

Michael R. Gesinski

Curriculum Vitae

Department of Chemistry, Lawrence University, Appleton, WI 54911
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ACADEMIC POSITIONS

Associate Professor, 2023 – present; Lawrence University
Department of Chemistry

Associate Professor, 2019 – 2023; Southwestern University
Department of Chemistry and Biochemistry

Department Chair, 2019 – 2022; Southwestern University
Department of Chemistry and Biochemistry

Assistant Professor, 2013 – 2019; Southwestern University
Department of Chemistry and Biochemistry

Organic Chemistry Lecturer, 2012; University of California, Berkeley
College of Chemistry

Post-doctoral Research Associate, 2011 – 2013; University of California, Berkeley
College of Chemistry
Research Advisor: Professor F. Dean Toste

EDUCATION

Ph.D. in Organic Chemistry, June 2011, University of California, Irvine
Research Advisor: Professor Scott D. Rychnovsky
Thesis Title: The Prins Dimerization/Macrocyclization Reaction: Applications toward the Synthesis of Clavosolide A, Cyanolide A, and SCH 351448.

B.S. in Chemistry, January 2005, Rice University, Houston, Texas
Research Advisor: Professor Victor Behar
GPA: 3.82, *cum laude*

TEACHING SPECIALIZATION

Organic Chemistry I and II; Pharmaceutical Chemistry; Organic Chemistry Lab; Inorganic Chemistry; First-Year Seminar; Non-Majors Chemistry

Flipped classrooms; Clickers student response systems; Inquiry-Based Laboratories; Culturally relevant teaching; Student-centered pedagogies

RESEARCH AREA

Development of novel organic reactions for the synthesis of pharmaceuticals and other industrially important molecules:

- Titanium-mediated annulation reactions
- Gold-catalyzed cyclization reactions

GRANTS

- *Organic Syntheses Inc. Grant for Summer Research at an Undergraduate Institution, 2022*
"Gold(I)-Catalyzed Synthesis of 1*H*-Isochromenes and Naphthoquinones" (\$16,000)
- *National Organic Symposium Best Poster Award* in collaboration with Michelle Nguyen, 2022
- *Departmental Grant Program, Welch Foundation, 2021*
"Promoting Undergraduate Research in Chemistry" (\$135,000)
- *Associated Colleges of the South Grant Programs, 2018*
"Increasing Diversity in the STEM Pipeline through the Incorporation of Culturally and Socially Responsive Pedagogy in the Organic Chemistry Laboratory," a collaboration with Spelman and Centre Colleges (\$37,950)
- *NOS Travel Award: American Chemical Society, 2015, 2017, 2019, and 2022* (\$600)
- *Undergraduate New Investigator Grant, Petroleum Research Fund, 2016*
"Development and Application of Novel Titanium-Mediate Annulation Reactions" (\$55,000)
- *Teaching Award: Southwestern University, 2015*
- *Blended Learning Program: Associated Colleges of the South, 2014*
Lead Investigator on "Associated Chemistry of the South," a collaboration with Centre College (\$12,000)
- *HHMI Professional Development Fund: Southwestern University, 2014*
"The Sweeter Side of Organic Chemistry" (\$2000)

AWARDS AND HONORS

- *Outstanding Advising Award*: Southwestern University, 2023
- *Member: ACS Division of Organic Chemistry (30798116)*: 2014 – present
- *Most Promising Future Teacher in Organic Chemistry*: UC Irvine, 2010
- *Dissertation Fellowship*: UC Irvine, 2010
- *Eli Lilly Graduate Research Fellowship*: UC Irvine, 2008
- *Outstanding Teaching Assistant Award*: UC Irvine, 2007
- *Chancellor's Fellow*: UC Irvine, 2005
- *Baker College Fellow*: Rice University, 2005

PEER-REVIEWED PUBLICATIONS (undergraduate collaborators are underlined)

Niemeyer, E. D.; Gesinski, M. R. Active learning pedagogies in the introductory and organic chemistry curriculum: increasing student persistence and success, In *Designing Student-Centered Classrooms for Equity and Inclusion across Disciplines*, University of Cincinnati Press, Cincinnati, OH, **2021**, pp 137–149.

