Sharon J. Nieter Burgmayer

office
Department of Chemistry
Bryn Mawr College
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Education

Ph.D. in Inorganic Chemistry	University of North Carolina at Chapel Hill	1984
B.S. in Chemistry and French magna cum laude	Heidelberg College, Tiffin, Ohio	1979

Professional Appointments

Dean of Graduate Studies	Bryn Mawr College Bryn Mawr, Pennsylvania	2014-present
Interim Dean of Graduate Studies	Bryn Mawr College Bryn Mawr, Pennsylvania	2013-2014
Acting Chairman, Department of Chemistry	Bryn Mawr College Bryn Mawr, Pennsylvania	2002-2003
Professor of Chemistry	Bryn Mawr College Bryn Mawr, Pennsylvania	2000-present
Visiting Professor Department of Chemistry	University of Arizona Tucson, Arizona	1999-2000
Chairman, Department of Chemistry	Bryn Mawr College Bryn Mawr, Pennsylvania	1994-1999
Associate Professor of Chemistry	Bryn Mawr College Bryn Mawr, Pennsylvania	1992-present
Assistant Professor of Chemistry	Bryn Mawr College Bryn Mawr, Pennsylvania	1986-1992
Postdoctoral Research Chemist	Exxon Research & Engineering Company Corporate Research Laboratories Clinton, New Jersey	1984-1986

Research Grant Awards and Proposals

National Institutes of Health 2014-2018 $370,600
"Investigation of a Pterin-Dithiolene Model Complex for the Molybdenum Cofactor"

HHMI New Directions Grant 2013-2014 $23,500
"Transition Metals and Computational Modeling: Classroom and Laboratory Applications"
with Prof. Jason Schmink

Mellon Tri-co Program, co-proposer, *In support of* "Tri-co Bioinorganic Community" (TBIC)
2011-2012 $2300
2010-2011 $1500
2009-2010 $1500

ACS Petroleum Research Fund 2008 $3600
In support of "Frontier in Metal Dithiolenes" symposium

National Institutes of Health 2007-2011 (*incl. 1 yr extension*) $210,867
"Molybdenum Pterin-Dithiolene Complexes for model Studies of the Catalytic Site "

National Institutes of Health 2000-2003 $98,417
"Study of Improved Model Complexes for Molybdoenzyme Active Sites"

National Science Foundation 1999-2001 $82,686
"Studies of Model Compounds for the Active Site of DMSO Reductase"

Bryn Mawr College Faculty Research Grant 1995-1996 $2350
"Purchase of a Research Microscope"

Research Corporation 1992-1994 $13,000
"Studies of Model Compounds for the Metal Sites in Pterin-Dependent Metalloenzymes"

National Institutes of Health 1990-1992 $120,113
"Models for Metalloenzymes having Pterin Cofactors"

Pew Science Program 1990-1991 $10,000
(with Dr. Lynn Francesconi, U. of Penn.)
"Ligand Design Applied to Technecium Radiopharmaceutical Development"

Pew Science Program 1989-1990 $8,000
(with Dr. Thomas Spiro, Princeton University)
"Resonance Raman Studies on Molybdenum Dithiolene Model Complexes"

Exxon Education Foundation 1987-1988 $15,000
"Models for Molybdenum Enzymes"

Exxon Research & Engineering Company 1987 $2,500
"Syntheses of Copper(II) Pteridines"

Grant in Support of New Course Development
Sponsored by the Center for Science in Society 2002-2003 $10,000
and the Center for Visual Culture

Research Journal Articles (* denotes undergraduate researchers).

33. " The Electronic Effect of Pyran Cyclization in the Molybdenum Cofactor"
Douglas Gisewhite, Benjamin R. Williams, Alisha Esmail*, Jing Yang, martin L. Kirk, Sharon J. Nieter Burgmayer, under review in *Chemical Science*.

32. "Solvent-Dependent Pyranopterin Cyclization In Molybdenum Cofactor Model Complexes"
Benjamin R. Williams, Douglas Gisewhite, Anna Kalinsky*, Alisha Esmail*, Sharon J. Nieter Burgmayer, Accepted in *Inorganic Chemistry, 2015,* **54**, 8214-8222.

31. "Recent Developments in the Study of Molybdoenzyme Models"
Partha Basu and Sharon J. Nieter Burgmayer
*Journal of Biological Inorganic Chemistry, **2015***, 20, 373-383.

30. "Structure and Reversible Pyran Formation in Molybdenum Pyranopterin Dithiolene Models of the Molybdenum Cofactor",
Benjamin R. Williams, Yichun Fu*, Glenn P. A. Yap, Sharon J. Nieter Burgmayer
*Journal of the American Chemical Society **2012***, 134, 19584−19587.

29. "Pteridine Cleavage Facilitates DNA Cleavage"
Benjamin Williams, Shannon Dalton, Meredith Skiba*, Susie Kim*, Allison Shatz*, Patrick Carroll, Sharon J. Nieter Burgmayer, *Inorganic Chemistry **2012***, 51, 12669–12681.

28. "A Study of Mo(4+)Quinoxalyl-Dithiolenes as Models for the Non-Innocent Pyranopterin in the Molybdenum Cofactor"
Kelly G. Matz, Rebecca Rothstein*, Regina P. Mtei, Sharon J. Nieter Burgmayer, Martin L. Kirk
*Inorganic Chemistry **2011***, 50, 9804–9815. *Invited contribution and journal cover art*

27. "Pterin Chemistry and its Relationship to the Molybdenum Cofactor"
Partha Basu and Sharon J. Nieter Burgmayer, *Coordination Chemistry Reviews **2011***, 255, 1016–1038.
Invited contribution

26. "Noninnocent Dithiolene Ligands: A New Oxomolybdenum Complex Possessing a Donor-Acceptor Dithiolene Ligand"
Kelly G. Matz, Belinda Leung*, Regina P. Mtei, Sharon J. Nieter Burgmayer, Martin L. Kirk
*Journal of the American Chemical Society **2010***, 132, 7830-7831.

25. "DNA Binding by Ru(II)-bis(bipyridine)-Pteridinyl Complexes"
Shannon Dalton, Samantha Glazier, Belinda Leung*, Sanda Win*, Sharon J. Nieter Burgmayer
*Journal of Biological Inorganic Chemistry, **2008,*** 13, 1133-1148**.**

24. **"**Synthesis, Characterization, and Spectroscopy of Model Molybdopterin Complexes**"**
Sharon J. Nieter Burgmayer, Mary Kim*, Rebecca Petit*, Amy Rothkopf*, Alison Kim*, Shadia BelHamdounia*, Ying Hou*, Arpad Somogyi, Diana Habel-Rodriguez, Antonio Williams, Martin L. Kirk, *Invited paper, Journal of Inorganic Biochemistry,* **2007**, 101, 1601-1616.

