21, **2010** (Invited).

"Initiating and Sustaining a Productive Research Program at a Predominantly Undergraduate Institution" American Chemical Society National Meeting, San Francisco, CA, March 20-25, **2010** (Award Address – ACS Award for Research at an Undergraduate Institution)

"Development and Dissemination of E-Learning Modules Through the Analytical Sciences Digital Library," American Chemical Society National Meeting, San Francisco, CA, March 20-25, **2010** (Invited)

"Initiating and Sustaining Research at Predominantly Undergraduate Institution" Pittsburgh Conference, Orlando, FL, February 28-March 3, **2010** (Invited)

"Collaborative- and Project-based Learning in the Undergraduate Analytical Chemistry Curriculum," Pittsburgh Conference, Orlando, FL, February 28-March 3, **2010**

"Initiating and Sustaining a Research Program at a Predominantly Undergraduate Institution," CUR Dialogue, Washington, DC, February 25-27, **2010** (Invited plenary address)

"Writing More Competitive Proposals to the National Science Foundation Research at Undergraduate Institutions Program," CUR Dialogue, Washington, DC, February 25-27, **2010** (Invited)

"Balancing the Demands: Succeeding at a Faculty Position at a Predominantly Undergraduate Institution," Vermont Genomics Network Professional Development Seminar, St. Michael's College, Burlington VT, January 23, **2010** (Invited keynote address).

"Chiral Receptor Compounds as Enantioselective NMR Shift Reagents and Catalysts for Curricular Reform," Indiana University-Purdue University Indianapolis, November 4, **2009** (Invited).

"The Analytical Sciences Digital Library," Euroanalysis 2009, Innsbruck, Austria, Sept 6-10, **2009** (Invited keynote address).

"Development of Curricular Material for Chemical Equilibrium and Separation Science," Analytical Sciences Digital Library Curriculum Development Workshop, University of Kansas, July 19-23, **2009** (Invited).

"Why Should Undergraduates and Undergraduate Institutions be Involved in Transformative Research," Council on Undergraduate Research Transformative Research Summit, Snowbird, UT, June 10-12, **2009** (Invited opening plenary address).

"Instituting Research at a Predominantly Undergraduate Institution," Butler University, April 23, **2009** (Invited).

"Writing More Competitive NSF-Research at Undergraduate Institutions Proposals," CUR Dialogue, Alexandria, VA, April 2-4, **2009**.

"What is Undergraduate Research and Why do Research at a Predominantly Undergraduate Institution," American Chemical Society National Meeting, Salt Lake City, UT, March 22-26, **2009** (Invited)

"Writing More Competitive Grant Proposals," American Chemical Society National Meeting, Salt Lake City, UT, March 22-26, **2009** (Invited)

"Collaborative and Project-Based Learning in Analytical Chemistry," Pittsburgh Conference, Chicago, IL, March 6-11, **2009** (Invited)

"Chiral Receptor Compounds as Enantioselective NMR Shift Reagents and Catalysts for Curricular Reform," Middlebury College, February 13, **2009** (Invited).

"Succeeding as a Faculty Member at a Primarily Undergraduate Institution," Indiana University, December 4, **2008** (Invited).

"Chiral Receptor Compounds as Enantioselective NMR Shift Reagents and Catalysts for Curricular Reform," Brigham Young University, October 16, **2008** (Invited).

"Nefertari, Vishnu, Pencils, and Thalidomide: Stories of Molecular and Other Handedness," Eastern Oregon University, October 9, **2008** (Invited).

"Writing More Competitive Grant Proposals," American Chemical Society Petroleum Research Fund Workshop, Washington, DC, August 5-7, **2008**. (Invited)

"Writing More Competitive NSF-Research at Undergraduate Institutions Proposals," CUR 2008 National Conference, St. Joseph, Minnesota, June 21-24, **2008**.

"Writing More Competitive NSF Course, Curriculum and Laboratory Improvement Proposals," CUR 2008 National Conference, St. Joseph, Minnesota, June 21-24, **2008**.

"What is Undergraduate Research and Why do Research at a Predominantly Undergraduate Institution," American Chemical Society National Meeting, New Orleans, LA, April 4-9, **2008** (Invited)

"Writing More Competitive Grant Proposals," American Chemical Society National Meeting, New Orleans, LA, April 4-9, **2008** (Invited)

"Teaching Pedagogy: The Advantage of Non-traditional Approaches," Pittsburgh Conference, New Orleans, LA, March 3-7, **2008** (Invited)

"External Grant Support for Instruction and Research," Hobart and William Smith Colleges, Geneva, NY, February 23, **2008** (Invited).

"Nefertari, Vishnu, Pencils, and Thalidomide: Stories of Molecular and other Handedness", Birmingham and Southern College, Birmingham, AL, October 4, **2007** (Invited).

