

CURRICULUM VITAE
Gregory K. Friestad, Ph.D.

Department of Chemistry
University of Iowa
Iowa City, IA 52242

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PROFESSIONAL APPOINTMENTS

- 2005-present: **University of Iowa** – Iowa City, Iowa
Department of Chemistry
Associate Professor (2005–present)
Director of Graduate Studies (2017–present)
- 1998-2005: **University of Vermont** – Burlington, Vermont
Department of Chemistry
Associate Professor (2004–2005); Assistant Professor (1998–2004)

EDUCATION

- 1995-1998: **University of Pennsylvania** – Philadelphia, Pennsylvania
Department of Chemistry (Professor Amos B. Smith, III)
NIH Postdoctoral Research Fellow
- 1990-1995: **University of Oregon** – Eugene, Oregon
Department of Chemistry (Professor Bruce P. Branchaud)
Doctor of Philosophy, Organic Chemistry, 1995
- 1986-1990: **Bradley University** – Peoria, Illinois
Bachelor of Science, Chemistry, 1990
Undergraduate Research: USDA Northern Regional Research Center, Peoria

AFFILIATIONS

Editorial Advisory Board, *Current Organic Chemistry*, 2009–present
Editorial Board, *Molbank*, 2009–present
University of Iowa Biosciences Program, 2005–present
Vermont Cancer Center (NCI Comprehensive Cancer Center), 2002–present
American Chemical Society, 1990–present

AWARDS AND HONORS

- 2016: Visiting Professor, Kunming University of Science and Technology,
Kunming, Yunnan Province, P. R. China
- 2013: Marion L. Huit Faculty Award, University of Iowa
- 2009-2010: Obermann Scholar, Obermann Center for Advanced Studies, University of Iowa
- 2008-2011: University Faculty Scholar Award, University of Iowa
- 2005: Visiting Professor, University of Wisconsin-Madison
- 2005: Kroepsch-Maurice Excellence in Teaching Award Nominee, University of Vermont
- 2003: Japan Society for the Promotion of Science (JSPS) Invitation Fellowship
- 2003: Visiting Professor, Kobe Pharmaceutical University, Kobe, Japan
- 2001: Lake Champlain Cancer Research Organization Award, Vermont Cancer Center

Curriculum Vitae — Gregory K. Friestad, Ph.D.

- 1996-1998: NIH Postdoctoral Research Fellowship, National Cancer Institute
1991-1994: GAANN Teacher-Scholar Fellowship, United States Department of Education
1990: Dean's List, Outstanding Academic Achievement, Bradley University
1990: Certificate of Merit, United States Department of Agriculture
1986-1987: Meyer and Anna Block Scholarship, Academic Merit Award, Bradley University