23. "Redox Reactions of the Pyranopterin System of the Molybdenum Cofactor "
Sharon J. Nieter Burgmayer, Dori L. Pearsall, Shannon Blaney*, Eva Moore*, Calies Sauk-Schubert*
Journal of Biological Inorganic Chemistry, **2004**, 9, 59.

22. "Molybdenum-Pterin Chemistry Part 1. The Five Electron Oxidation of an Oxo-Molybdenum-Dithiolate

Complex of Reduced Pterin Coupled to DMSO Reduction"
Heather Layton Kaufmann, Louise Liable-Sands, Arnold L. Rheingold, Sharon J. Nieter Burgmayer.
Inorganic Chemistry **1999**, 38, 2592.

21. "Molybdenum-Pterin Chemistry Part 2. A Reinvestigation of Molybdenum-Flavin Chemistry"
Heather Layton Kaufmann, Patrick J. Carroll, Sharon J. Nieter Burgmayer.
Inorganic Chemistry **1999**, 38, 2600.

20. "Molybdenum-Pterin Chemistry Part 3. X-Ray Photoelectron Spectrocopy of Molybdenum-Pterin Complexes. A Solution to the Oxidation State Assignment Problem"
Sharon J. Nieter Burgmayer, Heather L. Kaufmann, G. Fortunato, Paul Hug, Berthold Fischer.
Inorganic Chemistry **1999**, 38, 2607.

19. "Use of a Titanium Metallocene as a Colorimetric Indicator for Learning Inert Atmosphere Techniques"
Sharon J. Nieter Burgmayer
Journal of Chemical Education **1998,** 75, 460.

18. "Tetrahydropterin Reactions of Dioxo-Molybdenum(6+) Complexes. Does Redox Occur?"
Sharon J. Nieter Burgmayer, Michelle R. Arkin*, Laura Bostick*, Sara Dempster*, Kristin Everett*, Heather Layton, Kateri Paul, * Cory Rogge*.
Journal of the American Chemical Society **1995**, 117 , 5812.

17. "Oxidation of Molybdenum Dithiolene Complexes Yields Thiophene Analogues of Urothione and Molybdopterin Form B"
Cheryl L. Soricelli, Veronika A. Szalai*, Sharon J. Nieter Burgmayer.
Journal of the American Chemical Society **1991**, 113, 9877.

16. "Preparations and Properties of Transition Metal Pterin Complexes. Models for the Metal Site in Phenylalanine Hydroxylase" Joanna Perkinson, * Sharon Brodie*, Keum Yoon*, Karoline Mosny*, Patrick J. Carroll, T. Vance Morgan, Sharon J. Nieter Burgmayer. *Inorganic Chemistry* **1991**, 30, 719.

15. "Resonance Raman Signatures of Oxomolybdenum Thiolate and Dithiolene Models of Molybdenum Proteins"
Prem Subramanian, Sharon J. Nieter Burgmayer, Sarah Richards*, Veronika Szalai, *
Thomas G. Spiro.
Inorganic Chemistry **1990**, 29, 3849.

14. "A Model Reaction for the Mo(VI) Reduction by Molybdopterin"
Sharon J. Nieter Burgmayer, Amy Baruch*, Karen Kerr*, Keum Yoon*.
Journal of the American Chemical Society **1989**, 111, 4982.

13. "Transition-Metal Pteridines. Preparation and Characterization of Cobalt Pteridines"
Sharon J. Nieter Burgmayer, Edward I. Stiefel.
Inorganic Chemistry **1988**, 27, 4059.

12. "Reactions of Molybdate with Dithiothreitol. The Structure of $[TEA]_2[Mo_2O_5$(L-dithiothreitolate)]"
Sharon J. Nieter Burgmayer, Edward I. Stiefel.
Inorganic Chemistry **1988**, 27, 2518.

11. "Protein Nitrogen Coordination to the FeMo Center of Nitrogenase from *Clostridium Pasteurianum"*
H. Thomann, T. V. Morgan, H. Jin, S. J. N. Burgmayer, R. E. Bare and E. I. Stiefel.
Journal of the American Chemical Society **1987**, 109, 7913.

10. "Electron Spin Echo Studies on Nitrogenase FeMo Protein and on the Iron Molybdenum Cofactor"
H. Thomann, T. V. Morgan, H. Jin, S. J. N. Burgmayer, C. L.Coyle and E. I. Stiefel
Recueil des Travaux Chimiques des Pays-Bas **1987**, 106, 311.

9. "Synthesis and Structure of the First Molybdenum-Pterin Complex"
Sharon J. Nieter Burgmayer, Edward I. Stiefel.
Journal of the American Chemical Society **1986**, 108, 8310.

8. "Molybdenum Enzymes, Cofactors and Model Systems"
Sharon J. Nieter Burgmayer, Edward I. Stiefel.
Journal of Chemical Education **1985**, 62, 943.

7. "Unusual Ligand Formation in CS_2 Chemistry: Synthesis, Structure and Reactivity of
$Mo_2(S_2CNEt_2)_3(\mu^2\text{-}CSC(S)S)(\mu^2\text{-}S_3C_2NEt_2)$"
Sharon J. Nieter Burgmayer, J. L. Templeton.
Inorganic Chemistry **1985**, 24, 3939.

6. "Synthesis and Structure of a Seven-Cooordinate Molybdenum Carbonyl Fluoride Derivative"
Sharon J. Nieter Burgmayer, J.L. Templeton. *Inorganic Chemistry* **1985**, 24, 2224.

5. "Simple Syntheses of Tungsten Vinylidenes and Carbynes from Terminal Alkyne Reagents"
K. R. Birdwhistell, S. J. Nieter-Burgmayer, J. L. Templeton.
Journal of the American Chemical Society **1983,** 105, 7789.

4. "Synthesis, Structure and Spectral Properties of $Mo(RCCR')L_2X_2$ Complexes"
P. B. Winston, S.J. Nieter-Burgmayer, J. L. Templeton.
Organometallics **1983**, 2, 167.

3. "Synthesis and Structure of Molybdenum Dimer Illustrating dπ Orbital Participation in Donation, Acceptance and Metal-Metal Bond Formation"
R. S. Herrick, S. J. Nieter-Burgmayer, J. L. Templeton.
Journal of the American Chemical Society **1983,** 105, 2599.

2. "Chemical, Spectral and Structural Features of $Mo(RCCR)_2(S_2CNC_4H_4)_2$ Complexes Containing the Electronically Unique Pyrrole-N-carbodithioate Ligand"
R. S. Herrick, S. J. Nieter-Burgmayer, J. L.Templeton.
Inorganic Chemistry **1983,** 22, 3275.

