

## CURRICULUM VITAE

JEFFREY HOLMES BYERS  
Professor of Chemistry and Biochemistry  
Middlebury College  
Middlebury, Vermont 05753  
(802) 443-5207  
email: byers@middlebury.edu

### Education

Dartmouth College, Hanover, NH 03755: Ph.D. in Organic Chemistry, 1984.  
University of Rochester, Rochester, NY 14627: B.S. in Chemistry, 1979.

### Professional Affiliations and Honors

American Chemical Society 1979-Present.  
Organic Division 1985-Present.  
Green Mt. Section, Secretary and Newsletter Editor, 1986-1990; Chair-elect 1991-1992,  
Chair 1992-1993  
Associate Councilor 2010-2018  
Executive Board of the Petroleum Research Fund of the ACS, 2010-2016  
Council on Undergraduate Research 1989-Present.  
Recipient of 1999 Perkins Award for Outstanding Teaching in the Sciences at Middlebury,

### Professional Experience

2010-Present Middlebury College Philip Battell Stewart and Sarah Frances Cowles Stewart Professor of Chemistry. Research interests in synthetic organic chemistry, nanowire synthesis, organic free-radicals, organoselenium and heterocyclic chemistry. Primary teaching responsibilities in organic chemistry, general chemistry, and freshman seminar

1997-2010: Middlebury College. Professor of Chemistry and Biochemistry

1998-2000, 2002-2003: Middlebury College. Chair, Dept. of Chemistry and Biochemistry.

1991-1997: Middlebury College. Associate Professor of Chemistry and Biochemistry.

1990-1991: Sabbatical with Professor Gary Molander, Department of Chemistry and Biochemistry, University of Colorado, Boulder.

1986-1991: Middlebury College. Assistant Professor of Chemistry and Biochemistry

1984-1986: University of Utah. Postdoctoral Fellow with Professor Gary Keck. Development of the organic chemistry of free-radicals and organostannanes. Taught course in biochemistry for nursing and physical therapy undergraduates.

1979-1984: Dartmouth College. Thesis: Reactions of Cyclopropane Nucleophiles with Masked  $\alpha$ -Formyl Ketones. Thesis Advisor: Professor Thomas A. Spencer.

1978-1979: University of Rochester. Measurement of Carbon-14 Isotope Effects in Elimination Reactions. Advisor: Professor William H. Saunders.

### Publications (\* denotes Middlebury College Undergraduate)

"Social Networking Sites for Online Collaboration in Chemistry Courses: A Facebook Experiment" Byers, J. H. *The Chemical Educator*, **2011**.

"Radical Aromatic Substitution with Benzene Chromiumtricarbonyl" Byers, J. H.\*; Neale, N. R.\*; Alexander, J. B.\*; Gangemi, S. P.\* *Tetrahedron Lett.* **2007**, *48*, 7903-7905.

"The Radical Addition of Dimethyl 2-Ethynylcyclopropane-1,1-dicarboxylate to Electron-Rich Olefins" Byers, J. H.; Goff, P. H.\*; Janson, N. J.\*; Mazzotta, M. G.\*; Swigor, J. E. *Synthetic Commun.* **2007**, *37*, 1865-1871.

"Radical Additions to (n<sup>6</sup>-Styrene) Chromium Tricarbonyl" Byers, J. H.; Janson, N. J.\* *Organic Lett.* **2006**, *8*, 3453.

"Thiocarbonyldiimidazole" Byers, J.H. *Encyclopedia of Reagents for Organic Synthesis*, L. A. Paquette, Ed. Wiley, 2006.

"Radical Reactions Mediated by Cyclobutadienyl Chromium Tricarbonyl" Byers, J. H.; Sontum, S. F.; Dimitrova, T. S.\*; Huque, S.\*; Zhang, Y.\*; Zegarelli, B. M.\*; Jasinski, J. P.; Butcher, R. P. *Organometallics* **2006**, *25*, 3787.