"Cyclodextrins, Crown Ethers, and Calix[4]resorcarenes as Enantioselective NMR Shift Reagents, Chirality **2007**: ISCD 19, San Diego, CA, June 8-11 (Invited Keynote Address)

"External Grant Support for Instruction and Research," Hobart and William Smith Colleges, Geneva, NY, May 19, **2007** (Invited).

"What is Undergraduate Research and Why do Research at a Predominantly Undergraduate Institution," American Chemical Society National Meeting, Chicago, IL, March 24-29, **2007** (Invited)

"Writing More Competitive Grant Proposals," American Chemical Society National Meeting, Chicago, IL, March 24-29, **2007** (Invited)

"NSF Research at Undergraduate Institutions Program: Advice on Writing more Competitive Proposals," Council on Undergraduate Research Dialogue, Arlington, VA, March 8-10, **2007** (Invited)

"Calix[4]resorcarenes, Cyclodextrins, and Crown Ethers as Chiral NMR Shift Reagents," University of Richmond, Richmond, VA, November 3, **2006** (Invited).

"Inquiry-based Instructional Methods in the Classroom and Laboratory," Grambling State University, Grambling, LA, April 26, **2006** (Invited).

"Components of a Research-supportive Curriculum," American Chemical Society National Meeting, Atlanta, GA, March 26-30, **2006** (Invited)

"Writing More Competitive Grant Proposals," American Chemical Society National Meeting, Atlanta, GA, March 26-30, **2006** (Invited)

"What is Undergraduate Research and Why do Research at a Predominantly Undergraduate Institution?", American Chemical Society National Meeting, Atlanta, GA, March 26-30, **2006** (Invited)

"Creating Time for Scholarly Work," Luther College, Decorah, IA, February 14, **2006** (Invited)

"Water-soluble Calix[4]resorcarenes as Enantioselective NMR Shift Reagents for Aromatic Compounds," International Chirality Symposium, Parma, Italy, September 11-14, **2005**.

"Chiral NMR Shift Reagents – Broader Impacts," at the Broader Impacts Showcase, American Chemical Society National Meeting, Washington, DC, August 29-September 2, **2005** (Invited)

"Succeeding in a Faculty Position at a Predominantly Undergraduate Institution," University of Arizona, July 26, **2005** (Invited).

"Succeeding in a Faculty Position at a Predominantly Undergraduate Institution," University of Massachusetts, Amherst, July 19, **2005** (Invited).

"NSF Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA)," Council on Undergraduate Research Dialogue, Arlington, VA, April 17-19, **2005** (Invited)

"Outcomes of the Undergraduate Research Summit: Supporting Undergraduate Research through Extramural Grants," Council on Undergraduate Research Dialogue, Arlington, VA, April 17-19, **2005**.

"What is Undergraduate Research and Why do Research at a Predominantly Undergraduate Institution," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005** (Invited)

"Writing More Competitive Grant Proposals," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005** (Invited)

"What do we Need and Hope to Learn Through Assessment Studies of Undergraduate Research," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005** (Invited)

"Why Use Cooperative and Problem-based Learning," Pittsburgh Conference, Orlando, FL, Feb. 28-March 3, **2005** (Invited)

"Undergraduate Research as a Vehicle and Inspiration for Enhanced Student Learning," Middle Tennessee State University, Murfreesboro, TN, February 1, **2005** (Invited).

"Right-handed Sugar Doughnuts: Nutritional Food for Undergraduates and Their Faculty," Belmont University, Nashville, TN, January 31, **2005** (Invited – Vaughn Distinguished Scientist Lecture)

"Outcomes of the Undergraduate Research Summit," Southeast Regional American Chemical Society Meeting, Raleigh, NC, November 10-13, **2004**.

"The Attributes of a General Education in the Sciences," General Education Science Workshop 2004, Union College, Schenectady, NY, Oct 14-16, **2004** (Featured speaker).

"Outcomes of the Undergraduate Research Summit," Southwest Regional American Chemical Society Meeting, Fort Worth, TX , September 28-Oct 2, **2004**.

"Outcomes of the Undergraduate Research Summit," Implications of the NIH Roadmap For Undergraduate Life Sciences Education, Juniata College, Huntingdon, PA, August 9-10, **2004** (Invited).

"Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Solvating Agents," Chirality 2004 – International Chirality Symposium, New York City, July 11-14, **2004**.

"Pastoral Visions, Wilderness Dreams," The McLaughlin Foundation, South Paris, ME, July 8, **2004** (Invited).

"Successful NSF-CCLI and CAREER Proposals: Reviewer's Perspectives," CUR 2004 National Conference, La Crosse, WI, June 23-26, **2004**.

"Undergraduate Research in Chemistry Involving Partnerships," CUR 2004 National Conference, La Crosse, WI, June 23-26, **2004**.

"Outcomes from the Undergraduate Research Summit in Chemistry," CUR 2004 National Conference, La Crosse, WI, June 23-26, **2004**.

"Curricular Elements that Enhance Undergraduate Research," CUR 2004 National Conference, La Crosse, WI, June 23-26, **2004**.