1. "Frontier Orbital Control of Ligand Addition to $Mo(CO)_2(S_2CNEt_2)_2$"
J. L. Templeton, S. J. Nieter-Burgmayer.
Organometallics **1982**, 1, 1007.

Invited Book Chapters and Series Contributions

6. “Studies of pterin-inspired model compounds”
Sharon J. Nieter Burgmayer, Benjamin R. Williams and Partha Basu
Enzymes: Bioinorganic Chemistry, Ed. R. Hille, C. Schulzke, M. L. Kirk, Royal Society of Chemistry, Cambridge, **2016**, chapter 2, 8-67.
Invited chapter contribution

5. Dithiolenes in Biology "

Sharon J. Nieter Burgmayer, in Progress in Inorganic Chemistry, Vol. 52, Stiefel, E. I., Ed.; Wiley, N. Y., **2004.**

4. "Molybdenum Enzymes/Models"
Sharon J. Nieter Burgmayer in Encyclopedia of Catalysis, Horvath, I. T., Ed.; Wiley & Sons, NY, **2002**.

3. "Models for the Pyranopterin-Containing Molybdenum and Tungsten Cofactors"
Berthold Fischer and Sharon J. Nieter Burgmayer in Metal Ions in Biological Systems, Vol. 39, Sigel, A. and Sigel H., Eds.; Marcel Dekker, N. Y., **2002**, pp 265-305.

2. "Electron Transfer Reactions in Transition Metal Pterin Complexes"
Sharon J. Nieter Burgmayer, in Bioinorganic Chemistry of the Less Common Transition Metals, Structure and Bonding Vol. 92, Clarke, M. J., Ed., Springer: Heidelberg, **1998**, pp 67-120.

1. "Molybdenum Complexes of Reduced Pterins"
Sharon J. Nieter Burgmayer, Kristin Everett, Laura Bostick in Molybdenum Enzymes, Cofactors and Models, Stiefel, E. I., Coucouvanis, D., Newton, W., Eds.; American Chemical Society Symposium Series; A.C.S.: Washington D.C., **1993**, 114.

Invited Book Reviews

1. "Transition Metal Sulfur Chemistry: Biological and Industrial Significance." Eds. Stiefel, E. I.; Matsumoto, K. ACS; Washington, 1996. Reviewed in, *J. Amer. Chem. Soc.* **1998**, 120, 614.

Presentations with Abstracts

37. "Exploring Molybdenum Pterin-Dithiolene Reaction Chemistry"
Sharon J. Nieter Burgmayer, Benjamin Williams, Douglas Gisewhite, Molybdenum and Tungsten Enzymes Conference, Balatonfüred, Hungary, September 2015.

36. "What is the role of the pterin-dithiolene ligand of the molybdenum cofactor?"
Sharon J. Nieter Burgmayer, Benjamin Williams, Yichun Fu*, Suyin Lee*, Hannah Gilbert*, Molybdenum and Tungsten Enzymes Conference, Sintra, Portugal, July 2013

35. "Studies of Molybdenum Pterin-Dithiolene Complexes"
Sharon J. Nieter Burgmayer, Benjamin Williams, Kelly Matz, Yichun Fu*, Suyin Lee*, Hannah Gilbert*, Molybdenum and Tungsten Enzymes Conference, University of Alberta, Canada, July 2011

34. "Pterin Dithiolene as Non-Innocent Ligands"
Sharon J. Nieter Burgmayer, Kelly Ginion Matz, Martin Kirk, Regina Mtei.
Gordon Research Conference "Metals in Biology", Ventura, CA, January 2011

33. "The Three Ring Circus of Pterins"
Sharon J. Nieter Burgmayer, Kelly Ginion, Tanya Michelle Corder*, Rebecca Petit*, Amy Rothkopf*
Gordon Research Conference "Molybdenum and Tungsten Enzymes", Lucca, Italy, July 2009.

32. "Pterin-Dithiolene Complexes of Molybdenum as Models for Moco"
Sharon J. Nieter Burgmayer, ACS Nat'l Conference Conference, Phildelphia, August 2008

31. "Pterin Dithiolene Chemistry and Hydroxyl Havoc"
Sharon J. Nieter Burgmayer, Kelly Ginion, Tanya Michelle Corder*, Rebecca Petit*, Amy Rothkopf*
Gordon Research Conference "Metals in Biology", Ventura, January, 2008

30. “Making Pterin Dithiolene Ligands on Molybdenum”
Sharon J. Nieter Burgmayer, Kelly Ginion, Tanya Michelle Corder*, Rebecca Petit*, Amy Rothkopf*
Gordon Research Conference “Molybdenum and Tungsten Enzymes”, Salve Regina, N.H. July 2007.

29.“Mulling Over Molybdopterin “
Sharon J. Nieter Burgmayer , Mica Grantham, Alison Kim, Mary Kim, Eleni Kardaras, Shadia BelHamdounia, Sruti Bhaumik,Candi Greeman
Gordon Research Conference "Metals in Biology", Ventura, January, 2005

28. “Intercalation of DNA by Ruthenium(II) Pteridinyl Complexes“
Shannon R. Dalton, Samantha Glazier, Alanna Albano, Courtney Megatulski, Sharon J. Nieter Burgmayer
International Conference on Bioinorganic Chemistry Ann Arbor, Michigan July 2005

27. ”Piecing Together the Molybdopterin Puzzle”
Sharon J. Nieter Burgmayer, Mica Grantham, Alison Kim, Ying Hou, Grace Shin, Ria Sankar
Gordon Research Conference “Molybdenum and Tungsten Enzymes”, Oxford Univ., UK, July 2005.

26. ”Molybdenum Tris-Dithiolene Compounds with Unusual Magnetic Properties”
Sharon J. Nieter Burgmayer, Laura Rose Snyder, Angelina Lucento
36th international Conference on Coordination Chemistry, Merida Mexico, July 2004.

25. ”Hyper-Paramagnetic Mo-tris-dithiolenes”
Sharon J. Nieter Burgmayer, Laura Rose Snyder, Angelina Lucento
NSF Workshop in Inorganic Chemistry, Sedona AZ, June 2004

24. “Molybdenum Dithiolenes: Mo(+4) Complexes Related to Mo-co?”
Sharon J. Nieter Burgmayer*, Laura Snyder, Janet Lee, Laura Picraux, Cheryl Soricelli
Gordon Research Conference “Molybdenum and Tungsten Enzymes”, Salve Regina, N.H. 2003.