Finalist: Midwest Independent Publishers Association 2022 Awards

Le, N. N.; Rodriguez, A. M.; Alleyn, J. R.; Gesinski, M. R. "Synthesis of 1,4-Diketones via Titanium-Mediated Reductive Homocoupling of α -Haloketones." *Synlett*, **2018**, 29, 2195–2198.

Gesinski, M. R.; Brenzovich, W. E.; Staben, S. T.; Srinilta, D. J.; Toste, F. D. "A divergent/convergent approach to dolabriferol: the Kornblum–DeLaMare enantiomeric resolution." *Tetrahedron Lett.* **2015**, 56, 3643–3646.

Gesinski, M. R., Toste, F. D., Gold Catalysis in Natural Product Synthesis, In *Gold Catalysis: A Homogeneous Approach*, Imperial College Press: London, **2014**, pp 501–536.

Tay, G. C.; Gesinski, M. R.; Rychnovsky, S. D. "Formation of Highly Substituted Tetrahydropyranones: Application to the Total Synthesis of Cyanolide A." *Org. Lett.* **2013**, 15, 4536–4539.

Gesinski, M. R.; Rychnovsky, S. D. "Total Synthesis of the Cyanolide A Aglycon." *J. Am. Chem. Soc.* **2011**, 133, 9727–9729.

Highlighted in *Synfacts* **2011**, 9, 931.

Gesinski, M. R.; Tadpetch, K.; Rychnovsky, S. D. "Symmetric Macrocycles by a Prins Dimerization/Macrocyclization Strategy." *Org. Lett.* **2009**, 11, 5342–5345.

Gesinski, M. R.; Van Orden, L. J.; Rychnovsky, S. D. "Lewis Acid-Promoted Mukaiyama Aldol-Prins (MAP) Cyclization of Acetals, Ketals, α -Acetoxy Ethers, and Orthoesters." *Synlett* **2008**, 363–366.

NATIONAL PRESENTATIONS (undergraduate collaborators are underlined)

Cipleu, L. C.; Calvert, S. J.; Southwell, C. C.; Blake, N. J.; Gesinski, M. R., Gold(I) Catalyzed Synthesis of Naphthoquinones and Isoquinolines. *Abstracts of Papers*, 47th National Organic Chemistry Symposium, La Jolla, CA, June 26–30, 2022; American Chemical Society: Washington, DC, 2022, M-45.

Logan, Z. T.; Karim, S. A.; Mouat, J. M.; Grimm, Z. A.; Butler, D. D.; Lacker, C. R.; Gesinski, M. R., Gold(I) Catalyzed Synthesis of 1*H*-Isochromenes *Abstracts of Papers*, 48th National Organic Chemistry Symposium, South Bend, IN, June 26–30, 2022; American Chemical Society: Washington, DC, 2023, T-9.

Rodriguez, R. S.; Zequeria, N. A.; Nguyen, M. N.; Seavey, S. F.; Rodriguez, A. M.; Gesinski, M. R., Titanium-Mediated Synthesis of Cyclobutanones, *Abstracts of Papers*, 48th National Organic Chemistry Symposium, South Bend, IN, June 26–30, 2022; American Chemical Society: Washington, DC, 2023, T-8.

Nguyen, M. N.; Momin, N.; Seavey, S. F.; Rodriguez, A. M.; Gesinski, M. R., Ti-Mediated Synthesis of Cyclobutanones, *Abstracts of Papers*, 47th National Organic Chemistry Symposium, La Jolla, CA, June 26–30, 2022; American Chemical Society: Washington, DC, 2022, M-41.

Winner of best poster award for Michelle Nguyen.

Blake, N. J.; Sebastiany, Y.; Southwell, C. C.; Calvert, S. J.; Gesinski, M. R., Gold(I) Catalyzed Synthesis of Naphthoquinones and Isoquinolines. *Abstracts of Papers*, 47th National Organic Chemistry Symposium, La Jolla, CA, June 26–30, 2022; American Chemical Society: Washington, DC, 2022, M-45.

Mouat, J. M.; Grimm, Z. A.; Butler, D. D.; Lacker, C. R.; Gesinski, M. R., Gold(I) Catalyzed Synthesis of 1*H*-Isochromenes *Abstracts of Papers*, 47th National Organic Chemistry Symposium, La Jolla, CA, June 26–30, 2022; American Chemical Society: Washington, DC, 2022, W-31.