PEER-REVIEWED PUBLICATIONS

59. Ryan M. Friedrich; Jay Q. Bell; Alfredo Garcia; Zican Shen; Gregory K. Friestad "Unified Strategy for 1,5,9- and 1,5,7-Triols via Configuration-Encoded 1,5-Polyol Synthesis: Preparation and Coupling of C15–C25 and C26–C40 Fragments of Tetrafibrin." *Journal of Organic Chemistry* **2018**, *83*, 13650-13669. (Featured Article)
58. Ryan M. Friedrich; Gopeekrishnan Sreenilayam; Jacob Hackbarth; Gregory K. Friestad "Unified Strategy for 1,5,9- and 1,5,7-Triols via Configuration-Encoded 1,5-Polyol Synthesis: Enantioselective Preparation of gamma-Sulfonyl-alpha-silyloxyaldehydes and Iterative Julia-Kocienski Coupling." *Journal of Organic Chemistry* **2018**, *83*, 13636-13649. (Featured Article)
57. Sherif M. S. Ibrahim; Koushik Banerjee; Kara A. Slater; Gregory K. Friestad "A Tamao-Fleming oxidation route to dipeptides bearing *N,O*-acetal functionality." *Tetrahedron Letters* **2017**, *58*, 4864-4866.
56. Ryan M. Friedrich; Gregory K. Friestad "Access to an anti,syn-1,5,7-Triol via Configuration-Encoded 1,5-Polyol Synthesis: The C15–C25 Fragment of Tetrafibrin." *European Journal of Organic Chemistry* **2017**, 1961-1964.
55. Gregory K. Friestad; Koushik Banerjee; Jean-Charles Marié; Umesh Mali, Lei Yao "Stereoselective Access to Tubuphenylalanine and Tubovaline: Improved Mn-Mediated Radical Additions and Assembly of A Tubulysin Tetrapeptide Analog" *Journal of Antibiotics* **2016**, *69*, 294-298.
54. Kara A. Slater; Gregory K. Friestad "Mn-Mediated Radical-Ionic Annulations of Chiral *N*-Acyldhydrazones." *Journal of Organic Chemistry* **2015**, *80*, 6432-6440.
53. Gregory K. Friestad "Control of Asymmetry in the Radical Addition Approach to Chiral Amine Synthesis" In *Topics In Current Chemistry: Stereoselective Formation of Amines*; Wei Li; Xumu Zhang, Eds.; Springer-Verlag: Berlin, 2014, vol. 343, pp. 1-32.
52. Xu Xiangming; Gregory K. Friestad; Yao Lei "Recent Advances in the Synthesis of Tubulysins" *Mini-Reviews in Medicinal Chemistry* **2013**, *13*, 1572-1578.
51. Gregory K. Friestad; Gopeekrishnan Sreenilayam; Joseph C. Cannistra; Luke M. Slominski "Preparation of enol ester epoxides and their ring-opening to α -silyloxyaldehydes" *Tetrahedron Letters* **2012**, *53*, 5064-5067.
50. Gregory K. Friestad; An Ji; Jonas Baltrusaitis; Chandra Sekhar Korapala; Jun Qin "Scope of Stereoselective Mn-Mediated Radical Addition to Chiral Hydrazones and Application in a Formal Synthesis of Quinine." *Journal of Organic Chemistry*, **2012**, *77*, 3159-3180.
49. Gregory K. Friestad "Asymmetric Radical Addition to Chiral Hydrazones." In *Topics In Current Chemistry: Radicals in Synthesis III*; Gansauer A.; Heinrich, M., Eds.; Springer-Verlag: Berlin, 2012, vol. 320, pp. 61-92.

48. Gregory K. Friestad "Organomanganese-Mediated Radical Reactions." In *The Chemistry of Organo-Manganese Compounds*; Marek, I.; Rappoport, Z., Eds.; Wiley: Chichester, United Kingdom, 2011; pp. 559-584.
47. Gregory K. Friestad; An Ji; Chandra Sekhar Korapala; Jun Qin "Intermolecular Radical Addition to *N*-Acylhydrazones as a Stereocontrol Strategy for Alkaloid Synthesis: Formal Synthesis of Quinine." *Organic and Biomolecular Chemistry* **2011**, 4039-4043.
46. Gregory K. Friestad; Gopeekrishnan Sreenilayam "1,5-Polyols: Challenging Motifs for Configurational Assignment and Synthesis." *Pure and Applied Chemistry* **2011**, 83, 461-478.
45. Gregory K. Friestad; Gopeekrishnan Sreenilayam "Versatile Configuration-Encoded Strategy for Rapid Synthesis of 1,5-Polyol Stereoisomers" *Organic Letters* **2010**, 12, 5016-5019.
44. Gregory K. Friestad "Asymmetric Methods for Radical Addition to Imino Compounds." In *Chiral Amine Synthesis. Methods, Developments and Applications*; Nugent, T., Ed.; Wiley-VCH: Weinheim, Germany, 2010; pp. 51-74.
43. Gregory K. Friestad; Hye Jin Lee "Trans-2,5-Disubstituted Tetrahydrofurans via Additions of Carbon Nucleophiles to the Strained Bicyclic Acetal 2,7-Dioxabicyclo[2.2.1]heptane." *Organic Letters* **2009**, 11, 3958-3961. (Highlighted in Yamamoto, H.; Payette, J. N. *SynFacts* **2009**, 1373.)
42. Gregory K. Friestad; Koushik Banerjee "Synthesis of γ -Amino Esters via Mn-Mediated Radical Addition to Chiral γ -Hydrazonoesters." *Organic Letters* **2009**, 11, 1095-1098.
41. Gregory K. Friestad; Yaoping Wu "Intermolecular Non-Reductive Alkylation of Enamides via Radical-Polar Crossover." *Organic Letters* **2009**, 11, 819-822.
40. Gregory K. Friestad "Reaction of Acetals with Organometallic Reagents." In *Science of Synthesis, Vol. 40a: Compounds with One Saturated Carbon-Heteroatom Bond: Amines and Ammonium Salts*; Enders, D.; Shaumann, E., Eds.; Thieme: Stuttgart, Germany, 2009; pp. 91-110.
39. Gregory K. Friestad "Addition of Carbanions to Azomethines." In *Science of Synthesis, Vol. 40a: Compounds with One Saturated Carbon-Heteroatom Bond: Amines and Ammonium Salts*; Enders, D.; Shaumann, E., Eds.; Thieme: Stuttgart, Germany, 2009; pp. 305-342.
38. Gregory K. Friestad; Tao Jiang; Gina M. Fioroni "Stereocontrol in Radical Mannich Equivalents for Aminosugar Synthesis: Haloacetal and 2-(Phenylthio)vinyl Tethered Radical Additions to α -Hydroxyhydrazones." *Tetrahedron* **2008**, 64, 11549-11557.
37. Gregory K. Friestad; An Ji "Mn-Mediated Coupling of Alkyl Iodides and K^+ : A Radical Addition Route to α,α -Disubstituted α -Aminoesters" *Organic Letters*, **2008**, 10, 2311-2313.
36. Chandra Sekhar Korapala; Jun Qin; Gregory K. Friestad "Quinine Synthesis Studies: A Radical-Ionic Annulation via Mn-Mediated Addition to Chiral *N*-Acylhydrazones" *Organic Letters*, **2007**, 9, 4243-4246.
35. Gregory K. Friestad; Alex Mathies "Effects of α -Alkoxy Substitution and Conformational Constraints on 6-*exo* Radical Cyclizations of Hydrazones via Reversible Thiyl and Stannyl Additions." *Tetrahedron* **2007**, 63, 9373-9381. (Corrigendum: *Tetrahedron* **2007**, 63, 13039.)