23. “Investigation of DNA Binding Interactions with Ru-pteridinyl Complexes”
Sharon J. Nieter Burgmayer*, Lindsay Alaishuski, Samantha Glazier, Courtney Megatulski
Gordon Research Conference "Metals in Biology", Ventura, January, 2003

22. “Building the Cofactor Ligand of the Mo and W Enzymes”
Gordon Research Conference "Environmental Bioinorganic Chemistry", NH, June, 2002

21. " Molybdenum Dithiolene Model Chemistry", Sharon J. Nieter Burgmayer, *invited speaker* ,
Gordon Research Conference “Molybdenum and Tungsten Enzymes”, Oxford Univ., UK, July 2001.

20.“Embellished Molybdenum Dithiolenes: Spectroscopy, Reactivity, Electrochemistry”
Sharon J. Nieter Burgmayer*, Susan Ashton, Lindsay Alaishuski, Wendy Belliston, Anne Braun, Whitney Drake, Jennifer Malone, Francine Morris, Jeanne Moody, Ria Sankar, Akino Yamashita
Gordon Research Conference "Metals in Biology", Ventura, January, 2001

19. “Reaction Chemistry of Molybdenum Coordinated by Pterin- and Quinoxaline-Dithiolene Ligands”
Sharon J. Nieter Burgmayer*, Susan Ashton, Wendy Belliston, Anne Braun,Whitney Drake, Jennifer Malone, Francine Morris, Jennifer Pectol
Gordon Research Conference "Metals in Biology", Ventura, January, 2000

18. “Redox Reactions of the Pyranopterin System of the Molybdenum Cofactor “
Sharon J. Nieter Burgmayer*, Dori L. Pearsall, Eva M. Moore, Shannon M. Blaney, Whitney Drake, Calies Sauk-Schubert,
Gordon Research Conference “Molybdenum and Tungsten Enzymes”, Plymouth, NH, July 1999

and
International Conference on Bioinorganic Chemistry, Minneapolis, July 1999.

17. "A Double-Pronged Approach to the Molybdenum Cofactor" *with Dori Pearsall*
Gordon Research Conference "Metals in Biology", Ventura, January, 1998

15. "The Search For Small Molecule Models for the Molybdenum Cofactor" *with Dori Pearsall*
Molybdenum Enzyme Conference, Univ. Sussex, UK April, 1997

15. "The Search For Small Molecule Models for the Molybdenum Cofactor" *with Dori Pearsall*
Middle Atlantic Regional Meeting ACS, Villanova, May, 1996

14. "Molybdenum Complexes of Reduced Pterins" *with Kateri Paul, Heather Layton, Cory Rogge*
National American Chemical Society Meeting, Washington, D. C., August 1994

13. "ESEEM of Molybdenum Dithiolene Models for Mo-co"*with Cheryl Soricelli, Lisa Ziemer*
National American Chemical Society Meeting, Washington, D. C., August 1994

12. "Molybdenum Complexes of Dihydropterin" *invited symposium speaker*
National American Chemical Society Meeting, Washington, D. C., August 1992

11 "Properties of a Reduced Molybdenum-Pterin Complex" *with Kristin Everett*
National American Chemical Society Meeting, New York City, August 1991

10. "Reactions of Molybdenum-Dithiolenes Modelling the Reaction Center of Mo-co"*with Cheryl Soricelli*
National American Chemical Society Meeting, New York City, August 1991

9. "Metal Complex Reduction by Tetrahydropterin" *invited symposium speaker*
National American Chemical Society Meeting, Washington, D. C., August 1990

8. "Redox Reactions of Reduced Pterins with Copper and Molybdenum Complexes"
with Kristin Everett, Michelle Arkin, Karoline Mosny
International Conference on Bioinorganic Chemistry, Oxford, August, 1991

7. "Modelling the Molybdenum Cofactor"
Gordon Research Conference "Metals in Biology", Ventura, January, 1991

6. "Models for Metal-Pterin Cofactors in Metalloenzymes"
International Conference on Bioinorganic Chemistry, Boston, July, 1989

5. "Investigations of Pteridine Reactions with Transition Metals for Modelling Metalloenzymes having Pterin Cofactors"*with Joanna Perkinson, Amy Baruch, Sharon Brodie, Ayesha Jafri, Keum Yoon*
National American Chemical Society Meeting, Toronto, June 1988

4. "Reactions of Molybdenum Sulfides with Acetylenes having Nitrogen Heterocyclic Substituents"
with Veronika Szalai
National American Chemical Society Meeting, Toronto, June 1988

3. "Synthesis and Structure of the First Molybdenum-Pterin Complex"
NationalAmerican Chemical Society Meeting, Chicago, September 1985

2. "Unusual Ligand Formation in CS_2 Chemistry: Synthesis, Structure Reactivity of $Mo_2(S_2CNEt_2)_3(\mu^2\text{-}CSC(S)S)(\mu^2\text{-}S_3C_2NEt_2)$"
National American Chemical Society Meeting, Philadelphia, September 1984

1. "Construction of d^4 Metal Carbonyl Derivatives with Acute OC-M-CO Angles"
National American Chemical Society Meeting, Washington, D.C., August 1983

Presentations without Abstracts

27. "Why Nature Does Not Use a Methyl Group"	Haverford College	October 2016
26. "Two Tales from Bioinorganic Chemistry"	Swarthmore College	March 2013
25. "Innocence Lost in Inorganic Chemistry"	Bryn Mawr College,	February 2012
24. "A Three Ring Circus of Pterin Dithiolenes"	University of Arizona	October 2010
23. "Two Tales from Bioinorganic Chemistry"	U. Richmond	November 2010
22. "A Three Ring Circus of Pterin Dithiolenes"	Franklin & Marshall	October 2010
21. "Tribute to Edward I. Stiefel"	GRC Conference on Molybdenum and Tungsten Enzymes Conference, NH, July2008	
20. "Why The Answer is 42"	University of Arizona,	November 2005
19. "The Stuff of Art"	Center for Visual Culture, Bryn Mawr College,	March 2004.
18. "Molybdenum Enzymes"	U. S. Naval Academy	October 2003
17. "Model Studies for the Molybdenum Cofactor"	U. S. Naval Academy	October 2003
16. "Make Mistakes! Takes Chances! Get Messy!	Bryn Mawr College Parents' Weekend	November 2002
15."A Molybdenum Enzyme Expedition"	Bryn Mawr College	April 2001
14. "Pterribly Pterrific Pterins"	Duquesne University	January 2000
13. "Pterribly Pterrific Pterins"	University of Arizona	October 1999
12. "Pterribly Pterrific Pterins"	Yale University	November 1996
11. "The Molybdenum-Pterin Cofactor"	Bryn Mawr College	April 1995
10. "Transition Metal Pterin Chemistry"	University of Maryland, College Park	October 1994
9. "Modeling the Molybdenum Cofactor"	Swarthmore College	September 1993
8. "Model Studies of the Molybdenum Cofactor"	Haverford College	January 1993
20. "Model Studies of the Molybdenum Cofactor"	SUNY, Buffalo	April 1992
7. "Model Studies of the Molybdenum Cofactor"	Hunter College	May 1992
6. "Modeling the Molybdenum Cofactor	Villanova University	April 1991
5. "Modeling the Metal-Pterin Cofactors in Hydroxylase Enzymes"	Weslylan College	May 1990
4. "Modeling the Metal-Pterin Cofactors in Hydroxylase Enzymes"	University of Virginia	April 1989
3. "Modeling the Metal-Pterin Cofactors in Hydroxylase Enzymes"	University of Georgia	November 1988
2. "Recent Advances in Modeling the Molybdenum Cofactor"	Exxon Research & Engineering Co.	September 1988
1. "Transition Metal Complexes of Pteridines as Models for Metalloenzymes"	University of Pennsylvania	March 1987