Calvert, S. J.; Shilgalis, E.; Mouat, J. M.; Grimm, Z. A.; Gesinski, M. R., Gold(I) Catalyzed Synthesis of 1*H*-Isochromenes and Naphthoquinones *Abstracts of Papers*, 262nd American Chemical Society National Meeting, San Diego, CA, March 22, 2022; American Chemical Society: Washington, DC, 2022.

Gierat, N.; Seavey, S. F.; Rodriguez, A. M.; Gesinski, M. R., Synthesis of cyclobutanones via low-valent titanium intermediates, *Abstracts of Papers*, 262nd American Chemical Society National Meeting, San Diego, CA, March 22, 2022; American Chemical Society: Washington, DC, 2022.

Mouat, J. M.; Grimm, Z. A.; Butler, D. D.; Lacker, C. R.; Gesinski, M. R., Gold(I) Catalyzed Synthesis of 1*H*-Isochromenes, *Abstracts of Papers*, 46th National Organic Chemistry Symposium, Indianapolis, IN, June 23–27, 2019; American Chemical Society: Washington, DC, 2019, M-55.

Seavey, S. F.; Le, N. N.; Rodriguez, A. M.; Alleyn, J. R.; Gesinski, M. R., Ti-Mediated Synthesis of Cyclobutanones and 1,4-Diketones, *Abstracts of Papers*, 46th National Organic Chemistry Symposium, Indianapolis, IN, June 23–27, 2019; American Chemical Society: Washington, DC, 2019, T-64.

Rodriguez, A. M.; Le, N.N.; Alleyn, J. R.; Gesinski, M. R., Synthesis of cyclobutanones and 1,4-diketones via low-valent titanium intermediates, *Abstracts of Papers*, 257th American Chemical Society National Meeting, Orlando, FL, March 31, 2019; American Chemical Society: Washington, DC, 2019, ORGN-102.

Cantú, S. N.; McCormack, J.; Lacker, C. R.; Gesinski, M. R., Development of a novel gold(I)-cleavable protecting group, *Abstracts of Papers*, 257th American Chemical Society National Meeting, Orlando, FL, March 31, 2019; American Chemical Society: Washington, DC, 2019, ORGN-104.

Butler, D. D.; Cantú, S. N.; Lacker, C. R.; Wilson, P. L.; Gesinski, M. R., Gold(I)-Catalyzed Synthesis of 1H-Isochromenes, *Abstracts of Papers*, 45th National Organic Chemistry Symposium, Davis, CA, April 2–6, 2017; American Chemical Society: Washington, DC, 2017, S-22.

Le, N.N.; Rodriguez, A.; Bradley, J.; Walker, R.; Alleyn, J. R.; Gesinski, M. R., Ti-Mediated Synthesis of Cyclobutanones and 1,4-Diketones, *Abstracts of Papers*, 45th National Organic Chemistry Symposium, Davis, CA, April 2–6, 2017; American Chemical Society: Washington, DC, 2017, T-10.

Bradley, J.; Walker, R.; Alleyn, J. R.; Nguyen, D.; Gesinski, M. R., Titanium-Mediated Synthesis of Cyclobutanols, *Abstracts of Papers*, 253rd American Chemical Society National Meeting, San Francisco, CA, April 2–6, 2017; American Chemical Society: Washington, DC, 2017, ORGN-268.

Alleyn, J.; Gersib, S.; Gesinski, M. R., Titanium-Mediated Synthesis of Cyclobutanols, *Abstracts of Papers*, 44th National Organic Chemistry Symposium, College Park, MD, June 28–July 2, 2015; American Chemical Society: Washington, DC, 2015, M-76.

Lacker, C. R.; Gesinski, M. R., The Synthesis and Application of a Novel Gold-Cleavable Protecting Group, *Abstracts of Papers*, 44th National Organic Chemistry Symposium, College Park, MD, June 28–July 2, 2015; American Chemical Society: Washington, DC, 2015, M-53.

UNIVERSITY SERVICE

Southwestern University

- Department Chair, 2019–2022
- Honor Code Advisory Panel, 2021–2023
- Academic Standards Committee, 2015–2021
- Paideia Cluster Member, Design, 2015–2019
- Pre-Dental Society, Faculty Adviser, 2015–2023
- First-Year Seminar Instructor, 2015–2016
- Sophomore Chemistry Recruitment Officer, 2014–2023
- University Discipline Committee, 2014–2015
- Chemistry Department Writing Guide, 2014