

# Jeffrey Edward Fieberg

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## Education

UNIVERSITY OF TEXAS AT AUSTIN, Austin, Texas

Ph.D., Chemistry, "Surface chemistry of methyl nitrite on Ag(111): Adsorption characteristics and state-resolved photochemical dynamics," 1998, 4.00/4.00 GPA

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, Urbana, Illinois

M.S., Chemistry, "Vibrational predissociation spectroscopy of solvated ion clusters," 1993, 3.91/4.00 GPA

CENTRE COLLEGE, Danville, Kentucky

B.S., Chemical Physics, *magna cum laude*, 1991, 3.92/4.00 cumulative GPA

## Teaching Experience

CENTRE COLLEGE, Chair, Division of Science and Mathematics, 2019-present; John H. Walkup Professor of Chemistry, 2017-present; Associate Professor of Chemistry, 2008-2017; Assistant Professor of Chemistry, 2005-2008.

### Courses on Campus:

General Chemistry I (with laboratory), 21-31 students, fall 2005, 2015, spring 2017.

General Chemistry II (with laboratory), 14-28 students, spring 2007, 2008, 2011, 2012.

General Chemistry II Laboratory, 20 students, spring 2022.

Accelerated General Chemistry (with laboratory), 24-27 students, fall 2006-2009.

Chemistry in the Modern World (for non-science majors), 28-32 students, fall 2018, 2019.

Quantum Chemistry and Spectroscopy (with laboratory), 3-21 students, 2006, 2011, 2012, 2014, 2016, 2017.

Thermodynamics and Kinetics (with laboratory), 6-14 students, 2006, 2007, 2009, 2013, 2015, 2016, 2021 (spring and fall).

Chemistry Senior Seminar, 10-15 students, spring 2015, 2016.

Materials Science, 8 students, spring 2006.

Big Bang: Developing the Evidence (with laboratory), 32 students, spring 2009, 2013, fall 2014.

Big Bang: Developing the Evidence Laboratory for non-science majors, 14-20 students, 2006, 2009, 2012, 2015, 2019, 2020.

### Study Abroad Courses:

Chemistry in Art, 20 students, taught in London, England, spring 2010.

British Scientists: Standing on the Shoulders of Giants, 27 students, London, spring 2010.

Molecular Modernism: Manet to Matisse, taught in Paris and Provence, France (cross-listed in Chemistry and Art History), 16-18 students, winter 2013, 2017, 2022, 2023.

Molecular Modernism: Manet to Marc, taught in Strasbourg (cross-listed in Chemistry and Art History), 18-24 students, fall 2013, spring 2014, fall 2017, spring 2018, fall 2022, spring 2023.

Art, Alchemy and Artillery in Alsace, taught in Strasbourg, 6-12 students, summer 2014, 2018, 2023.

France-Germany Wars, taught in Strasbourg, 23 students, fall 2017, spring 2018, fall 2022, spring 2023.

Strasbourg Science: The Prepared Mind, Strasbourg, 14-17 students, fall 2013, spring 2014.

The Physical Science of Volcanoes, New Zealand, 34 students, winter 2020 (chaperone).

### Courses taught primarily on campus with significant travel components:

Science in Art (with lab/studio), First-Year Studies course, 16 students, winter 2009, field trip to Washington D.C.

Molecular Modernism: Monet to Mondrian, First-Year Studies course, 16 students, winter 2011 (with field trips to Indianapolis and Washington D.C.), winter 2016 (field trip to Indianapolis and Chicago).

Chemical Analysis of Modernist Paintings, 14 students, winter, 2015, field trip to Indianapolis and Chicago.

GEORGETOWN COLLEGE, Assistant Professor of Chemistry, 2001-2005.  
General Chemistry I (with laboratory), 27-38 students, each fall.  
General Chemistry II (with laboratory), 29-42 students, each spring.  
Physical Chemistry I (with laboratory), 7-13 students, each fall.  
Physical Chemistry II (with laboratory), 12 students, odd springs.  
Advanced Inorganic Chemistry, 11-13 students, even springs.  
Surface and Materials Science (cross-listed in Physics), 3-6 students, even springs.  
Liberal Arts Chemistry (with laboratory), 28-40 students, spring 2003, fall 2004.  
Chemistry Senior Seminar, 6 students, fall 2003.  
Chemistry Junior Seminar, 6 students, spring 2004.  
Inorganic/Surface Chemistry Combined Laboratory, 5 students, spring 2004.  
Demonstration of Chemistry and Physics Principles, graduate education course, 6 students, summer, 2004.  
Freshman Seminar, 10-16 students, even falls.

HILLSDALE COLLEGE, Assistant Professor of Chemistry, 1998-2001.  
Physical Chemistry I (with laboratory), 5-9 students, each fall.  
Physical Chemistry II (with laboratory), 5-9 students, each spring.  
Non-majors chemistry (with laboratory), 7-48 students, every semester.  
Surface and Materials Chemistry, 6 students, spring 2000.  
General Chemistry I, 29 students, fall 2000.

UNIVERSITY OF TEXAS AT AUSTIN, Teaching Assistant, 1993-1995.  
General Chemistry I: 300 students, spring 1995.  
General Chemistry II: 32 students, fall 1994.  
Statistical Mechanics: 14 students, fall, 1994.  
Physical Chemistry laboratory: 19 students, summer 1993.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, Teaching Assistant, 1991-1993.  
Physical chemistry for biochemistry majors: 80 students, fall 1992.  
Physical chemistry lecture (thermodynamics): 25 students, spring 1992.  
Analytical laboratory: 20 students, fall 1991.

## Research Experience

CENTRE COLLEGE, 2005-present.  
Research advisor for 20 undergraduates.  
Nanotechnology, biosensors, photon-gated valves, photochemical fading of artists' materials, analysis and unrolling of ancient metal amulets, imaging and spectroscopic analyses of paintings, chemistry and fabrication of ancient glass. Chemical etching, electroless plating, current-voltage measurements, scanning electron microscopy, fluorescence microscopy, photochemistry, electrochemical reduction, x-ray fluorescence spectroscopy, x-radiography, infrared reflectography and transmittography, Raman spectroscopy.

INDIANAPOLIS MUSEUM OF ART, 2011-2012, 2015, 2016, 2019, 2021.  
Sabbatical Leave Research Fellow in Technical Art History, 2011-12 and 2019.  
Technical analyses of paintings from European modern collection, including works by Vincent van Gogh, Paul Gauguin, Emile Bernard and Giorgio de Chirico. X-ray fluorescence spectroscopy, Raman microspectroscopy, infrared microspectroscopy, scanning electron microscopy/energy dispersive x-ray spectroscopy, infrared reflectography and transmittography, x-radiography, ultraviolet fluorescence photography.