Research in Progress

Total Synthesis of the Molybdenum Cofactor
Synthesis of Ruthenium Pteridine Complexes
DNA Photocleavage by Ruthenium Pteridine Complexes

Current Research Collaborators

Dr. Martin Kirk, Department of Chemistry, University of New Mexico
Dr. Patrick J. Carroll, Department of Chemistry, University of Pennsylvania
Dr. Glenn Yap, Department of Chemistry, University of Delaware

Post-Doctoral Associates

Dr. Samantha Glazier, *Keck Teaching Postdoctoral Fellow*	January 2002-present
Dr. Curtis Wahlgren	August, 1990-February, 1991

College Activities

Dean of Graduate Studies	2013-present
Chair, GSSWSR Dean Search Committee	2016
Convenor, GSSWSR Leadership Transition Committee	2015-2016
Interim Dean of Graduate Studies	2013-2014
Chair, Committee on Nominations	2012-2013
Chair, ad hoc committee to review Arlo Weil	2011-present
Committee on Nominations	2010-2013
Graduate Council	2009-2011
Director of Graduate Studies in Chemistry	2009-present
Task Force on Alumni Engagement	2010
Chair, Committee on Appointments	2008-2009
Committee on Appointments	2004-2009
including multiple faculty searches in Biology, Geology and Physics	
Co-organizer, Chemistry Colloquium	2008-2009
Speaker, Northern New Jersey BMC Alumni	2008
Contributor, ***Science for College* program**	2005, 2006, 2007
Speaker, Prospective Students Weekend	2007
Speaker, Parents' Weekend	2006
Chair, Physical Chemist Search	2005
PKAL Leadership Initiative Team	2004-2005
Participant, MSPGP Pedagogy Workshop	2004-2005
Independent Major Advisor	2004-2005
for Annalisa Allegretti, with Elliott Shore	
Organizer and Speaker, ***Symposium on Beauty***	2004
Chemistry Colloquium Series Organizer	2001-2005
Acting Chairman, Department of Chemistry	2002-2003
Graduate Council *& associated sub-committees*	2002-2004

Fellow, *joint fellow in the Center for Visual Culture*	2002-2003
and the Center for Science in Society	

Post-Bac Advisory Committee	2003
Mellon Workshop for Mid-Career Faculty	2003
Steering Committee, Center for Science in Society	2002-present
Speaker, Parents' Weekend	2002
Panel Participant, Campaign Opening	2002
Presenter, McBride Workshop	2002
Freshmen Customs Faculty Participant	2002
Presenter, ***Summer Science Institute***	2002
Participant, ***Summer Science Institute*** *Science as Exploration (BMC)*	2001
Committee on Appointments	2000-2001
Faculty Mentor	2000-present
Chairman, Department of Chemistry	1994-1999
Coordination of the Sciences Committee	1994-1999
Chairman, Coordination of the Sciences Committee	1996-1999
OWL	1998-1999
Special Committee on Tenure Appeal	1999
Teaching Assistant Workshop	1997
Committee on Laboratories	1988-1997
Chairman, Committee on Laboratories	1991-1993, 1994-1997
Search Committee, Assistant Director of Health Professions Advising	summer 1997
Admissions	1988-1989 (substitute), 1989-1992
1902 Lecture Committee	1992-1996
Chairman, Parents' Day Committee	1994
Alumni Weekend Speaker	1994
Director of Graduate Studies in Chemistry	1992-1993
Computer Mathematics Search Committee	1990
Physics Search Committee	1990
Parents Day Speaker	1989
Representative to the Seven Sisters Conference	1989
Faculty Marshall	1988
Science Alumni Forum Committee	1988
Graduate Council	1987-1988 (substitute)
Minority Summer Program	1987

Professional Activities

11. Chair, Conference on Molybdenum and Tungsten Enzymes, Santa Fe, New Mexico for June 2017
10. Co-Chair (with Günter Schwarz), Conference on Molybdenum and Tungsten Enzymes, Lake Balaton, Hungary for September 2015
9. Co-Chair (with Jose Moura), Conference on Molybdenum and Tungsten Enzymes, Lisbon, Portugal summer 2013
8. Co-Organizer, Symposium on Frontiers in Metal Dithiolenes, American Chemical Society National Meeting, Philadelphia, August 2008
7. Outside Reviewer, Department of Chemistry, Gettysburg Colllege, 2003

6. ACS Division of Education. Inorganic Exam Committee, August 2000-2002, and August 1995-1997
5. Chair, Cofactor Biosynthesis and Properties Session, Gordon Conference on Molybdenum and Tungsten Enzymes, July 1999
4. Delaware Valley Science Fair Judge, March 1992, March 2000
3. NSF review panel "REU Program for Undergraduates", Nov. 1993
2. AWIS Mentoring Project, December 1995
1. Chair, Bioinorganic Session, Middle Atlantic Regional Meeting, May 1996 American Chemical Society