"Tandem Radical-Electrophilic Annulations to Pyrrole" Byers, J. H.; DeWitt, A.\*; Nasveschuk, C. G.\*; Swigor, J. E., *Tetrahedron Lett.* **2004**, *45*, 6587-6590.

"A One-Step Radical Synthesis of Pyrrol-2-Acetic Acids", Byers, J. H.; Duff, M. P.\*; Woo, G. W.\* *Tetrahedron Lett.* **2003**, *44*, 6853-6855.

"Syntheses of 3-Acylindoles via the Alkylation of the Dianion of 3-Acetylindole", Byers, J. H.; Zhang, Y.\* *Heterocycles*, **2002**, *57*, 1293-1297.

"Tandem Radical Addition Reactions to Substituted Indoles under Atom-Transfer and Oxidative Conditions " Byers, J. H.; Kosterlitz, J. A.\*; Steinberg, P. L.\*. *C. R. Acad. Sci., Paris, Chemistry*, **2001**, *4*, 471-476. (Special issue dedicated to radical chemistry)

"Atom Transfer Reactions" Byers, J. H. in *Radicals in Organic Synthesis*, M. P. Sibi and P. Renaud, eds. Wiley-VCH **2001**.

Book Review by Byers, J. H.: "General Aspects of Free Radical Chemistry", Z. B. Alfassi, ed. in *J. Chem. Ed.*, **2000**, *77*, 565.

"Radical Aromatic Substitution via Atom-Transfer Addition"; Byers, J. H.; Campbell, J. E.\*; Knapp, F. H.\*; Thissell, J. G.\* *Tetrahedron Lett.*, **1999**, *40*, 2677.

"Radical Lactonizations at Anomalously High Concentrations"; Byers, J. H.; Shaughnessy, E. I.\*; Mackie, T. N.\* *Heterocycles*, **1998**, *48*, 2071.

"A Novel Radical-Based Synthesis of Valerolactones"; Byers, J. H.; O'Leary, B. M.\*; Zrally, M. A.\* *Synthetic Commun.*, **1996**, *26*, 4039.

"Addition of a Sulfur-Stabilized Radical to Electron-Deficient Alkenes via Phenyl Selenide Transfer"; Byers, J. H.; Whitehead, C.C.\*; Duff, M. E.\* *Tetrahedron Lett.* **1996**, *37*, 2743.

"The Synthesis of Geminal Diphosphonates via Phenyl Selenide Transfer"; Byers, J. H.; Thissell, J. G.\*; Thomas, M. A.\* *Tetrahedron Lett.* **1995**, *36*, 6403-6406.

"The Photochemical Disproportionation of Dialkyl 2,2-Di(phenylseleno) Malonate"; Byers, J. H.; Thissell, J. G.\* *Synthetic Commun.* **1995**, *25*, 21-26.

"Diphenyl Diselenide" Byers, J. H. *Encyclopedia of Reagents for Organic Synthesis* Paquette, L., Ed. **1995**.

"Diphenyl Disulfide" Byers, J. H. *Encyclopedia of Reagents for Organic Synthesis* Paquette, L., Ed. **1995**.

"Radical Addition Reactions of 2-Phenylselenopropanedioates to Alkenes and Alkynes"; Byers, J. H.; Lane, G. C.\* *J. Org. Chem.* **1993**, *58*, 3355-3360.

"Radical Addition of Varied Functionality via Phenylselenenyl Transfer"; Byers, J. H.; Harper, B. C.\* *Tetrahedron Lett.* **1992**, 6953-6954.

"Hexenyl Radical Cyclization via Phenyl Selenide Transfer"; Byers, J. H.; Gleason, T. G.\*; Knight, K. S.\* *Chem. Commun.* **1991**, 355-357.

"A Convenient Preparation of O-Acyl Formaldehyde Cyanohydrins"; Byers, J. H.; Baran, R. C.\*; Craig, M. E.\*; Jackman, J. T.\* *Org. Prep. and Proc., Int.* **1991**, 373.