UNIVERSITY OF FLORIDA, Charles R. Martin, collaborator, 2006.  
Nanotechnology and biosensors. Chemical etching, electroless plating, current-voltage measurements.

GEORGETOWN COLLEGE and HILLSDALE COLLEGE, 1998-2005.  
Research advisor for 8 undergraduates.  
Photochemistry of self-assembled monolayers; chemical vapor deposition. Ultrahigh vacuum surface science, reflection-absorption infrared spectroscopy, surface photochemistry.

UNIVERSITY OF TEXAS AT AUSTIN, J. Michael White, advisor, 1995-1998.  
Photon- and electron-stimulated surface chemistry. Reflection-absorption infrared spectroscopy, temperature programmed desorption, laser-induced dissociation and desorption, time-of-flight mass spectrometry, resonance enhanced multiphoton ionization, Auger electron spectroscopy, high resolution electron energy loss spectroscopy.

UNIVERSITY OF NEBRASKA-LINCOLN, Paul D. Burrow, collaborator, 1997.

Gas phase dissociative electron attachment. Electron transmission spectroscopy, dissociative electron attachment ion counting.

UNIVERSITY OF TEXAS AT AUSTIN, Alan Campion, advisor, 1993-5.

Surface chemistry of polymer-metal interfaces. Unenhanced surface Raman spectroscopy, Auger electron spectroscopy.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, James Lisy, advisor, 1992-3.

Structure of solvated ion molecular clusters. Molecular beams, infrared vibrational predissociation spectroscopy, quadrupole mass spectrometry.

UNIVERSITY OF TEXAS AT AUSTIN and NORTHWESTERN UNIVERSITY, NSF Solid State Chemistry Program, Hugo Steinfink, advisor, 1990.

Phase relations in systems related to superconducting compounds. Solid state reactions, x-ray diffraction, resistivity measurements.

### Professional Societies

American Chemical Society, Lexington Bluegrass Section (Vice Chair 2003, Chair-Elect 2004, Chair 2005, Councilor 2008-2010, National Chemistry Week Coordinator, 2005-2012)

American Institute of Conservation

International Council of Museums-Committee for Conservation (Friend)

Project Kaleidoscope Faculty for the 21<sup>st</sup> Century, Class of 2007

Phi Lambda Upsilon, National Secretary (1999-2002)

Sigma Xi

Kentucky Academy of Sciences

Kentucky nanoNETWORK (invited member of advisory board, 2009)

### Academic Honors

CENTRE COLLEGE (faculty member)

Faculty Marshal (2020-present)

John H. Walkup Professorship of Chemistry (2017-present)

Centre Scholar (2014-2016)

Stodghill Research Professorship (2010)

Named co-Most Dramatic Professor in Kentucky by *Kentucky Monthly* (2010)

David F. Hughes Award for Excellence in Teaching and Service (2010)

Centre Scholar (2008-2010)

Outstanding Professor Award from Greek Life (2009)

Outstanding Professor Award from Greek Life (2008)

C. Eric Mount, Jr. Student Appreciation Award (2007)

Kirk Award for Excellence in Teaching (2007)

GEORGETOWN COLLEGE

John Walker Manning Distinguished Mentor and Teacher Award (2003)

Voted #2 on "Favorite Professor Top 10 list" by student body (2003)

Named "Professor of the Month," three times by two different sororities (2002-2003)

HILLSDALE COLLEGE

Nomination, Professor of the Year (2001), 1 of 6 nominations, only science nominee

UNIVERSITY OF TEXAS AT AUSTIN

Texaco Fellowship (1996), two awarded in department

Welch Fellowship (1993-4), top fellowship awarded to one incoming class member

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Department of Education Fellowship (1992-3)

Phi Lambda Upsilon (1992)

Honorable mention, NSF Fellowship (1992)

Roger Adams Fellowship (1991-2), awarded to 1 incoming physical chemistry student

CENTRE COLLEGE (undergraduate)  
Phi Beta Kappa (1990)  
Omicron Delta Kappa (1990), president  
Besser-Lindsey Award of Sigma Alpha Epsilon (1990), four awarded nationally  
Junior Marshal (1990), top twenty of junior class  
Chamberlain Prize (1989), awarded to sophomore letterman with highest GPA  
Trustee Scholar (1987-1991), top scholarship awarded to incoming students

### Manuscripts in Preparation (\* = undergraduate student)

C. Thomas McCollough, Beth Glazier, Lora Gralheer,\* Alexandria Combs,\* and Jeffrey E. Fieberg, "A Mandaean Amulet: Dating Its Origins and Deciphering Its Incantation," in preparation, conference paper given, to be submitted to *Archiv für Religionsgeschichte*.

Jeffrey E. Fieberg and Gregory D. Smith, "Giorgio de Chirico's palette of a 1930's *verifalsi*," in preparation, abstract completed.

Jeffrey E. Fieberg and Gregory D. Smith, "When Paul Gauguin arrived at the Studio of the South, did he possess his painting supplies or use Vincent van Gogh's?" in preparation, conference paper planned for 2022.

Nathaniel C. Blank\*, Hillary A. Botts\*, Benjamin G. Gowen\*, Emily C. Green\*, Sarah M. Hawkins\*, William P. Polio\*, Sarah A. Steele\*, Stephen E. Asmus, and Jeffrey Fieberg, "Biosensing with multiple functionalized conical nanotubes," in preparation, full draft completed.

### Peer-Reviewed Publications

Jeffrey E. Fieberg, "Development and Implementation of Molecular Modernism, a 'Chemistry and Art' Course with Travel Components in France or the United States," book chapter for *Contextualizing Chemistry in Art & Archaeology: Inspiration for Instructors* for the American Chemical Society Symposium Series eBooks Education Collection, pp. 235-282 (2021).

Jeffrey E. Fieberg and Gregory D. Smith, "Dry Laboratory Forgery Investigation of a Purported Giorgio de Chirico Painting for a 'Chemistry in Art' Course," book chapter for *Contextualizing Chemistry in Art & Archaeology: Inspiration for Instructors* for the American Chemical Society Symposium Series eBooks Education Collection, pp. 315-356 (2021).