Master's Theses Supervised

1. Cheryl Soricelli, M.A. 1992 *(1989-1997)* "A Model For The Structure And Reactivity Of Mo-co"
2. Kristin Everett, M.A. 1992 *(1990-1992)* "Modelling Reactions of *cis*-Dioxo Molybdenum(VI) Complexes with Tetrahydropterins"
3. Yoko Momoyama, M.A. 1993 *(1991-1993)* "Studies Of Two Applications Of Bioinorganic Chemistry: Rhenium(V)-N_2S_2 Complexes And Ruthenium And Molybdenum(0) *Tris*-Pterin Complexes"
4. Jonathon Schwartz *(1991-1993) - incomplete*
5. Heather Layton, M.A. 1994 *(1992-1997)*"Reactions Of Molybdenum-Tetrahydropterin Complexes"
6. Sharon Glasgow, M.A. 1995 *(1993-1995)* "Synthesis of Tethered Pterin Ligands"
7. Lilly Temu (incomplete) *(1994-1996)*
8. Dori L. Pearsall, M. A. 1998 *(1996-1998)* "An Investigation Of Redox Capabilities Of A Pyranopterin Model For Molybdopterin"
9. Ying Hou, M. A. 2004 (2003-2004)
10. Laura Snyder, M. A. 2004 (2003-2004) "Unusual Paramagnetic Molybdenum *Tris*-Dithiolenes)"
11. Shannon Dalton, M. A. 2005 (2003-2005) "DNA Intercalation by Ru(II)-*bis*(bipyridine)-Pteridinyl Complexes"
12. Mica Grantham (2003) – *incomplete*
13. Kelly Ginion (2004-2006) "A Synthetic, Structural, and Magnetic Investigation of Molybdenum Tris-Dithiolene Complexes"
14. Benjamin Williams (2009-2011) "An Investigation of Ruthenium Ring-Cleaved Pteridinyl Complexes and their DNA Photocleaving Ability"
15. Douglas Gisewhite (2014) "Probing Steric Effects in a Pyranopterin Dithiolene Model of the Molybdenum Cofactor"
16. Cassandra Gates (2016-present)

Ph. D. Dissertations Supervised

1. Cheryl Soricelli, Ph. D. 1997 *(1989-1997)*
   "Synthesis Of Molybdenum-Dithiolene Complexes: A Route To The Active Site Of Molybdopterin-Containing Enzymes"
2. Heather Layton, Ph. D. 1997 *(1992-1997)*
   "Molybdenum-Pterin Complexes: Their Characterization, Reactivity And Relationship To The Synthetic Modeling Of The Molybdenum Cofactor"
3. Kelly Ginion *(2006 - 2010)*

"Building a Better Model for the Molybdenum Cofactor: A New Class of Molybdenum Dithiolene Complexes"

4. Shannon Dalton *(2007 - 2009)*
   "An Investigation of the Interactions between DNA and Family of Ruthenium(II) Pteridinyl Complexes"
5. Benjamin Williams (2010 – present)
   "Exploring Pteridine Chemistry in Two Bioinorganic Systems"
6. Samantha Klein (2010 – present, jointly supervised with Jonas Goldsmith)
7. Douglas Gisewhite (2014-present)

Undergraduate Research Supervised 1986-2006

	Period supervised *(external support)*
1. Adrienne Howard	1986-1987
2. Joanna Perkinson	1986-1987, summer 1987 *(Exxon grant)*
3. Amy Baruch	1987-1988
4. Sharon Brodie	1987-1988
5. Ayesha Jafri	1987-1988
6. Veronka Szalai	1987-1988, summer 1988 *(Exxon grant)*
7. Najma Dalal	1988-1989
8. Karen Kerr	1988-1989, spring 1988 *(Exxon grant)*
9. Sushma Patel	1988-1989
10. Sarah Richards	spring - summer 1988, *(Exxon grant)*, Marshall Fellow, 1988-1989
11. Keum Yoon	1988-1989, summer 1988 *(Dana fellowship)*
12. Virginia Nez	summer 1989
13. Kristin Everett	1988-1989 *(Dana fellowship* 1989-1990, summer 1990 *(Pew Science Consortium)*
14. Karoline Mosny	1988-1989 *(Dana fellowship* 1989-1990
15. Holli Horak	1989-1990, summer 1990 *(Pew Science Consortium)*
16. Michelle Arkin	1989-1990, summer 1990 *(NIH)* Marshall Fellow, 1989-1990
17. Yoko Momoyama	summer 1990-1992 *(Pew Science Consortium)* Marshall Fellow, 1991-1992
18. Lavina Barwhani	1990-1992 *(Pew Science Consortium and NIH)*
19. Aletha Akers	1991 *(NIH)* , summer 1991, 1992-1993
20. Sarah Dempster	summer 1991 and 1992-1993
21. Audrey Ettinger	1991-1992
22. Katherine Erkkila	1991-1992
23. Lisa Ziemer	summers 1992, 1993 and 1993-1994
24. Laura Bostick	summer 1992 and 1992-1993
25. Lily Tadayyon	summer 1992 and 1992-1993
26. Joy Heising	summer 1992 and 1992-1993
27. Charolotte Dai	summer 1993 and 1993-1994
28. Kateri Paul	summer 1993, 1994, Marshall Fellow, 1993-1994
29. Cory Rogge	summers 1993, 1994 and 1993-1994
30. Martha Heintzelman	summer 1994, 1994-1995
31. John Murphy (Conestoga High School)	summer 1994
32. Jennifer Peterson	fall 1994
33. Judy Burke	1994-1995, *(Minority Women in Science Program)*
34. Sara Tuttle	semester II 1995, summer 1995, 1996-1997
35. Stephanie Eisenbarth	1994-1996
36. Laurie Schubert	summer 1995, 1995-1996

	Period supervised *(external support)*
37. Mikalina Efros	summer 1995, 1995-1996
38. Zermatt Scutt	1995-1996, *(Minority Women in Science Program)*
39. Jennifer Loch	1996-1997
40. Catherine Matsen	1996-1997
41. Carrie Tomasallo	summer 1996, 1996-1997
42. Abi Haka	semester II , 1996, 1997-1998
43. Carol Carneal	summer 1997, 1997-1998
44. Telandria Boyd	summer 1997, 1997-1998
45. Rebekah Katz	summer 1997, 1997-1998
46. Eva Moore	summer 1997, 1997-1998
47. Melissa Marchin	1997-1998
48. Laura Picraux	1997-1998
49. Mattie Towle	1997-1998, Sem I 1998
50. Susan Ashton	Sem.II, 1998, summer 1998, Sem. I 1998, summer 1999, 1999-2000
51. Francine Morris	summer 1998, Sem. I 1998, summer 1999, 1999-2000
52. Deborah Bae	summer 1998, 1998-1999, 1999-2000
53. Shannon Blaney	summer 1998, 1998-1999
54. Kristin Gower	summer 1998
55. Kristina Muncan	summer 1998, 1998-1999
56. Wendy Belliston	1998-1999
57. Deepa Jeyakumar	Sem. I 1998
58. Rickquel Tripp	1998-1999, *(GE Faculty for the Future)*
59. Ria Sankar	1998-1999, 1999-2000, summer 2000-2002 *(GE Faculty for the Future)* 2001-2002
60. Anne Braun	Marshall fellow, summer 1999, 1999-2000
61. Whitney Drake	summer 1999, 1999-2000