"The Palladium-Catalyzed Oxidation of 2-Vinylnaphthalene: A Microscale Organic Experiment"; Byers, J. H.; Ashfaq, A. A.\*; Morse, W.\* *J. Chem. Ed.* **1990**, 67, 341-342.

"Radical Addition of Diethyl (2-Phenylseleno)propanedioate to Olefins"; Byers, J. H.; Lane, G. C.\* *Tetrahedron Lett.* **1990**, 5697-5701.

"An Improved Preparation of Gamma-Keto Cyclobutanones"; Kaydos, J.; Byers, J. H.; Spencer, T. A. *J. Org. Chem.* **1989**, 54, 4698-4700.

"A Free-Radical Addition-Fragmentation Reaction for the preparation of Vinyl Sulfones and Phosphine Oxides"; Keck, G. E.; Byers, J. H.; Tafesh, A. M. *J. Org. Chem.* **1988**, 53, 1127-1128.

"A New One Electron Carbon-Carbon Bond Forming Reaction: Separation of the Chain Propagation Steps in Free-Radical Allylation"; Keck, G. E.; Byers, J. H. *J. Org. Chem.* **1985**, 50, 5442.

"A Novel 1,4 Cyclohexanone Annulation." Byers, J. H.; Spencer, T. A. *Tetrahedron Lett* **1985**, 713-716.

"Improved Preparation and New Reactions of  $\beta$ -(1-Phenylthio)-cyclopropyl Enones." Byers, J. H.; Spencer, T. A. *Tetrahedron Lett* **1985**, 717-720.

Submitted Presentations at Professional Meetings (\* denotes Middlebury College Undergraduate)

"Synthesis of conjugated polyalkenes from organometallic chromium complexes for use as molecular wires" Terrett, J. A.\*; Byers, J. H. Poster Presented at ACS National Meeting, Anaheim, CA, Poster CHED 1049 3/28/11

"Mechanistic studies on the decarboxylation of pyrroleacetic acids" Byers, J. H.; Berliner, J. L.\* Poster Presented at ACS National Meeting, Salt Lake City, UT, Poster ORGN 155, 3/22/09.

"Radical intermediates in and additions to ruthenium polyene complexes", Keenan, J. J.\*; Byers, J. H. Poster Presented at ACS National Meeting, Salt Lake City, UT, Poster CHED 845, 3/23/09.

"Radical Additions to Styrene-Transition metal Complexes" Byers, J. H.; Janson, N. J.\*; Griswold, M. K.\*; O'Mara, D. M.\* Poster Presented at ACS National Meeting, Boston, MA, Poster ORGN 556, 8/21/07.

"Radical Chemistry of Arenechromium Tricarbonyl and Cyclobutadieneiron Tricarbonyl Complexes" Byers, J. H.; Sontum, S. F.; Dimitrova, T. S.\*; Huque, S.\*; Zegarelli, B. M.\*; Zhang, Y.\*; Janson, N. J.\* Poster Presented at 2006 EUCHEM Radical Conference, Bergen, Norway, 7/10/2006.

"Radical Reactions mediated by Cyclobutadieneiron Tricarbonyl" Byers, J. H.; Zhang, Y.\*; Zegarelli, B.M.\*; Dimitrova, T.\*; Huque, S.\*; Sontum, S. F. Presented at 2005 Pacificchem meeting, Honolulu, HI, 12/17/05.

"Radical Reactions mediated by Cyclobutadieneiron Tricarbonyl" Byers, J. H.; Zhang, Y.\*; Zegarelli, B.M.\*; Dimitrova, T.\*; Huque, S.\*; Sontum, S. F. Presented at 2005 EPSCOR Annual Meeting, Burlington, VT, 8/15/05.

"Radical Reactions mediated by Cyclobutadieneiron Tricarbonyl" Byers, J. H.; Zhang, Y.\*; Zegarelli, B.M.\*; Dimitrova, T.\*; Huque, S.\*; Sontum, S. F. Presented at National Organic Symposium, Salt Lake City UT, 6/12/05. Abstract A38.