Kristen D. Fulfer, Erin Wachter, Jennifer L. Muzyka, Leonard T. Demoranville, Jeffrey E. Fieberg, January D. Haile, Daniel Scott, Yang Song, José M. Workman, and Karin J. Young, "#StayCentred: Maintaining Personal Education at Centre College During COVID-19," *Journal of Chemical Education*, **97**, 2783-2787 (2020).

Jeffrey E. Fieberg, Per Knutås, Kurt Hostettler, and Gregory D. Smith, "Paintings fade like flowers': Pigment Analysis and Digital Reconstruction of a Faded Pink Lake Pigment in Vincent van Gogh's *Undergrowth with Two Figures*," Featured Paper, *Applied Spectroscopy*, **71**, 794-808 (2017).

Jeffrey E. Fieberg, "Visualizing reaction progress and the geometry and instability of the transition state," *Journal of Chemical Education*, **89**, 1174-1177 (2012).

Jeffrey E. Fieberg and C. Girard, "A mnemonic device relating the eight thermodynamic state variables: the 'Energy Pie'", *Journal of Chemical Education*, **88**, 1544-1546 (2011).

J. E. Fieberg and J. M. White, "Halogen-substituted hydrocarbons on metals and semiconductors," chapter for Landolt-Börnstein III/42A3: *Physics of Covered Solid Surfaces: Adsorbed Layers on Surfaces*, Bonzel, H.P., Ed., Springer-Verlag, pp. 444-479, 2003.

Jeffrey E. Fieberg and J. M. White, "Photodissociation of methyl nitrite on Ag(111): nitric oxide ejection dynamics," *Journal of Chemical Physics*, **113**, 3839-3853 (2000).

Jeffrey E. Fieberg and J. M. White, "Dynamics of NO produced by photodissociation of *t*-butyl nitrite on Ag(111)," *Chemical Physics Letters*, **306**, 103-110 (1999).

Jeffrey E. Fieberg, G. J. Szulczewski and J. M. White, "Trimodal velocity distributions of nitric oxide for ultraviolet photodissociation of CH<sub>3</sub>ONO adsorbed on Ag(111)," *Chemical Physics Letters*, **290**, 268-274 (1998).

A. L. Schwaner, Jeffrey E. Fieberg and J. M. White, "Methyl formate on Ag(111). 1. Thermal adsorption-desorption characteristics and alignment in monolayers," *Journal of Physical Chemistry B*, **101**, 11112-11118 (1997).

Jeffrey E. Fieberg and J. M. White, "Structure of methyl nitrite on Ag(111)," *Journal of Vacuum Science and Technology A*, **15**, 1674-1678 (1997).

C. M. Child, Jeffrey E. Fieberg and Alan Campion, "Surface chemistry of polyimide formation on Cu(111)," *Surface Science*, **372**, L254-L260 (1997).

Jeffrey E. Fieberg, Andras Szabo and J. M. White, "Electron-stimulated chemistry of CF<sub>3</sub>I adsorbed on Ag(111): C-F bond cleavage and C-C coupling," *Journal of the Chemical Society, Faraday Transactions (Special Issue on Spectroscopy at Interfaces)*, **92**, 4739-4748 (1996).

### **Non-Peer-Reviewed Publications**

Jeffrey E. Fieberg and Gregory D. Smith, "Art Forgeries Revealed through Chemistry," in "Solving Mysteries through Chemistry," *Celebrating Chemistry*, American Chemical Society National Chemistry Week publication, 2016 (readership of 250,000).

### **Peer-Reviewed Presentations**

Jeffrey E. Fieberg and Gregory D. Smith, "Did Gauguin use Van Gogh's painting materials upon arrival at the Studio of the South?" Scientific Methods in Cultural Heritage Research, Gordon Research Conference, Les Diablerets, Switzerland, July, 2022.

Jeffrey E. Fieberg and Gregory D. Smith, "Did Gauguin use Van Gogh's painting materials upon arrival at the Studio of the South?" Scientific Methods in Cultural Heritage Research, Gordon Research Conference, Les Diablerets, Switzerland, July, 2020, Conference Canceled.

Jeffrey E. Fieberg and Gregory D. Smith, "Dry Laboratory Activity: Is *The Mysterious Departure* Authentic, a Forgery or a *Verifalsi*?" International Council of Museums-Committee on Conservation Triennial Meeting, Copenhagen, Denmark, September, 2017.

Jeffrey E. Fieberg, Per Knutas, and Gregory D. Smith, "Rediscovering Color: Treatment, Analysis and Digital Restoration of Vincent Van Gogh's *Undergrowth with Two Figures*," American Institute of Conservation National Meeting, Indianapolis, IN, May, 2013.

### **Invited Seminars**

Jeffrey E. Fieberg, "Mysterious Departures: Technical Art Historical Investigations of Paintings by Giorgio de Chirico and Vincent van Gogh," University of North Carolina Asheville, April 2022.

Jeffrey E. Fieberg, "Départs mystérieux : la science au service de l'histoire de l'art autour des peintures de De Chirico et Van Gogh," L'Ecole Supérieure d'Art d'Avignon, France, January 2022.

Jeffrey E. Fieberg, "Mysterious Departures: Technical Art Historical Investigations of Paintings by De Chirico and Van Gogh," Transylvania University, Lexington, KY, May 2021.

Jeffrey E. Fieberg, "Did Gauguin use Van Gogh's painting materials upon arrival at the Studio of the South?" Special Symposium, "At the Interface of Chemistry and Art," Central Regional Meeting of the American Chemical Society, Columbus, Ohio, May 2020, Conference Canceled.

Jeffrey E. Fieberg, "Paintings Fade Like Flowers': Analysis and Digital Reconstruction of Vincent van Gogh's *Undergrowth with Two Figures*," McElvain Physical Chemistry Seminar Series, University of Wisconsin-Madison, November, 2019.

Jeffrey E. Fieberg, "Mysterious Departures: Scientific Investigations of Paintings by Giorgio de Chirico and Vincent van Gogh," Lexington Chapter of the American Chemical Society, Lexington, KY, March, 2017.

Jeffrey E. Fieberg, "Chemistry in Art Study Abroad Courses in England and France," keynote speaker for NSF-sponsored CWCS (Center for Workshops in the Chemical Sciences) Chemistry in Art Workshop, Bismarck State College, Bismarck, ND, July, 2015.

Jeffrey E. Fieberg, "Post-Impressionism and the Periodic Table," convocation for the Kentucky Governor's Scholars Program, Murray State University, Murray, KY, July, 2015.