62. Jen Malone summer 1999, 1999-2000
63. Jen Pectol summer 1999, 1999-2000
64. Teresa Perez summer 1999, 1999-2000 *(GE Faculty for the Future)*
65. Calies Sauk-Schubert summer 1999, 1999-2000
66. Mariah Schumacher summers 2000 and 2001, 2001-2002
67. Lindsay Alaishuski summers 2000 and 2002, 2002-2003
68. Janet Lee summers 2000 and 2001, 2001-2002
69. Grace Shin summers 2001 and 2002, 2002-2003
70. Rebecca Soinski summer 2000
71. Akino Yamashita summer 2000, 2000-2001
72. Jeanne Moody 2000-2001
73. Erin Dwight summer 2001, fall 2001
74. Jessica Herzog summer 2001, 2001-2002
73. Laura Snyder summers 2001 and 2002, 2002-2003 *(GE Faculty for the Future), Marshall Fellow 2003-2004.*
74. Kia Showell 2001-2002, *(GE Faculty for the Future)*
75. Kesel Wilson summer 2001
76. Ying Hou summers 2001-2002, 2002-2003
77. Shanti Mikkilini summer 2002
78. Courtney Megatulski summers 2002, 2003, 2004, 2004-2005
79. Angelina Lucento summer 2003, 2003-2004
80. Alanna Albano summer 2004, 2004-2005
81. Cara Blankenbicker summer 2004, 2004-2005
82. Melissa Leedle summer 2004, SemI, 2004
83. Alison Kim 2004-2005
84. Eleni Kardaras 2004-2005
85. Mary Kim summers 2004 and 2005; 2005-2006
86. Shadia BelHamdounia summer 2005, 2005-2006
87. Candacia Greeman summer 2005, 2006
88. Anna Merkle summer 2005, 2005-2006
89. Sruti Bhaumik 2005-2006
90. Sandi Mnuskin summer 2006, 2006-2007
91. Rebecca Petit summer 2006, 2006-2007
92. Amy Rothkopf summer 2006, 2006-2007
93. Tanya Corder summer 2007, 2007-2008
94. Lauren Dillon summer 2007, 2007-2008
95. Belinda Leung summer 2007, 2007-2008
96. Sanda Win summer 2007, 2007-2008
97. Erika Lippolt summer 2008, 2009-2009
98. Rebecca Rothstein summer 2008, 2008-2009
99. Alison Panosian summer 2008, 2009
100. Liz Beilinski 2008-2010
101. Allison Shatz summer 2009-2010
102. Stephanie Vrakas summer 2009-2010
103. Jenny Chen summer 2010-2011
104. Yichun Fu summer 2010-2012
105. Alex Gaudette spring 2009-2012
106. Susie Kim summer 2010-2011
107. Meredith Skiba summer 2010-2012
108. Suyin Lee spring 2011 - 2012
109. Sri Suresh spring 2011
110. Hannah Gilbert summer 2011-2014
111. Diane Kim spring 2012-2013
112. Alexandra Kirsch spring 2012-2014
113. Juliana Quarterman spring 2012-2013
114. Anna Kalinsky spring 2013
115. Rachael Kahelin summer 2013
116. Tianmin Chen fall 2013
117. Stephanie Yang fall 2013
118. Kai Wang 2013-2015
119. Alisha Esmail 2014-2015
120. Alexandra Nagelski 2015-present
121. Eleanor Hayes summers 2013, 2014
122. Linda Zhang 2014-2015
123. Ashley Zhu 2014-2015
124. Divya Jain summer 2015
125. Nam Nyugen spring 2016 - present
126. Haley Varnam spring 2016 – present
127. Victoria Berke spring 2016 – present
128. Nazifa Tabbassum spring 2016 - present
129. Leslie Reiffen fall 2016 - present

Honors Theses Supervised

1. Amy Baruch (1987-1988) "Reaction of a Molybdenum Model Complex with 6,7-Dimethyl Tetrahydropterin"
2. Veronika Szalai (1987-1988) "Reactions of Molybdenum Sulfides with Nitrogen Heterocyclic Alkynes "
3. Ayesha Jafri (1987-1988) "Synthesis of Iron-Pterin Complexes"
4. Sarah Richards (1988-1989) "Reactions of Molybdenum Sulfides with Nitrogen Heterocyclic Alkynes "
5. Karen Kerr (1988-1989) "Mechanism of Model Complex Reaction Tetrahydropterins"
6. Michelle Arkin (1989-1990) "Investigations of Molybdenum (VI) tetrahydropterin Interactions"
7. Kristin Everett (1989-1990) "Model Systems to Investigate the Molybdenum Cofactor"
8. Karoline Mosny (1989-1990) "Creating Models for the Active Sites in Mammalian and Bacterial Phenylalanine Hydroxylase"
9. Lavina Bharwani (1991-1992) "Modelling the Active Sites of Bacterial Phenylalanine Hydroxylase by Investigating the Blue Intermediate"
10. Aletha Akers (1992-1993) "Study of DNA binding by Ruthenium Tris Pterin Complexes"
11. Laura Bostick (1992-1993) "Investigations of Molybdenum (VI) Tetrahydropterin Interactions"
12. Sara Dempster (1992-1993)"An Investigation of the Oxidation States in Two Molybdenum Complexes of Reduced Pterins Isolated from Mo-co Model Studies"