"Chemical Structure and its Importance in the Environment: An Alternative Introductory Course for Chemistry Majors at Bates College," Conference of the Course, Curriculum, and Laboratory Improvement (CCLI) Program of the National Science Foundation, Crystal City, VA, April 16-18, **2004** (Invited).

"The Value of a Postdoctoral Experience at an Undergraduate Institution," Wenzel, T. J.; Dignam, C. F., 2nd Convocation of Enhancing the Postdoctoral Experience for Scientists and Engineers, Washington, DC, April 15, **2004** (Invited).

"Components of a Research-Supportive Curriculum," American Chemical Society National Meeting, Anaheim, CA, March 27-31, **2004** (Invited)

"Curricular Reform in Analytical Chemistry," University of North Carolina, Chapel Hill, March 22, **2004** (Invited).

"Outcomes from the Undergraduate Research Summit Meeting," Association of American Colleges and Universities Annual Meeting, Washington, DC, Jan 21-24, **2004**.

"Outcomes of the Undergraduate Research Summit: Goals and Assessment," Gordon Research Conference on Chemistry Education Research and Practice, Ventura, CA, Jan. 1-9, **2004**. (Invited)

"Curricular Reform in Analytical Chemistry," University of Delaware, Nov. 3, **2003** (Invited).

"Enantiodistinction in NMR Spectroscopy Using Lanthanide-Chiral Solvating Agent Couples," 15th International Symposium on Chirality, Shizuoka, Japan, Oct. 20-23, **2003**.

"A Research-Supportive Curriculum," Hendrix College, Conway, AR, Sept. 29, **2003** (Invited).

"Chiral Recognition in NMR Spectroscopy: Using Lanthanide-Chiral Solvating Agent Couples," Hendrix College, Conway, AR, Sept. 29, **2003** (Invited).

"Teaching and Research at an Undergraduate Institution," University of New Hampshire, April 11, **2003** (Invited).

"Writing a Follow-on Grant Proposal," CUR Dialogue: The Art of Grantmanship, Fairfax, VA, Feb. 23-25, **2003** (Invited).

"NSF Research in Undergraduate Institutions (RUI) and Research Opportunities Awards (ROA) Programs," CUR Dialogue: The Art of Grantmanship, Fairfax, VA, Feb. 23-25, **2003** (Invited).

"Proposal Writing: Tales from the Trenches," CUR Dialogue: The Art of Grantmanship, Fairfax, VA, Feb. 23-25, **2003** (Invited opening plenary address).

"The Use of Lanthanide-Chiral Solvating Agent Couples as Chiral NMR Shift Reagents," Bowdoin College, Nov. 15, **2002** (Invited).

"The Use of Lanthanide-Chiral Solvating Agent Couples as Chiral NMR Shift Reagents," University of South Dakota, Nov. 4, **2002** (Invited).

"Panel Presentation: Models of Undergraduate Research and Creative Activity: A Dialogue with CUR Presidents," University of South Dakota, Nov. 4, **2002** (Invited).

"Panel Presentation: Problem-Based Learning in Analytical Chemistry," Federation of Analytical Chemistry and Spectroscopy Societies meeting, Providence, RI, Oct. 13-17, **2002** (Invited).

"Lanthanide-Chiral Solvating Agent Couples as Chiral NMR Shift Reagents," 14th International Symposium on Chirality, Hamburg, Germany, Sept. 8-12, **2002** (Invited plenary address).

"What's Involved in Doing 'Productive' Undergraduate Research at a Predominantly Undergraduate Institution," 17th Biennial Conference on Chemical Education, Bellingham, WA, July 28 - August 1, **2002** (Invited).

"Analytical Science: Teaching in Ways that Promote Better Learning," Education Forum 2002, Problem-Based Learning: The Way Forward, Royal Society of Chemistry, University of Huddersfield, United Kingdom, July 3, **2002** (Invited plenary address).

"Right-handed Sugar Doughnuts: Nutritional Food for Undergraduates," Council on Undergraduate Research Fellows Award Address, CUR 2002 National Conference, New London, CT, June 19-22, **2002** (Invited).

"Funding Undergraduate Research: Importance and Availability of External Sources of Support," American Chemical Society, National Conference, Orlando, FL, Apr. 7-10, **2002** (Invited).

"Undergraduate Research at Undergraduate Institutions: 'Talking the Talk' and 'Walking the Walk'", American Chemistry Society, National Conference, Orlando, FL, Apr. 7-10, **2002** (Invited).

"Curricular Reform in Analytical Chemistry," University of Michigan, Nov. 30, **2001** (Invited).

"Problem-Based Learning in Analytical Chemistry: Panel Presentation," American Chemical Society, National Conference, Chicago, IL, Aug. 26-29, **2001** (Invited).

"Impact of ILI and CCLI Awards on the General and Analytical Chemistry Curriculum at Bates College," American Chemical Society, National Conference, Chicago, IL, Aug. 26-29, **2001** (Invited).