Jeffrey E. Fieberg, "Mysterious Departures: Technical Art Historical Investigations of Paintings by Giorgio de Chirico and Vincent van Gogh," Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, June, 2015.

Jeffrey E. Fieberg, "Mysterious Departures: Technical Art Historical Investigations of Paintings by Giorgio de Chirico and Vincent van Gogh," Georgetown College, Georgetown, KY, April, 2015.

Jeffrey E. Fieberg, "Mysterious Departures: Technical Art Historical Investigations of Paintings by De Chirico and Van Gogh at the Indianapolis Museum of Art," Emory University, Atlanta, Georgia, April, 2013.

Jeffrey E. Fieberg, "Etudes techniques et recherche en histoire de l'art autour d'œuvres de G. De Chirico et de V. Van Gogh du Musée d'Art d'Indianapolis," Centre Interdisciplinaire de Conservation et de Restauration du Patrimoine (CICRP), Marseille, France, January, 2013.

Jeffrey E. Fieberg, "Etudes techniques et recherche en histoire de l'art autour d'œuvres de G. De Chirico et de V. Van Gogh du Musée d'Art d'Indianapolis," Centre de Recherche et de Restauration des Musées de France (C2RMF), Louvre, Paris, France, January, 2013.

Jeffrey E. Fieberg, "Science and Art: Forensic Art Project and Demonstrations for Your Classroom," Art Museum at the University of Kentucky, Lexington, Kentucky, September, 2012.

Jeffrey E. Fieberg, "Art and the Scientific Eye," private program for sponsors of Speed Art Museum (Wells Fargo and the Patron Circle), Speed Art Museum, Louisville, Kentucky, June, 2012.

Jeffrey E. Fieberg, "Mysterious Departures: Technical Art Historical Investigations of Works by De Chirico and Van Gogh at the Indianapolis Museum of Art," Franklin College, Franklin, Indiana, March, 2012.

Jeffrey E. Fieberg, "Renoir to Chagall: Viewing the Exhibition with a Scientific Eye," public program, Speed Art Museum, Louisville, Kentucky, March, 2012.

Jeffrey E. Fieberg, "Impressionism Viewed through a Scientific Lens," docent program for special exhibition, *Renoir to Chagall: Paris and the Allure of Color*, Speed Art Museum, Louisville, Kentucky, February, 2012.

Jeffrey E. Fieberg, "Chemistry in Art: Semester Study Abroad in London," keynote speaker for NSF-sponsored CWCS (Center for Workshops in the Chemical Sciences) Chemistry in Art Workshop, Whitman College, Walla Walla, WA, June, 2011.

Jeffrey E. Fieberg, "Happy 50<sup>th</sup>, Laser! Blasting Molecules Apart: Ph.otoD.issocation is Fun!", Georgetown College, Georgetown, KY, November, 2010.

Jeffrey E. Fieberg, "Chemistry in Art: Study Abroad," keynote speaker for NSF-sponsored CWCS (Center for Workshops in the Chemical Sciences) Chemistry in Art Workshop, Whitman College, Walla Walla, WA, June, 2010.

Jeffrey E. Fieberg, "Surface chemistry: thermal and photon-driven processes," Centre College, Danville, Kentucky, March, 2003.

Jeffrey E. Fieberg, "Surface photochemistry of alkyl nitrites on Ag(111): nitric oxide ejection dynamics," Physical Chemistry Symposium, Case Western Reserve University, Cleveland, Ohio, October, 2000.

Jeffrey E. Fieberg, "Surface photochemistry of alkyl nitrites on Ag(111): nitric oxide ejection dynamics," Wayne State University Physical Chemistry Seminar Series, September, 2000.

## **Presentations at Scientific Meetings** (\* = undergraduate student)

Jeffrey E. Fieberg, "Molecular Modernism: a Study Abroad Course in France that Teaches the Development of Modern Art from Realism to Abstraction Through a Scientific Lens," Southwest Regional Meeting of the American Chemical Society, Austin, TX, October 2021.

Emma Huckestein\*, Kari Young and Jeffrey E. Fieberg, "Coloring Glass," Centre RICE Research Symposium, Danville, KY, April 2018.

Emma Huckestein\* and Jeffrey E. Fieberg, "Recreating Ancient Glass Color," Centre RICE Research Symposium, Danville, KY, April 2017.

Amanda Iocono\*, Daniel Thompson\*, Will Vineyard\* and Jeffrey E. Fieberg, "Go Back and Get It: Examining the Remnants at Shelby City African American Cemetery," Centre RICE Research Symposium, Danville, KY, April 2016.

Alexandria Combs\* and Jeffrey E. Fieberg, "The Conservation of an Ancient Lead Artifact using Electrolytic Reduction," Centre RICE Research Symposium, Danville, KY, April, 2015.

Eric Beyerle\* and Jeffrey E. Fieberg, "Chemical Analysis of a Painting in Centre College's Evans-Lively Room," Centre RICE Research Symposium, Danville, KY, April, 2015.

Jonathan Ryan Hunt\*, Carly Jewell\*, and Jeffrey E. Fieberg, "An Investigation into the Authenticity of a Purported Blakelock Painting," Centre RICE Research Symposium, Danville, KY, April, 2015.

Eric Theodore\*, Louis Rodgers\*, James Bloom and Jeffrey Fieberg, "Identifying Ancient Glass: The Role of X-Ray Fluorescence (XRF) Spectroscopy in Art Historical Research," Centre RICE Research Symposium, Danville, KY, April, 2015.

Jeffrey E. Fieberg, "Molecular Modernism: Interdisciplinary Chemistry and Art History Study Abroad Courses in France," 23<sup>rd</sup> Biennial Conference on Chemical Education, Allendale, MI, August, 2014.

Jeffrey E. Fieberg, "Technical Art Historical Investigations at the Indianapolis Museum of Art," 22<sup>nd</sup> Biennial Conference on Chemical Education, Pennsylvania State University, PA, July, 2012.

Benjamin W. Slone\*, William P. Polio\*, and Jeffrey E. Fieberg, "Photon-Controlled Nanoswitches," Centre RICE Research Symposium, Danville, KY April, 2011.

Hillary A. Botts\* and Jeffrey E. Fieberg, "Nanoscale Biosensing," Centre RICE Research Symposium, Danville, KY April, 2011.

Lora E. Gralheer\*, Beth Glazier-McDonald, C. Thomas McCollough, and Jeffrey E. Fieberg, "Ancient Amulets: Unraveling History with Chemistry," Centre RICE Research Symposium, Danville, KY April, 2011.