"Radical Aromatic Substitution Reactions on Arene Chromium Tricarbonyls" Janson, N. J.\*; Byers, J. H.; Alexander, J. B.\*; Gangemi, S. P.\* Presented at National Organic Symposium, Salt Lake City UT, 6/13/05. Abstract B34.

"Radical Reactions of Cyclobutadiene Iron Tricarbonyl" Zegarelli, B.\*; Byers, J. H. Presented at Pfizer Summer Research Fellow poster session, Groton, CT, 9/04.

"Radical Aromatic Substitution on Nitrogen Heterocycles" Byers, J. H.; Woo, G. W.\*; Dewitt, A. J.\*; Duff, M. P.\*; Nasveschuk, C. G.\* Presented at 19<sup>th</sup> International Congress of Heterocyclic Chemistry, Ft. Collins, CO Abstract 11-PO-27, 8/11/03.

"Activation of Benzene for Radical Addition in Organic Synthesis" Alexander, J. B.\*; Byers, J. H. Presented at Posters on the Hill, Sponsored by the Council on Undergraduate Research, Washington, D. C., 4/1/03.

"Radical Reactions of Cyclobutadieneiron Tricarbonyl" Zhang, Y.\*; Byers, J. H. Presented at Pfizer Summer Research Fellow poster session, Groton, CT, 10/4/02.

"Radical Additions to Nitrogen Heterocycles" Byers, J. H. Presented at Gordon Conference on Organic Reactions and Processes, Bristol, RI, 7/02.

"Syntheses of 3-Acylindoles via the Alkylation of the Dianion of 3-Acetylindole"; Zhang, Y.\*; Byers, J. H. Presented at National Meeting of the American Chemical Society, Orlando FL, 4/02.

"Tandem Radical Additions to Indole and Pyrrole" Byers, J. H.; Kosterlitz, J. A.\*; Nasveschuk, C. G.\*; Steinberg, P. A.\*; Northrop, B. H.\* Presented at 37<sup>th</sup> National Organic Symposium, Bozeman, MT, 6/10/01, Paper No. 56.

"Tandem Radical Additions to Nitrogen Heterocycles" Byers, J. H.; Kosterlitz, J. A.\*; Nasveschuk, C. G.\*; Steinberg, P. A.\* Presented at Pacificchem Meeting, Honolulu, HI 12/00.

"Attempted Radical Aromatic Substitution to Benzenoid Aromatics" DeWitt, A. J.\*; Byers, J. H. Presented at Pfizer Summer Research Fellow poster session, Groton, CT, 9/00.

"Tandem Radical Additions to Nitrogen Heterocycles" Byers, J. H.; Kosterlitz, J. A.\*; Nasveschuk, C. G.\*; Steinberg, P. A.\* Presented at Esther Humphrey Symposium, University of Vermont, Burlington, VT 9/30/00.

"Tandem Radical Additions to Nitrogen Heterocycles" Byers, J. H.; Kosterlitz, J. A.\*; Nasveschuk, C. G.\*; Steinberg, P. A.\* Presented at Gomberg 2000 Symposium, University of Michigan, Ann Arbor, MI 6/29/00.

"Radical Aromatic Substitution via Atom-Transfer Addition" Byers, J. H.; Campbell, J. E.\*; Knapp, F. H.\*; Kosterlitz, J. A.\*; Steinberg, P. L.\*; Thissell, J. P.\* Presented at Gordon Conference on Free Radical Reactions, Holderness, NH, 7/12/99.

"Control of Stereochemistry in Radical Aromatic Substitution via Atom-Transfer Addition" Wolkowski, J. P.\*; Byers, J. H., Presented at 217<sup>th</sup> ACS National Meeting, Anaheim, CA, 3/22/99. Paper no. CHED-288.