"What is Undergraduate Research," Practice-Oriented Education Conference, Boston, MA, Apr. 25-27, **2001** (Invited).

"Problem-based Learning in Analytical Chemistry," Pacifichem Conference, Honolulu, HI, Dec. 14-19, **2000** (Invited).

"Undergraduate Analytical Chemistry: Lessons from the Second Millennium as a Guide for Teaching in the Third," Eastern Analytical Symposium, Atlantic City, NJ, Oct. 29-Nov. 3, **2000** (Invited).

"The Role of Textbooks in Problem-based Learning," Federation of Analytical Chemistry and Spectroscopy Societies Conference, Nashville, TN, Sept. 24-28, **2000** (Invited).

"Succeeding as a Faculty Member at an Undergraduate Institution," American Chemical Society, National Conference, Washington, DC, Aug. 19-23, **2000** (Invited)

"Best Practices in Analytical Chemistry - Panel Presentation," Federation of Analytical Chemistry and Spectroscopy Societies Conference, Vancouver, BC, Oct. 24-29, **1999** (Invited).

"All the World's a Sample," American Chemical Society, National Conference, New Orleans, LA, Aug. 22-26, **1999** (Invited - Award Address)

"Active Learning in Analytical Chemistry," American Chemical Society, National Conference, New Orleans, LA, Aug. 22-26, **1999** (Invited - Award Symposium)

"Lanthanide-Crown Ether Couples as Chiral NMR Shift Reagents" 11th International Symposium on Chiral Discrimination, Chicago, IL, July 25-28, **1999**.

"Institutionalizing Undergraduate Research: Why Its Important and Elements of Some Successful Program," Northeastern University, December 1, **1998** (Invited).

"Undergraduate Research: Chemistry Education at its Best," American Chemical Society, National Conference, Boston, MA, Aug. 23-26, **1998** (Invited)

"A New Approach to Teaching Undergraduate Analytical Chemistry," American Chemical Society, National Conference, Boston, MA, Aug. 23-26, **1998** (Invited)

"A New Approach to Teaching Undergraduate Analytical Chemistry," Pittsburgh Conference, New Orleans, LA, Feb. 28-March 4, **1998** (Invited).

"A New Approach to Teaching Undergraduate Analytical Chemistry," University of Colorado, December 8, **1998** (Invited).

"A New Approach to Undergraduate Analytical Chemistry," at the Macro-Research Opportunity Awards Reunion, University of Kansas, July 10-12, **1997** (Invited guest speaker)

"A New Approach to Undergraduate Analytical Chemistry," at an NSF-sponsored workshop entitled "Curricular Development in Analytical Sciences," Atlanta, GA, Mar. 13-15, **1997** (Invited).

"Undergraduate Analytical Chemistry: Relegating the Quant/Instrumental Mentality to the Scrap Heap," University of New Hampshire, January 30, **1997** (Invited)

"Undergraduate Analytical Chemistry: Relegating the Quant/Instrumental Mentality to the Scrap Heap," 14th Biennial Conference on Chemical Education," Clemson, SC, Aug. 4-8, **1996**

"Undergraduate Research: Chemistry Education at Its Best," 14th Biennial Conference on Chemical Education," Clemson, SC, Aug. 4-8, **1996** (Invited)

"Lanthanide-Cyclodextrin Complexes as Chiral NMR Shift Reagents," 22nd Annual Conference of the Federation of Analytical Chemistry and Spectroscopy Societies, Cincinnati, OH, Oct. 15-20, **1995** (Invited).

"The Status of Undergraduate Research in Colleges and Universities," Sixth Annual Student/Faculty Research Days, University of New England, Biddeford, ME, May 4-5, **1995** (Invited Keynote Address).

"Mechanism and Use of Cyclodextrin-Lanthanide Ion Chelates as Chiral NMR Shift Reagents," Sixth National Conference on Chiral Discrimination, St. Louis, MO, Apr. 26-28, **1995** (Invited Keynote Address).

"Teacher-Scholar vs. Scholar-Teacher," Ninth National Conference on Undergraduate Research, Union College, Schenectady, NY, April 20-22, **1995** (Invited Panel Participant).

"An Alternative Format for Teaching Analytical Chemistry to Undergraduates," Fifth National Conference of the Council on Undergraduate Research, Lewiston, ME, June 23-25, **1994** (Invited).

"Lanthanide-Cyclodextrin Complexes as Chiral NMR Shift Reagents," Free University (Amsterdam), April 11, **1994** (Invited).

"Selective Sorbents for the Pre-Treatment of Environmental Samples," Bowdoin College, February 10, **1994** (Invited).

"The Role of the Council on Undergraduate Research in the Undergraduate Research Program," Eastern Analytical Symposium, Somerset, NJ, Nov. 15-18, **1993** (Invited).

"Supercritical Fluid Extraction of Metal-Containing Selective Sorbents," Free University (Amsterdam), July 8, **1993** (Invited).

"Chiral NMR Shift Reagents," Colby College, April 6, **1993** (Invited).