34. Gregory K. Friestad; Tao Jiang; Alex K. Mathies "Enhanced Reactivity in Radical Cyclizations of Hydrazones Using the Silicon-Tethered 1-Bromovinyl Group" *Tetrahedron* **2007**, 63, 3964-3972.
33. Gregory K. Friestad; Tao Jiang; Alex K. Mathies "Aldehyde-Selective Wacker Oxidation in a Thiyl-Mediated Vinyl Group Transfer Route to Daunomycin." *Organic Letters* **2007**, 9, 777-780.
32. Gregory K. Friestad; Alex K. Mathies "Recent Developments in Asymmetric Catalytic Addition to C=N Bonds." *Tetrahedron*, **2007**, 63, 2541-2569.
(#7 most downloaded article in *Tetrahedron* for the year 2007; Top 50 Most Cited Articles in *Tetrahedron* for the years 2006-2009)
31. Hui Ding; Gregory K. Friestad "Strecker Reactions of Chiral *N*-Acylhydrazones." *Heterocycles* **2006**, 70, 185-199.
30. Gregory K. Friestad; Jun Qin; YoungSung Suh; Jean-Charles Marié "Mn-Mediated Coupling of Alkyl Iodides and Chiral *N*-Acylhydrazones: Optimization, Scope, and Evidence for a Radical Mechanism." *Journal of Organic Chemistry* **2006**, 71, 7016-7027.
29. Gregory K. Friestad; Chandra Sekhar Korapala; Hui Ding "Dual Activation in Asymmetric Allylsilane Addition to Chiral *N*-Acylhydrazones: Method Development, Mechanistic Studies, and Elaboration of Homoallylic Amine Adducts." *Journal of Organic Chemistry* **2006**, 71, 281-289.
28. Hui Ding, Gregory K. Friestad "Asymmetric Addition of Allylic Nucleophiles to Imino Compounds." *Synthesis* **2005**, 2815-2829.
27. Gregory K. Friestad; Cristian Draghici; Mustapha Soukri; Jun Qin "Radical Addition Approach to Asymmetric Amine Synthesis: Design, Implementation, and Comparison of New Chiral *N*-Acylhydrazones." *Journal of Organic Chemistry* **2005**, 70, 6330-6338.
26. Gregory K. Friestad "Chiral *N*-Acylhydrazones: Versatile Imino Acceptors for Asymmetric Amine Synthesis." *European Journal of Organic Chemistry* **2005**, 3157-3172.
(#1 most read article in *European Journal of Organic Chemistry* for July 2005)
25. Gregory K. Friestad; Gina M. Fioroni "Haloacetal Radical Cyclizations of α - and β -Hydroxyhydrazones." *Organic Letters* **2005**, 7, 2393-2396.
24. Gregory K. Friestad; Amy M. Deveau; Jean-Charles Marié "Stereoselective Mn-Mediated Coupling of Functionalized Iodides and Hydrazones: A Synthetic Entry to the Tubulysin gamma-Amino Acids" *Organic Letters* **2004**, 6, 3249-3252.
23. Hui Ding; Gregory K. Friestad "Allyltrimethoxysilane Addition to *N*-Acylhydrazones: Two Catalytic Methods Employing CuCl and Fluoride." *Synthesis* **2004**, 2216-2221.
22. Gregory K. Friestad; Tao Jiang; Alex K. Mathies; Sara E. Massari "Silicon-Containing Heterocycles in Stereocontrolled Radical Additions to Chiral Hydrazones." *Phosphorous, Sulfur, and Silicon* **2004**, 179, 955-956.
21. Hui Ding; Gregory K. Friestad "Trifluoroacetyl-Activated Nitrogen-Nitrogen Bond Cleavage of Hydrazines by Samarium (II) Iodide." *Organic Letters* **2004**, 6, 637-640.