Jeffrey E. Fieberg, "Teaching Chemistry in Art in London," 21<sup>st</sup> Biennial Conference on Chemical Education, North Texas State University, TX, August, 2010.

Emily C. Green\*, Sarah A. Steele\*, Benjamin G. Gowen\*, Sarah M. Hawkins\* and Jeffrey E. Fieberg, "Biosensing with Functionalized Gold Nanotubes," Centre RICE Research Symposium, Danville, KY April, 2009.

Emily C. Green\*, Sarah A. Steele\*, Benjamin G. Gowen\*, Sarah M. Hawkins\* and Jeffrey E. Fieberg, "Biosensing with Functionalized Gold Nanotubes," Southeastern Regional Meeting of the American Chemical Society, Nashville, TN, November 2008.

Sarah A. Steele\*, Emily C. Green\*, Benjamin G. Gowen\*, Sarah M. Hawkins\* and Jeffrey E. Fieberg, "Biosensing with Functionalized Gold Nanotubes," Kentucky Academy of Sciences Meeting, Lexington, KY, November 2008.

Jeffrey E. Fieberg, "Visualizing the transition state and reaction coordinate," Promote Inquiry Using Chemical Demonstrations Workshop, 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.

Jeffrey E. Fieberg, "Relating thermodynamic state functions through a simple mnemonic device: The Energy Pie," 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.

Sarah Hawkins\*, Nathaniel Blank\*, Benjamin Gowen\*, Lauren Lackey\* and Jeffrey E. Fieberg, "Prototype Nanoscale Biosensor for use in Aqueous Solutions," Centre RICE Research Symposium, Danville, KY, April, 2008.

Jeffrey E. Fieberg, "Nanomolar Sensing with Multiple Conical Gold Nanotubes," KYNANOMAT 2008 (Kentucky NanoMaterials), Louisville, KY, March 2008.

Sarah Hawkins\*, Nathaniel Blank\*, Benjamin Gowen\*, Lauren Lackey\* and Jeffrey E. Fieberg, "Prototype Nanoscale Biosensor for use in Aqueous Solutions," Kentucky Academy of Sciences Meeting, Louisville, KY, November, 2007.

Benjamin Gowen\*, Nathaniel Blank\*, and Jeffrey E. Fieberg, "Fabrication of Conical Nanopores in Polycarbonate with Biosensor Applications," Kentucky Academy of Sciences Meeting, Morehead, KY, November, 2006.

Nathaniel Blank\*, Benjamin Gowen\*, and Jeffrey E. Fieberg, "Fabrication of Conical Nanopores in Polycarbonate to be used for Biosensors," Southeastern Regional Meeting of the American Chemical Society, Augusta, GA, November 2006.

Jeffrey E. Fieberg, "Visualizing the transition state and reaction coordinate," Demo Grand Prix, 19<sup>th</sup> Biennial Conference on Chemical Education, Purdue University, IN, August, 2006.

Jeffrey E. Fieberg and S. Keith Dunn, "Quantum or Thermo First? Yes." 19<sup>th</sup> Biennial Conference on Chemical Education, Purdue University, IN, August, 2006.

Jeffrey E. Fieberg, "Exploring vibrational motion in the general chemistry laboratory: molecules rock!" 19<sup>th</sup> Biennial Conference on Chemical Education, Purdue University, IN, August, 2006.

C. Daniel Benson\*, Michael B. Newcomer\*, Ali K. Said\*, John D. Craddock\*, Kourtney L. Gordon\* and Jeffrey E. Fieberg, "Assemblage of an ultrahigh vacuum chamber for surface science studies," Southeastern Regional Meeting of the American Chemical Society, Research Triangle Park, NC, November, 2004.

J. Michael White, Jeff E. Fieberg, Chulhoon Kim, and Wei Zhao, "Dynamics of NO ejection during photolysis of adsorbed alkyl nitrites," National Meeting of the American Chemical Society, San Francisco, CA, March, 2000.

Emily McLinden\* and Jeffrey E. Fieberg, "Starting a surface chemistry research lab: building an ultrahigh vacuum chamber," LAUREATES program, Hillsdale College, MI, summer, 2000.

Jeffrey E. Fieberg, P. M. Blass, G. J. Szulczewski and J. M. White, "Ultraviolet photodissociation of CH<sub>3</sub>ONO adsorbed on Ag(111): Trimodal velocity distributions of nitric oxide," The Texas Surface Science Round-Up, Round Top, TX, May, 1998.

Jeffrey E. Fieberg and J. M. White, "Structure of methyl nitrite on Ag(111)," 43rd National Symposium of the American Vacuum Society, Philadelphia, PA, October, 1996.

Thomas J. Selegue, Jeffrey E. Fieberg, Orlando M. Cabarcos and James M. Lisy, "Vibrational spectroscopy of NH<sub>4</sub><sup>+</sup>(NH<sub>3</sub>)<sub>n</sub> in the region of the ν<sub>2</sub> vibration," contributed paper, 48th Ohio State International Symposium on Molecular Spectroscopy, Columbus, Ohio, June, 1993.

Jeffrey E. Fieberg and Hugo Steinfink, "Syntheses and Characterization of Ba<sub>4-x</sub>K<sub>x</sub>Pb<sub>3-x</sub>Ta<sub>x</sub>O<sub>10</sub>, Ba<sub>2</sub>Pb<sub>1-x</sub>Zr<sub>x</sub>O<sub>4</sub> and Ba<sub>2</sub>Sn<sub>1-x</sub>Zr<sub>x</sub>O<sub>4</sub>," NSF Solid State Chemistry Symposium, Northwestern University, Evanston, IL, August, 1990.