"NEAACC Inspiration - An Alternative Format for Teaching Analytical Chemistry to Undergraduates," New England Academic Analytical Chemistry Conference, Fairhaven, MA, Oct. 23-24, **1992**.

"Supercritical Fluid Extraction of Metal Chelate Polymers," Saint Joseph College, Oct. 22, **1992** (Invited).

"Supercritical Fluid Extraction of Metal-Containing Selective Sorbents," New England Academic Analytical Chemistry Conference, Kennebunkport, ME, Oct. 25-26, **1991**.

"NMR Shift Reagents - New Approaches to Chiral Resolution," University of Massachusetts at Amherst, Oct. 22, **1991** (Invited).

"Lanthanide Luminescence Detection in Liquid Chromatography," Bowdoin College, Mar. **1991** (Invited).

"Chiral Lanthanide NMR Shift Reagents," New England Academic Analytical Chemistry Conference, Bolton Valley, VT, Nov. 2-3, **1990**.

"Spectroscopic Studies of Pyrene on Silica Interfaces," University of Vermont, Nov. 1, **1990** (Invited)

"Spectral Anomalies in Pyrene Luminescence in Adsorbed and Covalently-Bound States", Pittsburgh Conference, Atlanta, GA, Mar. 3-7, **1989**.

"HPLC in the Undergraduate Curriculum in Chemistry," National American Chemical Society Meeting, New Orleans, August 30-September 4, **1987**.

"The Use of Terbium(III) and Europium(III) as Luminescent Chromophores for Liquid Chromatographic Detection," Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 4-7, **1986**. (Invited)

"The Use of Terbium(III) and Europium(III) as Luminescent Chromophores for Liquid Chromatographic Detection," Tenth International Symposium on Column Liquid Chromatography, San Francisco, CA, May 18-23, **1986**.

"Metal Chelates as NMR Shift Reagents and Selective Sorbents for Gas Chromatography," University of New Hampshire, October 11, **1983**. (Invited)

"Aqueous Relaxation Reagents for Carbon-13 and Nitrogen-15 NMR Spectroscopy," Rocky Mountain Analytical Conference, Denver, CO, August **1981**.

"Water-Soluble Gadolinium(III) Chelates as NMR Paramagnetic Relaxation Reagents," Second Chemical Congress of the North American Continent, Las Vegas, NV, August, **1980**.

"New Binuclear Shift Reagents for Altering NMR Spectra of Aromatic, Olefinic, and Halogenated Compounds, Rocky Mountain Analytical Conference, Denver, CO, August **1980**.

"Binuclear Complexes of Lanthanide(III) and Silver(I) and Their Function as Shift Reagents for Aromatic and Olefinic Compounds," Southwest Regional American Chemical Society Meeting, Salt Lake City, UT, June **1980**.

"New Binuclear NMR Shift Reagents Effective for Altering the Spectra of Aromatic, Olefinic, and Phosphine Compounds," National American Chemical Society Meeting, Houston, TX, March **1980**.

WORKSHOPS

"Proposal Writing: Research and Curricular Grants in the Natural and Social Sciences," Quinnipiac University, April 26, **2011**.

"Proposal Writing: Research and Curricular Grants," Iona College, April 19, **2011**.

"Proposal Writing: Research and Curricular Grants," State University of New York, Pottsdam, April, 5, **2011**.

"Proposal Writing: Beyond the Basics: Research Grants in the Sciences," CUR Dialogue, Washington, DC, February 26-27, **2011**.

"Inquiry-Based Learning," National Science Foundation CCLI Meeting for PIs, Washington, DC, Jan. 24-25, **2011**.

"Proposal Writing: Beyond the Basics: Research Grants in the Sciences," CUR Dialogue, Washington, DC, February 27-28, **2010**.

Workshop Leader: "Research Grants in the Sciences," CUR Dialogue, Alexandria, VA, April 5-6, **2009**.

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, March 12-16, Orlando, FL, **2006**.

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, February 28-March 3, Orlando, FL**2005**.

Workshop Co-leader: Starting a Successful Research Program with Undergraduates," American Chemical Society National Meeting, Anaheim, CA, March 27-31, **2004**.

Workshop Leader: "Current Issues in Analytical Education," Pittsburgh Conference, March 7-12, **2004**, Chicago, IL.

Short-course Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, March 9-14, **2003**, Orlando, FL.

Workshop Leader: "Problem-Based Learning Methods," Education Forum 2002, Problem-Based Learning: The Way Forward, Royal Society of Chemistry, University of Huddersfield, United Kingdom, July 3, **2002**.

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, March 17-21, **2002**, New Orleans, LA.

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, March 4-8, **2001**, New Orleans, LA.

Workshop Leader: "Analytical Chemistry: Project-Based Laboratories," July 9-21, **2000**, Bates College, Lewiston, ME. Organized through the Center for Chemical Education at Miami University, Ohio.

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, March 11-13, **2000**, New Orleans, LA.