20. Gregory K. Friestad; Sara E. Massari "A Silicon Tether Approach for Addition of Functionalized Radicals to Chiral α -Hydroxyhydrazones: Diastereoselective Additions of Hydroxymethyl and Vinyl Synthons." *Journal of Organic Chemistry* **2004**, *69*, 863-875.
19. Gregory K. Friestad; Yuehai Shen; Erik L. Ruggles "Enantioselective Radical Addition to *N*-Acylhydrazones Mediated by Chiral Lewis Acids." *Angewandte Chemie International Edition* **2003**, *42*, 5061-5063.
18. Gregory K. Friestad; Tao Jiang; Gina M. Fioroni "Tandem Thiyl Radical Addition and Cyclization of Chiral Hydrazones Using a Silicon-Tethered Alkyne." *Tetrahedron: Asymmetry* **2003**, *14*, 2853-2856.
17. Jun Qin; Gregory K. Friestad "Stereocontrol in Hydride Addition to Ketone-Derived Chiral *N*-Acylhydrazones." *Tetrahedron* **2003**, *59*, 6393-6402.
16. Yuehai Shen; Gregory K. Friestad "Comparison of Electrophilic Amination Reagents for *N*-Amination of 2-Oxazolidinones and Application to Synthesis of Chiral Hydrazones." *Journal of Organic Chemistry* **2002**, *67*, 6236-6239.
15. Gregory K. Friestad; Hui Ding "Asymmetric Allylsilane Additions to Enantiopure *N*-Acylhydrazones with Dual Activation by Fluoride and In(OTf)." *Angewandte Chemie International Edition* **2001**, *40*, 4491-4493.
14. Gregory K. Friestad; Jun Qin "Intermolecular Alkyl Radical Addition to Chiral *N*-Acylhydrazones Mediated by Manganese Carbonyl" *Journal of the American Chemical Society* **2001**, *123*, 9922-9923.
13. Gregory K. Friestad "Addition of Carbon-Centered Radicals to Imines and Related Compounds" *Tetrahedron* **2001**, *57*, 5461-5496.
12. Gregory K. Friestad; Sara E. Massari "Diastereoselective Vinyl Addition to Chiral Hydrazones via Tandem Thiyl Radical Addition and Silicon-Tethered Cyclization." *Organic Letters* **2000**, *2*, 4237-4240.
11. Gregory K. Friestad; Jun Qin "Highly Stereoselective Intermolecular Radical Addition to Aldehyde Hydrazones from a Chiral 3-Amino-2-oxazolidinone." *Journal of the American Chemical Society* **2000**, *122*, 8329-8330.
10. Rama K. Kondru; David N. Beratan; Gregory K. Friestad; Amos B. Smith, III; Peter Wipf "Chiral Action at a Distance: Remote Substituent Effects on the Optical Activity of Calyculins A and B." *Organic Letters* **2000**, *2*, 1509-1512.
9. Amos B. Smith, III; Gregory K. Friestad; Joseph Barbosa; Emmanuel Bertounesque; James J.-W. Duan; Kenneth G. Hull; Makoto Iwashima; Yuping Qiu; P. Grant Spoons; Brian A. Salvatore "Total Synthesis of (+)-Calyculin A and (-)-Calyculin B: Cyanotetraene Construction, Asymmetric Synthesis of the C(26-37) Oxazole, Fragment Assembly, and Final Elaboration." *Journal of the American Chemical Society* **1999**, *121*, 10478-10486.
8. Amos B. Smith, III; Gregory K. Friestad; Joseph Barbosa; Emmanuel Bertounesque; Kenneth G. Hull; Makoto Iwashima; Yuping Qiu; Brian A. Salvatore; P. Grant Spoons; James J.-W. Duan "Total Synthesis of (+)-Calyculin A and (-)-Calyculin B: Asymmetric Synthesis of the C(9-25)

Curriculum Vitae — Gregory K. Friestad, Ph.D.