### **Collaborative Research with Undergraduates and Student Outcomes**

- Carter Alvey, 2021 (spring, fall), CHP major ('22)
- Zhujun Hou, 2018 (fall), Art History and Studio Art major

- Emma Huckestein, 2016 (fall), 2017 (spring and fall), 2018 (spring, fall), 2019 (spring, fall), 2020 (spring), CHP major ('20), Ph.D. candidate, University of Maryland
- Alexandria Combs, 2014 (fall), 2015 (spring), CHE major ('16), Ph.D., Chemistry, Auburn University
- Vanessa Rosing, 2014 (fall), CHE major ('15)
- Ben Slone, 2012 (fall), 2011 (spring, fall), 2010 (summer), CHP major ('13), attended graduate school in Materials Science and Engineering at California Institute of Technology, now a financial analyst
- Willie Polio, 2011 (spring), 2010 (fall), CHP major ('12), valedictorian, M.D., University of Louisville
- Hillary Botts, 2010 (summer), BNS major ('13), NSF-LSAMP participant
- Lora Gralheer, 2011 (summer, fall), 2010 (summer, fall), CHE major ('11)
- Julius Schoop, 2009 (spring), CHP major ('11), Ph.D., Materials Science and Engineering, University of Kentucky; assistant professor of mechanical engineering, University of Kentucky
- Carla Estridge, 2009 (spring), CHE major ('09), Ph.D., physical chemistry, University of Colorado-Boulder
- Brittany Camenisch, 2008 (fall), BMB major ('09)
- Jeffrey SoRelle, 2008 (fall), CHE major ('10), M.D., Baylor University
- Emily Green, 2009 (fall), 2008 (summer, fall), BMB major ('10), Pharm.D., University of Kentucky
- Sarah Steele, 2008 (summer, fall), CHE major ('10), M.D., University of Louisville
- Sarah Hawkins, 2007 (summer, fall), Spanish major ('10), M.D., University of Louisville
- Lauren Lackey, 2007 (summer), transferred from Centre
- Benjamin Gowen, 2008 (spring, fall), 2007 (fall), 2006 (spring, summer), BMB major ('09), Goldwater Scholarship winner, 2008-9; Ph.D., immunology, University of California-Berkeley
- Nathaniel Blank, 2007 (winter, fall), 2006 (spring, summer), CHE major ('08), organic farmer
- Michelle Swiderski, 2007 (spring) CHE major ('07), employed with Procter and Gamble, New York
- A. Ryan Reynolds, 2006 (spring), BMB major ('06), M.D., University of Virginia
- C. Daniel Benson, 2004 (fall, spring), CHE major ('05), M.D., University of Louisville
- Michael Newcomer, 2004 (fall, spring), CHE major ('05), Ph.D., Biophysical Chemistry, Yale University
- Ali Said, 2003 (spring), 2002 (fall) CHE major ('04), M.B.A., Sullivan University
- John Craddock, 2002 (fall), CHE major ('04), Ph.D., Chemistry, University of Kentucky
- Kourtney Gordon, 2002 (fall), CHE major ('03), Pharm.D., University of Kentucky, pharmacist at Ephraim-McDowell Hospital, Danville, KY.
- Chris Bolus, 2002 (fall), CHE major ('03), M.D., University of Kentucky
- Emily McLinden, 2000 (summer, fall), CHE major ('02)
- Matthew Milliken, 1999 (spring), CHE major ('99), M.S. in Physical Chemistry, 2002, Case Western Reserve University

## Grants Received

- Faculty Development Committee grant, Centre College, "Blakelock Forgery Investigation," travel, \$1311, summer 2016.
- Faculty Development Committee grant, Centre College, "Chemistry in Art in Indiana and Nebraska," travel, \$1411, summer 2015.
- Faculty Development Committee grant, Centre College, "Biosensors, Amulets, and Chemistry in Art," faculty stipend, \$1400, summer 2013.
- Arthur Vining Davis Foundation, Faculty Development Committee grant, Centre College, "Technical Investigations of Modernist Paintings as Research and Case Studies for "Molecular Modernism: Manet to Matisse" Study Abroad Course," Travel to France, \$4126, summer 2012.
- Faculty Development Committee grant, Centre College, "Unrolling Ancient Amulets," faculty stipend, \$1400, summer 2011.
- Associated Colleges of the South Andrew W. Mellon Faculty Renewal Program Grant, \$8000, "Unrolling, Drawing, Translating and Analyzing Amulets," with Beth Glazier-McDonald and Tom McCullough, 2011.
- Pittsburgh Conference Memorial National College Grants Program, "Handheld X-ray Fluorescence Analyzer to Enhance Learning in Centre College Chemistry Courses, Research Laboratories, and Community-based Opportunities," \$10,000, 2011.

Kresge Mini-Grant proposal through Centre College, “Portable X-ray Fluorescence Analyzer,” \$24,000, 2010.

Faculty Development Committee grant, “Stochastic Sensing in Nanoporous Membranes,” Centre College, student stipends, equipment for stochastic sensing, \$7500, summer 2010.

Associated Colleges of the South Andrew W. Mellon Faculty Renewal Program Grant, \$5000, “Exploration of Model Undergraduate Research Programs,” with Chris Barton, Dan Manheim, and Jason Neiser, 2009.

Council on Undergraduate Research Centre Expansion Grant, \$500, 2008.

Associated Colleges of the South Andrew W. Mellon Faculty Renewal Program Grant, \$5900, “Workshop on Engaged Learning Across the Curriculum,” with Steve Beaudoin, John Kinkade, Donna Plummer, and Peggy Richey, 2008.

Faculty Development Committee grant, Centre College, “Stochastic Sensing in Nanoporous Membranes,” faculty and student stipends, equipment, \$7500, summer 2008.

Faculty Development Committee grant, Centre College, “Fabrication of Biosensors Based on Conical Nanopores,” faculty and student stipends, equipment money, \$5000, summer 2007.

Faculty Development Committee grant, Centre College, “Fabrication of Biosensors Based on Conical Nanopores,” faculty and student stipends, gold plating solution, \$7500, summer 2006.

Margaret Voorhies Haggin Trust grant, laser equipment, \$5000, summer 2004.

LAUREATES research grant, “Assembling an Ultrahigh Vacuum Chamber,” Hillsdale College, ultrahigh vacuum equipment, faculty and student stipends, \$5500, summer 2000.

### **Professional Development Conferences, Workshops and Symposia (co-Facilitated)**

“Van Gogh’s Palette in Place,” as part of “Easy Ways to Go Global Virtually” session of International Connections Workshop, organized by Centre College for Associated Colleges of the South, August, 2020.

“Chemistry in Art,” NSF cCWCS Workshop, Bismarck State College, Bismarck, ND, July, 2015.

“Chemistry and Art,” Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, June, 2015.

“Teaching Basic Chemistry Through Artists’ Materials,” NSF cCWCS, 23<sup>rd</sup> Biennial Conference on Chemical Education, Grand Valley State University, MI, July 2014.

“Chemistry of Art and Conservation Science,” NSF cCWCS, 22<sup>nd</sup> Biennial Conference on Chemical Education, State College, PA, July 2012.

“Chemistry in Art,” NSF CWCS, 21<sup>st</sup> Biennial Conference on Chemical Education, Denton, TX, August 2010.

“Process-Oriented Guided-Inquiry Learning in Laboratory and Lecture,” Centre College Faculty Retreat, August, 2008.