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Pittsburgh Conference, March 7-8, **1999**, Orlando, Florida

Workshop Leader: "Problem-Based Learning in Analytical Chemistry," Southeast Regional American Chemical Society Meeting, Nov. 6-8, **1998**, Research Triangle Park, North Carolina.

Workshop Leader: "Analytical Chemistry: Project-Based Laboratories," July 6-17, **1998**, Bates College, Lewiston, ME. Organized through the Center for Chemical Education at Miami University, Ohio.

CHAIRED SYMPOSIA

"Sustaining Research at a Predominately Undergraduate Institution: Faculty, Departmental, and Institutional Strategies for Success." American Chemical Society National Meeting, Salt Lake City, UT, March 22-26, **2009.**

"Designing a Research-supportive Undergraduate Curriculum," American Chemical Society National Meeting, Atlanta, GA, March 26-30, **2006.**

"Conducting Research at a Predominantly Undergraduate Institution: Faculty Strategies for Success,: American Chemical Society National Meeting, Atlanta, GA, March 26-30, **2006.**

"Research at Undergraduate Institutions: Establishing a Departmental Culture of Research," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005.**

"Undergraduate Research as a Way to Recruit and Retain Students in Chemistry," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005.**

"Starting a Successful Research Program at a Predominantly Undergraduate Institution," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005.**

"Outcomes of the Undergraduate Research Summit," Southeast Regional American Chemical Society Meeting, Raleigh, NC, November 10-13, **2004**.

"Outcomes of the Undergraduate Research Summit," Southwest Regional American Chemical Society Meeting, Fort Worth, TX , September 28-Oct 2, **2004**.

"Exploring Alliances and Partnerships in Undergraduate Research: Partnerships Involving Predominantly Undergraduate Institutions," American Chemical Society National Meeting, Anaheim, CA, March 27-31, **2004**.

"Research at Undergraduate Institutions: Providing the Appropriate Infrastructure." American Chemical Society National Meeting, Anaheim, CA, March 27-31, **2004**.

"Research at Undergraduate Institutions: The Vital Faculty" American Chemical Society National Meeting, Anaheim, CA, March 27-31, **2004**.

"The Role of Research in the Undergraduate Curriculum," Gordon Research Conference on Chemistry Education Research and Practice, Ventura, CA, Jan 4-9, **2004**.

"New Models for Conducting Research at Undergraduate Institutions," American Chemical Society, Chemical Education Division, National Conference, New Orleans, LA, March 23-26, **2003**.

"Problem-Based Learning in Analytical Chemistry," Federation of Analytical Chemistry and Spectroscopy Societies conference, Providence, RI, Oct. 13-17, **2002**.

"Problem-Based Learning in Analytical Chemistry," American Chemical Society, Chemical Education Division, National Conference, Chicago, IL, Aug. 26-30, **2001**.

"Best Practices in Analytical Chemistry," Federation of Analytical Chemistry and Spectroscopy Societies Conference, Vancouver, BC, Oct. 24-29, **1999**.

"Problem-Based Learning in Analytical Chemistry," American Chemical Society, Analytical Division, National Conference, Boston, MA, Aug. 23-26, **1998**.

"NMR Spectroscopy," 22nd Annual Conference of the Federation of Analytical Chemistry and Spectroscopy Societies, Cincinnati, OH, Oct. 15-20, **1995**.

"Advances in Chromatography" Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 4-7, **1986**.

SHORT COURSES

"Seminar on NMR Spectroscopy Methods for Studying Chirality", Chirality 2008: ISCD 20, Geneva, Switzerland, July 6-9, **2008**.

"Seminar on NMR Spectroscopy Methods for Studying Chirality", Chirality 2007: ISCD 19, San Diego, CA, June 8-11, **2007**.

STUDENT PRESENTATIONS
(by students working in my laboratory)

"Calix[4]resorcinarenes and Cationic Cyclodextrins as Water-soluble Enantioselective NMR Shift Reagents," Chirality 21, Breckinridge, CO, July 12-15, **2009** (Ngoc Pham, Cora Chisholm)

"Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Discriminating Agents," American Chemical Society National Meeting, New Orleans, LA, April 4-9, **2008** (Katelyn Provencher)

"Water-soluble Calix[4]resorcinarenes as Chiral NMR Solvating Agents," American Chemical Society National Meeting, New Orleans, LA, April 4-9, **2008** (Kaitlin Hagan)

"Chiral NMR Discrimination of Secondary Amines Using (18-Crown-6)-2,3,11,12-tetracarboxylic Acid," American Chemical Society National Meeting, Chicago, IL, March 24-29, **2007** (Ann Lovely)

"Calix[4]resorcarenes as Chiral NMR Discriminating Agents," American Chemical Society National Meeting, Chicago, IL, March 24-29, **2007** (Courtney O'Farrell)

"L-proline Derivatives of Tetrasulfonated Calix[4]resorcarenes and Their Lanthanide Complexes as CSAs in NMR Spectroscopy," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005** (Chris Richards)

"Carboxymethylated Cyclodextrins as Chiral NMR Discriminating Agents for Cationic Substrates," American Chemical Society National Meeting, San Diego, CA, March 13-17, **2005** (Patrick Cunningham)

Calix[4]resorcarene Derivatives as Chiral NMR Discriminating Agents," Chirality 2004 – International Chirality Symposium, New York City, July 11-14, **2004** (Jason Zopf).