- Spiroketal Dipropionate Subunit." *Journal of the American Chemical Society* **1999**, *121*, 10468-10477.
7. Gregory K. Friestad "A Silicon Tether Approach for Diastereocontrol in Radical Addition to Chiral Hydrazones." *Organic Letters* **1999**, *1*, 1499-1501.
 6. Lana M. Grubb; April L. Dowdy; Heather S. Blanchette; Gregory K. Friestad; Bruce P. Branchaud "An Approach to (+)-Pancratistatin from D-Glucose: A Conformational Lock Solves a Stereochemical Problem." *Tetrahedron Letters* **1999**, *40*, 2691-2694.
 5. Amos B. Smith, III; Young Shin Cho; Gregory K. Friestad "Convenient Wacker Oxidations with Substoichiometric Cupric Acetate." *Tetrahedron Letters* **1998**, *39*, 8765-8768.
 4. Amos B. Smith, III; Gregory K. Friestad; James J.-W. Duan; Joseph Barbosa; Kenneth G. Hull; Makoto Iwashima; Yuping Qiu; P. Grant Spoons; Emmanuel Bertounesque; Brian A. Salvatore "Total Synthesis of (+)-Calyculin A and (-)-Calyculin B." *Journal of Organic Chemistry* **1998**, *63*, 7596-7597.
 3. Gregory K. Friestad; Bruce P. Branchaud "A New Approach to the Pancratistatin C-Ring from D-Glucose: Ferrier Rearrangement, Pseudoinversion and Pd-Catalyzed Cyclizations." *Tetrahedron Letters* **1997**, *38*, 5933-5936.
 2. Gregory K. Friestad *Control of Reductive vs Non-Reductive Cyclization in Palladium-Catalyzed Aryl-Enone Conjugate Additions and Application to a Synthetic Approach to (+)-Pancratistatin*. Doctoral Dissertation, Department of Chemistry, University of Oregon, 1995.
 1. Gregory K. Friestad; Bruce P. Branchaud "Intramolecular Pd-Catalyzed Aryl-Enone Conjugate Additions. Control of Reductive vs. Non-Reductive Cyclization." *Tetrahedron Lett.* **1995**, *36*, 7047-7050.

NON-PEER-REVIEWED PUBLICATIONS

12. Gregory K. Friestad "From Synthesis and Functionalization to Applications." *Current Organic Chemistry* **2015**, *19*, 1873. (invited editorial)
11. Gregory K. Friestad "Catalytic Asymmetric Synthesis, Third Edition Edited by Iwao Ojima" *Journal of Medicinal Chemistry* **2011**, *54*, 4280. (invited book review)
10. Gregory K. Friestad "Handbook of Cyclization Reactions Edited by Shengming Ma." *Journal of Medicinal Chemistry* **2010**, *53*, 6522. (invited book review)
9. Gregory K. Friestad "Practical Microwave Synthesis for Organic Chemists by C. Oliver Kappe, Doris Dallinger, and S. Shaun Murphree." *Journal of Medicinal Chemistry* **2009**, *52*, 3596. (invited book review)
8. Gregory K. Friestad "Dimanganese Decacarbonyl" in *Electronic Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A.; Fuchs, P.; Crich, D.; Molander, G., Eds.; Wiley: Chichester UK, in press, accepted Aug. 7, 2008. (invited review)
7. Gregory K. Friestad "Ion-Radical Organic Chemistry: Principles and Applications, 2nd ed. by Zory Vlad Todres." *Journal of the American Chemical Society* **2009**, *131*, 2418. (invited book review)

Curriculum Vitae — Gregory K. Friestad, Ph.D.

6. Gregory K. Friestad "Chloriodomethane" in *Electronic Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A.; Fuchs, P.; Crich, D.; Molander, G., Eds.; Wiley: Chichester UK, www.mrw.interscience.wiley.com/eros/articles/rc110/frame.html, Article Online Posting Date: September 15, 2008. (invited review)
5. Tao Jiang; Gregory K. Friestad "Bis(ethoxythiocarbonyl)sulfide" in *Electronic Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A.; Fuchs, P.; Crich, D.; Molander, G., Eds.; Wiley: Chichester UK, www.mrw.interscience.wiley.com/eros/articles/rn00637/frame.html, Article Online Posting Date: April 15, 2006. (invited review)
4. Gregory K. Friestad; Bruce P. Branchaud "Ammonium Tetrafluoroborate" in *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A., Ed.; Wiley: New York, 1995; v. 1, pp. 199-200. (invited review)
3. Gregory K. Friestad; Bruce P. Branchaud "Cesium Fluoride" in *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A., Ed.; Wiley: New York, 1995; v. 2, pp. 1042-1046. (invited review)
2. Gregory K. Friestad; Bruce P. Branchaud "Tetrafluoroboric Acid" in *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A., Ed.; Wiley: New York, 1995; v. 7, pp. 4762-4765. (invited review)
1. Bruce P. Branchaud; Gregory K. Friestad "Vitamin B₁₂" in *Encyclopedia of Reagents for Organic Synthesis*; Paquette, L. A., Ed.; Wiley: New York, 1995; v. 8, pp. 5511-5514. (invited review)