### **Professional Development Conferences, Workshops and Symposia (Attended)**

“Transforming STEM Higher Education,” including workshop, “Advancing Leadership for Broadening Participation,” American Association of Colleges & Universities (AAC&U) and Project Kaleidoscope (PKAL) Meeting, Chicago, November, 2019.

“A New Lens on 19<sup>th</sup>-Century Art,” Art Institute of Chicago, Chicago, IL, April, 2016.

“POGIL-PCL (Physical Chemistry Laboratory) Workshop,” Virginia Commonwealth University, Richmond, VA, February, 2013.

- “Summer Leadership Institute,” Project Kaleidoscope (PKAL), Colorado College Baca Campus, July, 2012.
- “Cultural Heritage/Cultural Identity – The Role of Conservation,” International Council of Museums-Committee for Conservation 16<sup>th</sup> Triennial Conference, Lisbon, Portugal, September, 2011.
- “NSF Day: Proposal-Writing Workshop,” Kentucky State University, December, 2010.
- “POGIL: Classroom Management with Clickers,” 21<sup>st</sup> Biennial Conference on Chemical Education, Denton, TX, August 2010.
- “Advanced Chemistry and Art Workshop,” NSF-sponsored CWCS Workshop, Villanova University, June, 2010.
- “Student/Faculty Collaborations across Disciplines,” Council on Undergraduate Research (CUR) workshop, Centre College, KY, August, 2008.
- “Research Based Laboratory Experiences—The CASPiE Approach,” 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.
- “Advanced POGIL Workshop: Using and Designing POGIL Laboratory Activities,” 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.
- “Advanced POGIL Workshop: Writing POGIL Classroom Activities,” 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.
- “Advanced POGIL Workshop: Facilitating Upper Division POGIL Courses in Analytical, Physical and Biochemistry,” 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.
- “Advanced POGIL Workshop: Facilitating POGIL in the Classroom,” 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, IN, July, 2008.
- “Leaders Developing Leaders, Developing Leaders...,” Project Kaleidoscope (PKAL) Faculty for the 21<sup>st</sup> Century National Assembly, Washington D.C., November 2007.
- “Hands-on Data Collection Workshop,” Vernier Software and Technology, Lexington, KY, October 2007.
- “Science Reform Workshop,” Associated Colleges of the South, Furman University, SC, September 2005.
- “Chemistry and Art,” National Science Foundation workshop, Millersville University, PA, June 2005.
- “Engaging Students in Learning Science and Mathematics: The Process Workshop Classroom,” National Science Foundation Chautauqua Short Course, Christian Brothers University, TN, July 2003.
- “Web Tech I: Using the World Wide Web to Deliver Course Content,” Ameritech Faculty Development Technology Project, Alma College, MI, July 1999.

## **CENTRE COLLEGE SERVICE**

### **Centre College Committees and Administrative Positions**

- Chair, Division of Science and Mathematics (2019-present)
- Chair, Chemistry Program (2014-2017)
- Chair, Committee on Tenure and Reappointment (2014-2015)
- Member, Committee on Tenure and Reappointment (2012-2013)
- Chair, Natural Science Program (2009-2013)
- Member, Task Force on Tenure and Promotion (2015-2017)
- Member, Curriculum and Academic Standards Committee (2019-present)
- Faculty Steering Committee (2014-2015, elected Division III representative 2016-2019)

Phi Beta Kappa Committee (2005-present)  
 Chair, Members-in-Course Subcommittee (2006-present)  
 Banquet Committee (2011)  
 Off-Campus Programs Committee (2016-2017)  
 Student Life Committee (2008-9, 2015-16)  
 Campus Center building committee (2007-2009)  
 Faculty Development Committee (elected, 2006–2009)  
 College Council, at-large faculty member (elected, 2006-2009)  
 Honors and Prizes Committee (2005-6, 2007-8)  
 Rhodes Scholarship Subcommittee (2005-6)  
 Truman Scholarship Subcommittee (2007-8)  
*Ad-hoc* committee on undergraduate research (2007-2011)  
*Ad-hoc* committee on Education Program (2007-2009)  
*Ad-hoc* committee on Faculty Workload (2008-2011)  
 Engaged and Experiential Learning Planning Committee (2006-7)  
 First Year Experience Committee (2006)  
 Member, Search Committee for Director for Global Citizenship (2016-2017: hired Kyle Anderson)  
 Chair, Tenure-Track Chemistry Search Committee (2016: hired Daniel Scott)  
 Chair, Tenure-Track Chemistry Search Committee (2016: hired Kristen Fulfer)  
 Chair, Non-Tenure Track Chemistry Search Committee (2016: hired Erin Wachter)  
 Chair, Non-Tenure Track Chemistry Search Committee (2016: hired Kedan He)  
 Chair, Non-Tenure Track Chemistry Search Committee (2015: hired Brianna Hughes)  
 Member, Non-Tenure Track Chemistry Search Committee (2013: hired Heather Bass)  
 Member, Tenure-Track Chemistry Search Committee (2012: hired Kari Young)  
 Member, Non-tenure Track Chemistry Search Committee (2012: hired Lenny Demoranville)  
 Member, Non-tenure Track Chemistry Search Committee (2012: hired Daniel Scott)  
 Member, Tenure-Track Chemistry Search Committee (2009: hired January Haile)  
 Member, Non-tenure Track Chemistry Search Committee (2008: hired January Haile)  
 Member, Non-tenure Track Chemistry Search Committee (2006: hired Melanie Hauser)

### **Centre College Service Activities**

Faculty Marshal (2020-present)  
 Director, Centre-in-Strasbourg program (2022-2023)  
 Director, Centre-in-Strasbourg program (2017-2018)  
 Director, Centre-in-Strasbourg program (2013-2014)  
 Co-Director, Centre-in-London program (2010)  
 Faculty advisor for Sigma Alpha Epsilon (2006-present)  
 Faculty liaison for women's softball team (2010-13, 2015, 2018-present)  
 Faculty advisor for American Chemical Society Student Chapter (2005-2010)  
 Faculty advisor for Centre Science Journal (2005-2010)  
 CentreBrass ensemble, French horn (2005-2009)  
 Faculty/staff intramural softball participant (2009-present)  
 Faculty/staff intramural softball manager (2006-2008)  
 Faculty/staff intramural soccer participant (2010-2011)  
 Mentor for Jeff Heath, Assistant Professor of Mathematics (2007-8)  
 Mentor for Charlie Suer, Visiting Assistant Professor of Mathematics (2015-6)  
 Honorary Football Coach, Sept. 18, 2010