"Chiral Amino Acid Derivatives of Calix[4]arenes for use as Chiral Solvating Agents in NMR Spectroscopy," Chirality 2004 – International Chirality Symposium, New York City, July 11-14, **2004** (Chris Richards).

"Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Solvating Agents," American Chemical Society National Meeting, Anaheim, CA, March 27-31, **2004** (Lauren Randall, Renee Blacken, Susan French).

"Carboxymethylated Cyclodextrins and their Lanthanide Complexes as Chiral NMR Solvating Agents," American Chemical Society National Conference, New Orleans, LA, March 23-26, **2003** (Stella Aniagyei).

"Calix[4]arenas and Calix[4]resorcarenes as Chiral NMR Solvating Agents," American Chemical Society National Conference, New Orleans, LA, March 23-26, **2003** (James Wilcox).

"Crown Ethers and their Ytterbium(III) Complexes as Chiral NMR Solvating Agents," American Chemical Society National Conference, New Orleans, LA, March 23-26, **2003** (Bailey Freeman).

"Chiral Calixarenes and their Lanthanide Couples as Chiral NMR Shift Reagents," American Chemical Society National Conference, Orlando, FL, Apr 7-10, **2002** (Kristin Smith)

"(+)-(18-Crown-6)-2,3,11,12-Tetracarboxylic Acid and Its Ytterbium(III) Complex as Chiral NMR Discriminating Agents," National American Chemical Society Conference, San Francisco, CA, March 26-30, **2000** (Jolene Thurston)

"Lanthanide-Cyclodextrin Complexes as Chiral NMR Shift Reagents," International Symposium on Chiral Discrimination, Chicago, IL, July 25-28, **1999** (Amanda Colby)

"Lanthanide-Chiral Carboxylate Complexes as Chiral NMR Shift Reagents," International Symposium on Chiral Discrimination, Chicago, IL, July 25-28, **1999** (Laura DiLorenzo)

"Lanthanide-Crown Ether Couples as Chiral NMR Shift Reagents," American Chemical Society National Conference, Boston, MA, August 23-27, **1998** (Melissa Vining)

"Synthesis of an Organic-Soluble Lanthanide-Encapsulating Ligand for use with NMR Spectroscopy," Twelfth National Conference on Undergraduate Research, Salisbury, MD, April 23-25, **1998** (David Richard)

"Synthesis of an 18-Crown-6 Ether to be Used in Conjunction with Lanthanides as a Chiral Resolving Agent," Twelfth National Conference on Undergraduate Research, Salisbury, MD, April 23-25, **1998** (Melissa Vining)

"A Study of Cyclodextrin Inclusion Complex Geometry Using NMR Spectroscopy," Twelfth National Conference on Undergraduate Research, Salisbury, MD, April 23-25, **1998** (Jeffrey Troughton)

"Calixarenes as Chiral Resolving Agents in NMR Spectroscopy," Twelfth National Conference on Undergraduate Research, Salisbury, MD, April 23-25, **1998** (Denby Johnson)

"Lanthanide Conjugates with Organic-Soluble Chiral Resolving Agents as NMR Shift Reagents," Eleventh National Conference on Undergraduate Research, Austin, TX, April 23-27, **1997** (Rhonda Crosson)

"Geometric Inclusion Studies of Cyclodextrin-Substrate Interactions Using NMR Spectroscopy," Eleventh National Conference on Undergraduate Research, Austin, TX, April 23-27, **1997** (Bethany Pond)

"Lanthanide-Chiral Carboxylate Complexes as NMR Shift Reagents," Eleventh National Conference on Undergraduate Research, Austin, TX, April 23-27, **1997** (Kathryn Brogan)

"Lanthanide-Crown Ether Couples as Chiral NMR Shift Reagents," Tenth National Conference on Undergraduate Research, Asheville, NC, April 18-20, **1996** (Sarah Weinstein)

"Lanthanide-Chiral Carboxylate Complexes as Chiral NMR Shift Reagents," Tenth National Conference on Undergraduate Research, Asheville, NC, April 18-20, 1996 (Kathryn Brogan)

"Lanthanide-Chiral Resolving Agent Mixtures as Organic-Soluble Chiral NMR Shift Reagents," 22nd Annual Conference of the Federation of Analytical Chemistry and Spectroscopy Societies. Cincinnati, OH, October 15-20, **1995** (Sarah Weinstein)

"Organic-Soluble Lanthanide Derivatives as Chiral Resolving Agents," Ninth National Conference on Undergraduate Research, Schenectady, NY, April 20-22, **1995** (Amy Bean)