INVITED LECTURES

6/20/18	22nd Green Chemistry & Engineering Conference (Portland, OR)
9/23/16	Yunnan University (Kunming, P. R. China)
9/21/16	Kunming University of Science and Technology (Kunming, P. R. China)
10/23/15	Truman State University (Kirksville, MO, USA)
9/22/14	University of Missouri, St. Louis (St. Louis, MO, USA)
2/7/13	North Dakota State University (Fargo, ND, USA)
10/4/12	Grinnell College (Grinnell, IA, USA)
9/28/12	University of New Mexico (Albuquerque, NM, USA)
8/2/10	18th International Conference on Organic Synthesis (Bergen, Norway)
3/3/10	University of Maryland (College Park, MD, USA)
10/9/08	Midwest Regional Meeting of The American Chemical Society (Kearney, NE, USA)
12/6/07	University of Alabama, Department of Chemistry (Tuscaloosa, AL, USA)
11/15/07	University of Kansas, Department of Medicinal Chemistry (Lawrence, KS, USA)
7/5/07	Gordon Research Conference: Radicals and Radical Ions (Holderness, NH, USA)
2/1/07	Bradley University (Peoria, IL, USA)
11/10/06	St. Olaf College (Northfield, MN, USA)
9/15/06	University of Missouri (Columbia, MO, USA)
7/21/06	Albany Molecular Research, Inc., Process Chemistry (Syracuse, NY, USA)
7/20/06	Albany Molecular Research, Inc., Medicinal Chemistry (Albany, NY, USA)
5/2/06	University of Iowa, Department of Medicinal and Natural Products Chemistry (Iowa City, IA, USA)
6/15/05	Schering-Plough Research Institute (Kenilworth, NJ, USA)
4/27/05	Merck & Company (Rahway, NJ, USA)
4/4/05	Vanderbilt University (Nashville, TN, USA)

Curriculum Vitae — Gregory K. Friestad, Ph.D.

2/22/05	University of Wisconsin (Madison, WI, USA)
12/9/04	Michigan State University (East Lansing, MI, USA)
11/15/04	1st Pacific Symposium on Radical Chemistry (Kanazawa, Japan)
10/15/04	University of Pennsylvania, Smith Symposium (Philadelphia, PA, USA)
10/7/04	University of Iowa, Department of Chemistry (Iowa City, IA, USA)
6/8/04	9th International Symposium on Organic Free Radicals, plenary lecture (Porto-Vecchio, France)
11/21/03	Kyushu University (Fukuoka, Japan)
11/20/03	Kobe Pharmaceutical University (Kobe, Japan)
11/19/03	Osaka University (Osaka, Japan)
11/18/03	Osaka City University (Osaka, Japan)
11/17/03	Kanazawa University (Kanazawa, Japan)
11/15/03	Osaka Prefecture University (Osaka, Japan)
11/13/03	Ninth International Kyoto Conference on New Aspects of Organic Chemistry (Kyoto, Japan)
11/12/03	Kyoto University (Kyoto, Japan)
10/6/03	Oregon State University (Corvallis, OR, USA)
10/3/03	University of Oregon (Eugene, OR, USA)
6/18/03	Northeast Regional Meeting of The American Chemical Society (Saratoga, NY, USA)
4/8/03	University of Illinois at Chicago (Chicago, IL, USA)
4/7/03	North Dakota State University (Fargo, ND, USA)
4/3/03	University of Utah (Salt Lake City, UT, USA)
4/2/03	Brigham Young University (Provo, UT, USA)
8/8/02	Indiana University (Bloomington, IN, USA)
8/7/02	Indiana U–Purdue U Indianapolis (Indianapolis, IN, USA)
8/6/02	Eli Lilly & Company (Indianapolis, IN, USA)
7/23/02	Gordon Research Conference: Organic Reactions and Processes (Bristol, RI, USA)
6/27/02	National Science Foundation Workshop on Synthetic Organic Chemistry (Holderness, NH, USA)
4/24/02	University of Connecticut (Storrs, CT, USA)
2/6/02	Université de Sherbrooke (Sherbrooke, Canada)
7/19/01	Gordon Research Conference: Free Radical Reactions (Holderness, NH, USA)
3/20/01	University of New Hampshire (Durham, NH, USA)
12/15/00	Pacificchem 2000: The 2000 International Chemical Congress of Pacific Basin Societies (Honolulu, HI, USA)
2/11/00	Hamilton College (Clinton, NY, USA)
4/15/99	Norwich University (Northfield, VT, USA)