### **Speaking Engagements to Centre College Community**

C6H0mecomings 2021, "The Impossible Formula: C6 H0 Examined with X-Ray Fluorescence Spectroscopy," October 2021.  
 Greek 101 Panel, "How to Manage Being Involved in a Greek Organization and on Campus," March 2020.  
 Alumni College, "Post-Impressionism and the Periodic Table," July 2019  
 Board of Trustees Committee on Academic Affairs, "Career Highlights," April 2019  
 Family Weekend Study Abroad Academic Sampler, *Bon Jour, Buenos Dias, Konichiwa!*, 2016  
 Centre of Attention Day, "Post-Impressionism and the Periodic Table," April 2016  
 Family Weekend Study Abroad Academic Sampler, *Bon Jour, Buenos Dias, Konichiwa!*, 2015  
 Omicron Delta Kappa, "Life Stories," May 2015  
 Kappa Alpha Theta Fireside, Ghost Stories, 2012, 2014, 2016  
 Chemistry Demonstrations for United Way Auction Winner, Cowan Dining Hall, April 2013

Friday Faculty Hour, "Mysterious Departures: Technical Art History at the Indianapolis Museum of Art: De Chirico and Van Gogh," February 2012  
 Opening Convocation, "Sidebar Surprises," August 2011  
 Centre of Attention Day, "Post-Impressionism and the Periodic Table," April 2011  
 Pedagogy Lunch, "Engaging Students in the Disciplines," with Beth Glazier-McDonald and Tom McCullough (and Sarah Murray, Genny Ballard and KatieAnn Skogsberg), April 2011  
 Centre of Attention Day, "Nanotechnology: Risks and Promises," April 2009  
 Acheson/Caldwell floor program, "Chemistry Demonstrations," March 2009  
 Omicron Delta Kappa, "Life Stories," May 2008  
 Friday Faculty Hour, "Foam, Fireflies, Frog (Kermit!), and FOOM!" February 2007  
 Centre Christian Fellowship, "The Spiritual Journey of a Nunk," January 2007  
 Nevin Hall program, "Chemistry Magic Show," January 2007  
 Family Weekend Mini-Lecture, "What in the World Isn't Chemistry?" September 2006  
 Career Services panel, "So, You Want to go to Graduate School?" October 2006

## Community Activities

"Scientific Forgery Investigation of Paintings," Lecture for Lunch with the Arts, Art Center of the Bluegrass, Danville, Kentucky, December 2021.  
 "What Lies Beneath: Commonalities in Art & Paleontology," National Taste of Science Event, with Greg Smith '95, Neidhammer, Indianapolis, IN, April 2019.  
 "Digital Reconstruction of a Van Gogh Masterpiece," Lecture for the Art History Series, Community Arts Center, Danville, Kentucky, October 2018.  
 Published article for the American Chemical Society's National Chemistry Week to be used in schools around the globe (readership of 250,000) 2016.  
<https://www.acs.org/content/dam/acsorg/education/outreach/ncw/educationalresources/2016/ncw-2016-brochure-low-res.pdf>  
 Kentucky Historical Society, analyzed artifacts and artwork with x-ray fluorescence analyzer, see <http://history.ky.gov/fluorescence-analyzer/>, July 2013.  
 Chemistry Demonstration Shows for Jennie Rogers, Toliver, Junction City Elementary Schools, Trinity Christian Academy, Boyle County High, Garrard County High, Kentucky School for the Deaf, Lexington Avenue Baptist preschool, Explorium (Lexington Children's Museum), 2005-present  
 "Forensic Art Project," 1-week project for gifted and talented and 8<sup>th</sup> grade art class, Bate Middle School, 2012  
 Parent Representative, Bate Middle School Site-Based Decision Making Council, 2011-2013, 2014-2017  
 Public Address Announcer, Boyle County High School Girls' Soccer, 2016, 2018  
 Public Address Announcer, Danville High School Girls' Soccer, 2018-2021  
 Public Address Announcer, Danville High School Softball, 2013, 2015-16, 2019, 2021  
 Assistant Softball Coach, Bate (Danville) Middle School, 2011-2012  
 Coach, girls' junior softball team, Danville Parks and Rec, 2007-2015  
 Participant, faculty/staff "Centre Fielders" softball team, Harrodsburg, 2009, 2015  
 National Chemistry Week Coordinator of Lexington Chapter of the American Chemical Society (2005-2012)  
 Member, Advocate Brass Band, played in Great American Brass Band Festival, 2012  
 Chair, Lexington Bluegrass Chapter of the American Chemical Society, 2005  
 Danville Kids University Program (3<sup>rd</sup>-5<sup>th</sup> graders), October 2006, "Centre College Day," March 2007, 2009  
 Assistant coach, girls' U-6 soccer team, KYSA, 2007  
 Faculty/staff softball manager, Boyle County Parks and Rec., 2006  
 Member, Ss. Peter and Paul Catholic Church, 2005-2021  
 Season ticket holder, Newlin Hall Series at Norton Center (2005-2016)  
 Bell-ringer (play trumpet) for Salvation Army, each December

## Georgetown College Administrative Responsibilities

Chair of the Natural Science Division (2003-2005)  
 Member, core curriculum revision ad hoc committee (2002-2004)  
 Associate Faculty Athletic Representative, NAIA (2004-2005)

## Georgetown College Activities

Faculty advisor for Student Affiliates of the American Chemical Society, chemistry demonstration shows at local schools, summer science camp (physics/materials science module), brass ensemble,

faculty/staff softball manager, fifth-grade graduation speaker, lecturer for academic sessions of NCAA-sanctioned basketball camps, freshman seminar advisor.

### **Hillsdale College Activities**

Faculty advisor for Student Affiliates of the American Chemical Society, chemistry demonstration shows at local schools, Hillsdale College community orchestra, faculty/staff softball manager, faculty advisor for Alpha Tau Omega.

### **Post-graduate Activities**

Mentor for local elementary school student (Young Scientist Program), judge for Texas State Science and Engineering Fair, St. Louis church orchestra, intramural sports, chemistry graduate student softball team manager.

### **Undergraduate Activities**

Varsity cross country (2-time captain and 2-time all-conference), student government, Undergraduate Fellow (College Council), Centre College orchestra (president, principal French horn), brass and jazz ensembles, Sigma Alpha Epsilon (chronicler, national leadership school delegate), peer counselor, intramural sports.