"Radical Aromatic Substitution At Arene Chromium Tricarbonyl Complexes" Steinberg, P. L.\*; Byers, J. H.; Neale, N. R.\*, Presented at Pfizer Summer Research Fellow poster session, Groton, CT, 9/25/98.

"Radical Aromatic Substitution Via Atom-Transfer Addition" Byers, J. H.; Campbell, J. E.\*; Knapp, F. H.\*, Presented at 216<sup>th</sup> ACS National Meeting, Boston, MA, 8/24/98, Paper no. ORGN-594.

"Radical Aromatic Substitution At Arene Chromium Tricarbonyl Complexes" Steinberg, P. L.\*; Byers, J. H.; Neale, N. R.\*, Presented at 216<sup>th</sup> ACS National Meeting, Boston, MA, 8/24/98, Paper no. CHED-274.

"Control Of Stereochemistry In Radical Aromatic Substitution Via Atom-Transfer Addition" Wolkowski, J. P.\*; Byers, J. H.; Burkett, G.C.\*, Presented at 216<sup>th</sup> ACS National Meeting, Boston, MA, 8/24/98, Paper no. CHED-273.

"Intramolecular Reactions Involving Radical Aromatic Substitution Via Atom Transfer" Breen, C. A.\*; Byers, J. H.; Kosterlitz, J. A.\*, Presented at 216<sup>th</sup> ACS National Meeting, Boston, MA, 8/24/98, Paper no. CHED-272.

"Addition of Iodoesters to Aromatic Heterocycles" Knapp, F. H.\*; Byers, J. H.; Thissell, J. G.\* Presented at Pfizer Summer Research Fellow poster session, Groton, CT, 9/27/96.

"Radical Lactonizations at High Concentration"; Byers, J. H.; Shaughnessy, E. I.\*; Mackie, T. N.\*, Presented at CU Roche-Syntex Symposium, Boulder, CO, 5/22/96.

"Addition of Nucleophilic Radicals via Atom Transfer"; Whitehead, C. C.\*; Byers, J. H.; Duff, M. E.\*, Presented at 211<sup>th</sup> ACS National Meeting, New Orleans, LA, 3/26/96, Paper no. CHED-502.

"Addition of Phenylselenomalonates to Indole": Byers, J. H.; Thissell, J. G.\*; Knapp, F. H.\*, Presented at 211<sup>th</sup> ACS National Meeting, New Orleans, LA, 3/25/96, Paper no. ORGN-94.

"Intermolecular Radical Reactions Involving Phenyl Selenide Transfer" Byers, J. H., Presented at Esther Humphrey Symposium, Burlington, VT, 10/94.

"Addition of Nucleophilic Radicals via Atom Transfer"; Whitehead, C. C.\*; Byers, J. H. Presented at Pfizer Summer Research Fellow poster session, Groton, CT, 9/94.

"A Novel Lactonization Procedure Involving Phenyl Selenide Transfer": Byers, J. H.; O'Leary, B. M.; Zrally, M. A., Presented at 24th Northeast Regional Meeting of the ACS, Burlington, VT, 6/22/94, Abstract no. 137.

"Carbon-Carbon Bond Formation in the Radical Addition Reactions of Phenyl Selenides to Alkenes and Alkynes": Byers, J. H.; Harper, B. C.; Lane, G. C.\*; Schuman, D. S.\*; Zrally, M. A.\*, Poster presented at 23rd National Organic Symposium, Bozeman, MT, 6/93.

"Carbon-Carbon Bond Formation in the Radical Addition Reactions of Phenyl Selenides to Alkenes and Alkynes": Byers, J. H.; Harper, B. C.; Lane, G. C.\*; Schuman, D. S.\*; Zrally, M. A.\*, Poster presented at 205th ACS National Meeting, Denver, CO, 3/31/93, Paper no. ORGN-197.

"Carbon-Carbon Bond Formation via Phenyl Selenenyl Transfer Radical Reactions"; Byers, J. H.; Lane, G.C.\*; Gleason, T. G.\*; Knight, K. S.\*, Poster presented at 22nd National Organic Symposium, Minneapolis, MN, 6/16/91, Abstract no. A-29.