TEACHING ACTIVITIES

Undergraduate Courses (Iowa)

CHEM:2220 (004:122): Organic Chemistry II (Spring 2012-2014)

enrollment 250-300, three lectures per week

CHEM 2240: Organic Chemistry II for Majors (Spring 2015-2016)

enrollment 27-48, three lectures per week

CHEM 2410 (004:141): Organic Chemistry Laboratory (Spring 2006-2008, Fall 2011-2015, 2018-2019)

enrollment 120-160, 6–8 lab sections, one lecture per week;

CHEM 2410 (004:141): Summer Organic Chemistry Laboratory (2014, 2017, 2019)

enrollment 20-40, 1-2 lab sections, two lectures per week

Undergraduate Courses (Vermont)

- CHEM 42/44: Introductory Organic Chemistry (Spring 2000, Spring 2001)
enrollment 115 (average), combined lecture/laboratory format
CHEM 141: Organic Chemistry, 1st Semester (Fall 2001, Fall 2004)
enrollment 198 (average), combined lecture/laboratory format
CHEM 143: Organic Chemistry for Majors (Fall 2001, Fall 2002, Fall 2003)
enrollment 19 (average), combined lecture/laboratory format
CHEM 144: Organic Chemistry for Majors (Spring 2002, Spring 2003, Spring 2004)
enrollment 16 (average), combined lecture/laboratory format

Graduate/Advanced Undergraduate Courses (Iowa)

- CHEM:5091: Graduate Chemistry Orientation (Fall 2017-2019)
enrollment 21–33, lecture format
CHEM:5329 (004:229): Advanced Organic Synthesis (Fall 2005-2007, Spring 2009-2011, Fall 2017)
enrollment 10–16, lecture format

Graduate/Advanced Undergraduate Courses (Vermont)

- CHEM 241: Advanced Organic Chemistry I (Fall 1998, Fall 1999, Fall 2000)
enrollment 9 (average), lecture format
CHEM 242: Advanced Organic Chemistry II (Spring 1999)
enrollment 5, lecture format
CHEM 257: Special Topics in Organic Chemistry, “Modern Organic Synthesis” (Fall 2001)
enrollment 6, student seminar format (team taught with Professor José Madalengoitia)

DISSERTATIONS AND THESES

14. Sherif M. S. Ibrahim “Quinazolin-2-yl-guanidines for Treatment of Neuropsychiatric Disorders and The Oxidative Preparation of *N,O*-Acetals Linked to the Amide Bond of Peptides.” PhD July 2018, University of Iowa.
13. Ryan M. Friedrich “Access to the C15–C40 Fragment of Tetrafibricin via Configuration-Encoded 1,5-Polyol Methodology.” PhD July 2017, University of Iowa.
12. Kara A. Slater “The Radical-Polar Crossover Approach to Chiral Substituted Pyrrolidines & Piperidines.” PhD August 2015, University of Iowa.
11. Koushik Banerjee “Mn-Mediated Radical Addition Approach Toward gamma-Amino Esters and Synthetic Studies of the Tubulysins.” PhD July 2011, University of Iowa.
10. Gopeekrishnan Sreenilayam “Asymmetric 1,5-Polyol Synthesis: A Concise Configuration-Encoded Approach.” PhD May 2011, University of Iowa.
9. An Ji “Mn-Mediated Radical Coupling Toward Synthesis of alpha,alpha-Disubstituted alpha-Amino Esters and Formal Synthesis of Quinine.” PhD May 2011, University of Iowa.
8. Hye Jin Lee “Nucleophilic Additions to the Strain-Activated Bicyclic Acetal, 2,7-Dioxabicyclo[2.2.1]heptane.” MS December 2008, University of Iowa.
7. Alex K. Mathies “Radical Cyclizations to Imino Acceptors Directed Toward the Total Syntheses of Aminosugars.” PhD December 2006, University of Iowa.