13. Lily Tadayyon (1992-1993) "Synthesis and Characterization of Transition Metal Pterin Complexes"
14. Charlotte Dai (1993-1994) "Study of DNA binding by Ruthenium Tris Pterin Complexes"
15. Cory Rogge (1993-1994) "Molybdenum Pterin Complexes"
16. Kateri Paul (1993-1994) "Redox Reactions of Reduced Molybdenum-Pterins"
17. Lisa Ziemer (1993-1994) "Novel Pterin Syntheses"
18. Martha Heintzelman (1994-1995) "Synthesis and DNA Binding Studies of Ruthenium-(phenanthroline-pterin) Complexes"
19. Stephanie Eisenbarth (1995-1996) "The Synthesis and Characterization of a bis-Dithiolene Molybdenum Cofactor Model "
20. Sarah Tuttle (1996-1997) "Synthesis and Characterization of a Molybdenum Mono-Oxo bis-Dithiolene Complex"
21. Abi Haka (1997-1998) "Total Synthesis of the Molybdenum Cofactor of DMSO Reductase: The First Seven Steps"
22. Rebekah Katz (1997-1998) "Synthesis, Characterization and Reactivity Studies of a Model of the Molybdenum Cofactor"
23. Laura Picraux (1997-1998) "Investigation of the Unusual Properties of Three Molybdenum Tris-dithiolene Complexes "
24. Wendy Belliston (1998-1999) "Modeling the Molybdenum Cofactor in DMSO Reductase: A Synthetic Approach to Molybdopterin"
25. Susan Ashton (1999-2000) "Modeling the Molybdenum Cofactor in DMSO Reductase"
26. Anne Braun (1999-2000) "Mono-Oxo Bis-Dithiolene Synthesis"
27. Whitney Drake (1999-2000) "Characterization and Study of a Molybdenum Cofactor Model by Cyclic Voltammetry"
28. Francine Morris (1999-2000) "Total Synthesis of Acetyl Ethynyl Pterin, The Closest Known Structural Mimic of Molybdopterin"
29. Calies Sauk-Schubert (1999-2000) "A Stereospecific Pyranopterin Model for Moco: Working towards an Oxo-Molybdenum Bound Complex"
30. Lindsay Alaishuski (2002-2003) "Ruthenium Phen-Pteridine Complexes Binding Interactions with DNA"
31. Laura Snyder (2003-2004) "Unusual Paramagetic Molybdenum Tris-Dithiolenenes"
32. Alanna Albano (2004-2005) "Analyzing the Binding Interactions of Ruthenium Pteridinyl Complexes to DNA "
33. Cara Blankenbicker (2004-2005) "Investigation of Unusual Paramagetic Molybdenum Tris-Dithiolenenes Compounds"
34. Alison Kim (2005-2006) "A New Approach to the Synthesis of a Model Compound for the Moco of Sulfite Oxidase"
35. Courtney Megatulski (2005-2006) "Synthesis and Characterization of Phenanthroline-Pteridines Chelated to Ru(II), Fe(II) and Cu(II)"
36. Shadia BelHamdounia(2005-2006) – "Improving the Structural Mimic of Molybdopterin"
37. Mary Kim –" The Molybdenum Cofactor: A Working Model"
38. Anna Merkle (2005-2006) – "Investigations of Unusual Magnetic properties of Molybdenum Tris-dithiolenes"
39. Rebecca Petit (2006-2007) — "Synthesis of Pterinyl Complexes to Model the Redox Behavior and Structure of the Molybdenum Cofactor"
40. Amy Rothkopf (2006-2007) — "Modeling the Molybdenum Cofactor"
41. Lauren Dillon (2007-2008) — "Total Synthesis of Molybdenum Cofactor Models: Synthesis of 2-pivaloyl-6-alkynylpterins"
42. Tanya Michelle Corder (2007-2008) — "Models for the Molybdenum Cofactor"
43. Belinda Leung (2007-2008) — " Synthesis, Characterization and Analysis of Metal Pteridine Complex Derivatives"
44. Sanda Win (2007-2008) — "Investigation of DNA Intercalation by Ruthenium(II)-*bis*(Bipyridine)-Pteridinyl Complexes"
45. Erika Lippoldt (2008-2009)–"Synthesis and Characterization of Cu(II) and Co(III) Complexes of Pteridinyl Ligands and DNA Cleavage and Photocleavage Studies"
46. Rebecca Rothstein (2008-2009)— "The Quinoxaline-dithiolene System: An Effective Model for the Molybdenum Cofactor"
47. Liz Beilinski (2008-2010) — "Building A Model for the Molybdenum Cofactor"
48. Allison Shatz (2008-2010) — "An Investigation of the Photochemical and Electrochemical Properties of Ru(II)Pteridinyl Complexes"
49. Jenny Chen (2010-2011) – "Improving a Molybdenum Cofactor Model for a Class of Molybdenum Dithiolene Complexes"

Alex Gaudette (2010-2012) – "Exploration of unusual pteridine chemistry to synthesize novel ruthenium(II) complexes"

50. Meredith Skiba (2010-2012) –"Explorations into interactions between Ruthenium (II) Pteridine Complexes and DNA"
51. Yichun Fu (2011-2013) – "Understanding the Structures and Reactivity of Molybdenum Pterin Dithiolene Cofactor in Model Complexes"
52. Hannah Gilbert (2012-2013) – "Molybdenum Cofactor Modeling: Investigation of Steric Effects in Molybdopterin Dithiolene Complexes"
53. Diane Kim (2012-2013) – "Singlet Oxygen Release, Photocleavage Ability, and Level of Intercalation of Ruthenium Compounds with Pteridine ligands"
54. Juliana Quarterman (2012-2013) – "Synthesis and Investigations of Ruthenium Complex Photocleavage Abilities"
55. Stephanie Yang (2014-2015) — "An Investigation into the DNA Intercalating and DNA Photocleaving Properties of a Family of Ruthenium(II) Polypyridyl Complexes"

Courses Taught

**Intimate Interactions: Chemical Bonding 2011
CHEM105

**The Stuff of Art CHEM100/HART100	2004, 2006, 2010, 2012
**Beauty CSEM / ENG (with Professor Anne Dalke)	2005
General Chemistry CHEM103 - General Chemistry CHEM103L (now 113) - 2006	1989
General Chemistry CHEM104 -	1993, 1995, 1997, 1999, 2001, 2002, 2003, 2005, 2007, 2009, 2010
Inorganic Chemistry CHEM231/ Inorganic Chemistry Laboratory CHEM231L *(CHEM231L through 1998 only)*	1986, 1987, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002, 2003, 2004, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
Inorganic Chemistry CHEM232/ Inorganic Chemistry Laboratory CHEM232L	1986, 1987, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998
**Research Methodology CHEM251/252	2004, 2006, 2009, 2011, 2015
Advanced Inorganic Chemistry CHEM332/532	1993, 1995, 1997, 1998, 1999, 2001, 2008, 2011, 2012, 2014, 2016
Low Temperature Geochemistry GEO302 (*with Professor Maria Luisa Crawford*)	1998
#Theory and Experiment in Inorganic Chemistry (*with Professor Michelle Francl)*	1987, 1992, 1996
#Organometallic Chemistry CHEM534 (*with Professor Charles Swindell*))	1990
**Organometallic Chemistry CHEM534 (*with Professor William Malachowski*))	2005
**Molybdenum Enzymes: A Historical Tour CHEM332/532 (with Professor Susan White)	2002
Group Theory CHEM535 (*with Edward Wovchko in 2001*)	1989, 1990, 1991, 1992, 1997, 1998, 2001, 2003, 2006, 2013
**Advances in Spectroscopy (*with Keck Fellow Samantha Glazier*)	2002
**Advanced Spectroscopy CHEM 350/550 *(with Professor Jason Schmink)*	2013

****denotes new course since promotion to full professor;*

*denotes new course*