"Carbon to Carbon Bond Formation with Phenylselenide Transfer"; Lane, G. C.\*; Byers, J. H. Presented at the Undergraduate Research Symposium, Rensselaer Polytechnic Institute, Troy, NY 4/20/91.

"Synthesis and Pd(II) Catalyzed Reactions of Acylstannanes"; Pringle, W. C.\*; Byers, J. H. Poster presented at Fourth National Conference on Undergraduate Research, Schenectady, NY, 4/20/90, Abstract no. CHM068.

"Free Radical Cyclization Reactions Using Boron Amine Initiators"; Ashfaq, A.\*; Byers, J. H. Poster presented at Fourth National Conference on Undergraduate Research, Schenectady, NY, 4/20/90, Abstract no. CHM104.

"Novel Synthesis of Carbon to Carbon Bonds via Phenylselenide Transfer"; Lane, G. C.\*; Byers, J. H. Poster Presented at Fourth National Conference on Undergraduate Research, Schenectady, NY 4/20/90, Abstract no. CHM105.

"Intra- and Intermolecular Reactions Involving Phenyl Selenide Transfer"; Byers, J. H.; Gleason, T. G.\*; Underwood, G. S.\*; Lane, G. C.\*, Poster presented at 8th Annual Esther Humphrey Symposium, Burlington, VT, 10/7/89.

"Radical Reactions Involving Phenyl Selenide Transfer"; Byers, J. H.; Gleason, T.\*; Knight, K.\*, Presented at 22nd Great Lakes Regional Meeting of the ACS, Duluth MN, 6/1/89, Abstract no. 92.

#### External Funding History

\$225,000 from NSF-RUI for Radical Reactions of Arene-Metal Complexes 5/09

\$600 from Organic Division of the ACS to attend ACS National Meeting, Salt Lake City Utah 3/09.

\$200,000 from NSF-MRI for "Acquisition of an LC/MS System" 2/06

\$24,900 from Vermont-EPSCOR for "Purchase of a solvent purification system" 1/05

\$5000 from Pfizer Pharmaceuticals Central Research in support of an undergraduate summer research assistant, 4/04

\$300,000 from the NSF-RUI for "Transition Metal Templated Radical Reactions" 7/03-6/07.

\$8900 from Vermont-EPSCOR for "Radical Chemistry of Cyclobutadiene Iron Tricarbonyl" 6/03-8/03.

\$5000 from Pfizer Pharmaceuticals Central Research in support of an undergraduate summer research assistant, 3/02

\$600 from the Organic Division of the ACS to attend the 37<sup>th</sup> National Organic Symposium, Bozeman, MT, 6/01.

\$5000 from Pfizer Pharmaceuticals Central Research in support of an undergraduate summer research assistant, 3/00.

\$5000 from Pfizer Pharmaceuticals Central Research in support of an undergraduate summer research assistant, 3/98.

\$139,400 from NSF-RUI for "Radical Aromatic Substitution via Atom-Transfer Addition" 4/98-5/01.

\$30,000 from ACS-PRF Type B for "Radical Aromatic Substitution via Atom-Transfer Addition" 4/98

\$5000 from Pfizer Pharmaceuticals Central Research in support of an undergraduate summer research assistant, 3/96.

\$10,000 from VT-EPSCOR in partial support of sabbatical during 1995-96 academic year.

\$122,500 from NSF-RUI for Phenyl Selenide Transfer Radical Reactions", 6/1/94-6/1/97.

\$3300 from The Council on Undergraduate Research in support of an undergraduate summer research assistant, 3/94.

\$5000 from Pfizer Pharmaceuticals Central Research in support of an undergraduate summer research assistant, 2/94.

\$805 from the Division of Organic Chemistry, American Chemical Society to attend the 23rd National Organic Symposium, 4/93.

\$11,370 from NSF-ILIP for "The Study of Molecular Asymmetry at Middlebury College, 5/92.