Curriculum Vitae — Gregory K. Friestad, Ph.D.

6. Tao Jiang "Synthesis of Chiral Amines by Radical Cyclizations of Chiral Hydrazones and Application to Asymmetric Synthesis of L-Daunosamine." PhD May 2005, University of Vermont.
5. Gina M. Fioroni "Haloacetals and Ethynylsilanes as Tethered Radical Precursors for Diastereoselective Addition to Chiral Alpha-Hydroxyhydrazones." MS January 2005, University of Vermont.
4. Sathish Rangarajan "Comparison of the Endo- and Exocyclic Stereocontrol Elements on the Diastereoselectivity of the Silicon-Tethered Radical Cyclization of Hydrazones.", MS January 2005, University of Vermont.
3. Hui Ding "Asymmetric Synthesis of Amines by Allylation, Cyanation and Radical Addition to N-Acylhydrazones." PhD, October 2004, University of Vermont.
2. Jun Qin "Design, Synthesis, and Radical Addition Reactions of Chiral N-Acylhydrazones and their Applications in Chiral alpha-Branched Amine and Natural Product Synthesis." PhD, January 2003, University of Vermont.
1. Sara Massari "Diastereoselective Vinyl Addition to Chiral Hydrazones via Tandem Thiyl Radical Addition and Silicon-Tethered Cyclization." MS, March 2001, University of Vermont.

PROFESSIONAL SERVICE

Organizational Leadership and Support Activities

- | | |
|------|---|
| 2010 | Session Chair, 18th International Conference on Organic Synthesis, Bergen, Norway |
| 2009 | General Chair, Midwest Regional American Chemical Society Meeting, Iowa City |
| 1998 | Session Chair, 216th American Chemical Society National Meeting, Boston |

Peer Review Activities

Editorial Advisory Boards:

- | | |
|--------------|----------------------------------|
| 2009–present | <i>Current Organic Chemistry</i> |
| 2009–present | <i>Molbank</i> |

Journal Manuscript Review: Peer reviews for 35 journals, approx. 10–20 manuscripts per year

Textbook Manuscript Review: Peer reviews for organic chemistry textbook publishers; Houghton-Mifflin, Brooks-Cole Thomson Learning, Prentice Hall, Oxford University Press, W. W. Norton, W. H. Freeman, Macmillan

Grant Review: Panels and Study Sections:

- | | |
|------|---|
| 2017 | NSF Chemical Synthesis Panel 9 |
| 2016 | American Cancer Society Cancer Drug Discovery Review Committee, Atlanta, GA |
| 2015 | NSF Chemical Synthesis Panel E |
| 2014 | NSF Graduate Research Fellowship Program Panel Review |
| 2013 | NIH K99/R00 Panel Review, Pathway to Independence program |
| 2012 | NIH K99/R00 Panel Review, Pathway to Independence program |
| 2011 | NIH Study Section, Synthetic and Biological Chemistry B, Baltimore, MD |
| 2011 | NIH K99/R00 Panel Review, Pathway to Independence program |
| 2010 | NIH Chemical and Bioanalytical Sciences F04A Panel Review, Kirchstein NRSA Postdoctoral Fellowships (BCMB), Washington DC |
| 2008 | NSF Organic Synthesis Panel S, Arlington, VA |
| 2008 | NIH Study Section, Synthetic and Biological Chemistry B, Rockville, MD |

Curriculum Vitae — Gregory K. Friestad, Ph.D.

- 2007 NIH Chemical and Bioanalytical Sciences F04A Panel Review, Kirchstein NRSA Postdoctoral Fellowships (BCMB), Washington DC (June and October meetings)
- 2006 NIH K99/R00 Panel Review, Pathway to Independence program
- 2006 NIH Chemical and Bioanalytical Sciences F04A Panel Review, Kirchstein NRSA Postdoctoral Fellowships (BCMB), Washington DC
- 2005 NIH Chemical and Bioanalytical Sciences F04A Panel Review, Kirchstein NRSA Postdoctoral Fellowships (BCMB), Washington DC
- Other Reviews: Ad Hoc Grant Reviews, Reviews of Faculty Fellowships and Promotion/Tenure
- 2005–present American Cancer Society
- 2000–present National Science Foundation, MPS-CHE
- 2000–present Petroleum Research Fund, Types B, G, and AC
- 2000–present Research Corporation
- 2017 Canada Council for the Arts, Killam Research Fellowship
- 2009 Grinnell College (Harris Faculty Fellowship, faculty Promotion/Tenure review)
- 2009 Vermont Genetics Network