"Utility of Relaxation Time Data with Cyclodextrin-Gadolinium(III) Complexes," Ninth National Conference on Undergraduate Research, Schenectady, NY, April 20-22, **1995** (Sarah Coulter)

"Cyclodextrin-Lanthanide Complexes as Chiral NMR Resolving Agents," Ninth National Conference on Undergraduate Research, Schenectady, NY, April 20-22, **1995** (Rebecca Miles)

"Solid-Phase Lanthanide Luminescence Detection in Liquid Chromatography," Ninth National Conference on Undergraduate Research, Schenectady, NY, April 20-22, **1995** (Brooke Perrins)

"Lanthanide Luminescence Detection of Bleomycins," Seventh National Conference on Undergraduate Research, Salt Lake City, UT, Mar 25-27, **1993**. (Sharon Rapkin)

"Lanthanide-Containing Chiral NMR Shift Reagents," Seventh National Conference on Undergraduate Research, Salt Lake City, UT, Mar 25-27, **1993**. (Sarah Dunham)

"Synthesis of Highly Luminescent Anion Exchange Lanthanide Complexes", 2nd Symposium on Undergraduate Research, Groningen, The Netherlands, Nov. 27, **1992** (Johannes Vissers)

"Metal Polymers as Selective Sorbents for Gas Chromatography, Sixth National Conference on Undergraduate Research, Minneapolis, MN, Mar 26-28, **1992**. (Karen Townsend)

"Chiral NMR Shift Reagents," Sixth National Conference on Undergraduate Research, Minneapolis, MN, Mar 26-28, **1992**. (Matthew Bogyo)

PROFESSIONAL ORGANIZATIONS AND ACTIVITIES

Journal Editorial Responsibilities

Analytical Chemistry – (Published by the American Chemical Society), Contributing Editor, Educational Topics (1999-2003)

Chirality – (Published by Wiley Press) – Editorial Board Member (2005 -)

Council on Undergraduate Research Quarterly – (Published by the Council on Undergraduate Research) – Editor-in-Chief, 2001-2005

The Open Organic Chemistry Journal – (Published by Bentham Science) – Editorial Board Member (2007 -)

American Chemical Society (Member since 1978)

Analytical Division – Coordinator of Speaker's Fund for Regional Meetings (2002-2006)

Committee on Professional Training – 2011 -

Analytical Sciences Digital Library – Advisory Board Member (2003 -)

Beckman Foundation – Executive Committee Member, Beckman Scholars Program (2005-2009)

Council on Undergraduate Research (1989-)
Councilor - 1990-2005
Councilor (President Emeritus Status) – (2005-)
President-elect - 1995-1996
President - 1996-1997
Immediate Past-president - 1997-1998

Associate Editor, *CUR Newsletter*
Sources in Funding in Chemistry - 1989, 1990, 1991
Series: Research in Analytical Chemistry at Undergraduate Institutions

Editor: "Research in Chemistry at Primarily Undergraduate Institutions," Fifth Edition, 1993.

Conference Co-Chair: "The Fifth National Conference of the Council on Undergraduate Research and First National Conference of CUR Kids," Bates College, June 23-25, 1994.

Workshop and Poster Coordinator: "The Seventh National Conference of the Council on Undergraduate Research," Occidental College, June 25-28, 1998

Coordinator: CUR Institute, "How to Institutionalize Undergraduate Research," University of North Carolina, Asheville, Nov. 15-17, 1996.

Coordinator: CUR Institute, "Concerns of Mid-Career Faculty," Bates College, May 8-10, 1998

Conference Co-chair, "CUR 2004, The Tenth National Conference of the Council on Undergraduate Research," University of Wisconsin, La Crosse, June 23-26, 2004.

Editor-in-Chief, *Council on Undergraduate Research Quarterly*, 2001-2005

Steering Committee Member – CUR Dialogue Meeting, April 2-4, 2009

Steering Committee Member – CUR Summit Meeting on Transformative Research, June 11-12, 2009

National Science Foundation, Chemistry Division Workshops

Curricular Developments in the Analytical Sciences, Atlanta, GA, March 13-15, 1997 (Speaker/Participant)

Research Sites for Educators in Chemistry, Arlington, VA, March 8-10, 2002 (Participant)

Undergraduate Research Centers, Arlington, VA, March 30- April 1, 2003(Participant)

Workshop on the Postdoctorate, Arlington, VA, May 11-13, 2003 (Member of the Steering Committee)

Undergraduate Research Summit, Bates College, Lewiston, ME, August 2-4, 2003 (Host and Meeting Chair)

National Science Foundation – Chemistry Division, Research Experiences for Undergraduates Program Leadership Group (2007-2010)

Research Corporation, Models in Academic Leadership Conference, Tucson, AZ, July 29-31, 2004 - special guest

Petroleum Research Fund (American Chemical Society) – Participant in the PRF External Review Workshop, January 10-11, 2007