\$93,395 from NSF-RUI for "Phenylselenenyl Transfer Radical Reactions", 6/1/91-6/1/94.

\$631 from the Division of Organic Chemistry, American Chemical Society to attend the 22nd National Organic Symposium, 4/91.

\$29,875.80 from the National Science Foundation for "Mass Spectrometry at Middlebury", 7/89.

\$380 from the Division of Organic Chemistry, American Chemical Society to attend the 21st National Organic Symposium, 5/89.

\$20,000 from the Petroleum Research Fund for "Acylstannanes as Synthetic Reagents", 4/89-9/91.

\$81,000 from the National Science Foundation for "Nuclear Magnetic Resonance Instruction at Middlebury", 5/88.

\$15,500 from the Research Corporation for "Thermodynamic Control of the Hexenyl Radical Cyclization; Synthetic Applications", 5/87-5/89.

#### Invited Lectures

"Love, Pain, and Chocolate – Musings of a Structural Scientist on the True Meaning of Valentine's Day" Monthly meeting of the Green Mountain Section of the American Chemical Society, Middlebury, VT, 2/13/12

"Buckyballs, Tiny Machines and Nanoputians" Monthly meeting of the Green Mountain Section of the American Chemical Society., Rutland, VT, 11/09

"Radical Reactions of Transition Metal-Polyene Complexes" Presented at NERM, Hartford, CT, 10/9/09

"Buckyballs, Tiny Machines and Nanoputians" Presented at Middlebury College as part of the Faculty Lecture Series, Middlebury, VT, 1/8/09

"Love Pain, and Chocolate" Presented at 2008 New England Regional Meeting of the ACS, Burlington, VT 7/1/08.

"Radical Additions to Styrene Transition Metal Complexes" Presented at 32<sup>nd</sup> Reaction Mechanisms Conference, Chapel Hill, NC, 6/28/08.

"Transition Metal Templated Radical Reactions" Presented at Marquette University, Chemistry Department Colloquium, 2/2/07.

"Love, Pain and Chocolate – Musings of a Structural Scientist on the True Meaning of Valentine's Day" Presented to Milwaukee local section of the American Chemical Society, Milwaukee, WI, 2/1/07.

"Transition Metal Templated Radical Reactions" Presented at Dartmouth College, Chemistry Department Colloquium, 5/4/06.

"Advances in Radical Organometallics" Presented at Williams College, Chemistry Department Seminar, 9/28/05

"Love, Pain and Chocolate – Musings of a Structural Scientist on the True Meaning of Valentine's Day" Presented to Middlebury College Alumni organizations in Seattle, WA (1/19/05), Denver, CO (1/20/05), and Burlington, VT (3/10/05).

"Radical Reactions from Heterocycles to Organometallics" Presented at the University of New Hampshire, Durham, NH, Dept. of Chemistry, 11/2/04.

"Advances in Radical Aromatic Substitution" Presented at University of Rochester, Rochester, NY, Department of Chemistry 4/9/04.

“Advances in Radical Aromatic Substitution” Presented at Department of Organic Chemistry, University of Florence, Florence, Italy 3/23/04.

“Love, Pain and Chocolate – Musings of a Structural Scientist on the True Meaning of Valentine’s Day” Middlebury College Faculty Lecture Series, 2/11/04.

“Advances in Radical Aromatic Substitution” Presented at Gordon Research Conference in Physical Organic Chemistry, Holderness, NH 7/2/03.

“Radical Aromatic Substitution to Nitrogen Heterocycles” Presented at Skidmore College Seminar Series, 3/01.

“Radical Aromatic Substitution - a New Twist on an Old Reaction” Presented at Hamilton College Seminar Series, 5/2/99.

“Radical Aromatic Substitution - a New Twist on an Old Reaction” Presented at University of Maryland Seminar Series, 10/15/98.

“Radical Aromatic Substitution via Atom-Transfer Addition” Presented at 14th Annual Rocky Mt. Regional Meeting, Tuscon, AZ 3/17/98.

“Radical Aromatic Substitution via Atom-Transfer Addition” Presented at NSF Workshop on Synthetic Organic and Natural Products Chemistry, Tomales Bay, CA, 7/97.

"Phenyl Selenide Transfer Radical Reactions" Presented at Department of Chemistry Seminar Series, Queens College, Queens, NY, 9/95.

"Phenyl Selenide Transfer Radical Reactions" Presented at Department of Chemistry Seminar Series, University of Vermont, Burlington, VT, 10/95.

"Phenyl Selenide Transfer Radical Reactions" Presented at Department of Chemistry Seminar Series, Dartmouth College, Hanover, NH, 5/94.

"Free Radicals and Organostannanes in Organic Synthesis" Presented at Department of Chemistry Seminar Series, Dartmouth College, Hanover, NH, 5/87.

"Free Radicals and Organostannanes in Organic Synthesis" Presented at Department of Chemistry Seminar Series, Marquette University, Milwaukee, WI, 8/86.

Other invited lectures as part of job interviews not included

#### Online Resources

Chemistry 203: Recorded lectures for Organic Chemistry I, in support of the flipped classroom.  
<http://sites.middlebury.edu/chemistry203/>

Chemistry 204: Recorded lectures for Organic Chemistry II, in support of the flipped classroom.  
<http://sites.middlebury.edu/chem204/>

“Love, Pain, and Chocolate” [http://middmedia.middlebury.edu/middmedia/view/dir/DigitalLectureArchive-MIDD-web\\_data-middlebury-edu/file/JeffByers2122013.mp4](http://middmedia.middlebury.edu/middmedia/view/dir/DigitalLectureArchive-MIDD-web_data-middlebury-edu/file/JeffByers2122013.mp4)

The Middlebury Trailrunner: An online resource of local interest. <http://sites.middlebury.edu/trailrunner/>  
Other Professional Activities

2011-2016 – served on the Executive Board of the Petroleum Research Fund, Committee 1 (Synthetic Organic Chemistry)

2011-present -served on numerous panels reviewing organic synthesis proposals for the NSF, Washington, DC.

2009-served on the visiting committee evaluating the Department of Chemistry at Keene State College, Keene, NH

2008- served on a panel reviewing organic synthesis proposals for the NSF, Washington, DC.

2007-served on panel reviewing proposals for Vermont Genetics Network, Burlington, VT

2007- Co-led workshop on "Mentoring Undergraduate Research Students", Vermont Genetics Network, Northfield, VT, 2/2007

2006-External Referee for Swarthmore College Senior Honors Program

2004-invited participant in "Committee of Visitors" evaluating Division of Chemistry, National Science Foundation, Washington, DC

2003-Served on panel to review NSF proposals for the Chemistry REU program, Washington, DC

2003-Participant in Council on Undergraduate Research, Posters on the Hill Program, Washington, DC

2002-Participated in outside review of the Department of Chemistry, Lafayette College.

1998- Served on panel to review NSF proposals for the Chemistry CAREER Program, Washington, DC

1997-Invited participant in NSF Summer Workshop in Synthetic Organic and Natural Products Chemistry 7/97.

1995- Served on panel to review NSF proposals for the Chemistry ILI Instrumentation Program, Washington, DC

1995- Served on panel to review NSF proposals for the Chemistry CAREER Program, Washington, DC

Referee for many journals, as requested (about 5-10 submissions/year)

Frequent outside reviewer of candidates for tenure, or other promotions or awards at other institutions

Undergraduate Student Mentoring:

Mentor for >100 undergraduate research students

28 of these students have gone on to graduate school in chemistry or allied sciences

Grad school attended include Boston College, Washington State, UCLA, Wisconsin, UNC Chapel Hill, Stanford, Indiana, MIT, Harvard, New Mexico, UNH, U. Washington, Berkeley, Yale, Colorado State, Columbia and Caltech

32 of these students have gone on to medical, dental, or veterinary school