

WILLIAM F. POLIK

Department of Chemistry
Hope College
35 East 12th Street
Holland, MI 49422-9000

phone: (616) 395-7639
fax: (616) 395-7118
email: polik@hope.edu
<http://www.chem.hope.edu/~polik>

Education

Ph.D., Physical Chemistry, University of California at Berkeley, 1988
B.A., Valedictorian, Chemistry and Mathematics, Dartmouth College, 1982

Experience

Edward and Elizabeth Hofma Professor of Chemistry, Hope College, 2001-pres
Associate Dean of Research and Scholarship, Hope College, 2016-2019
Chemistry Department Chair, Hope College, 2012-2015
Professor, Hope College, 2000-2001
Associate Professor, Hope College, 1994-2000
Assistant Professor, Hope College, 1988-1994
Visiting Academic, University of Queensland, 2008-2009
Fellow, San Diego Supercomputer Center, 2001-2002
Visiting Scientist, Massachusetts Institute of Technology, 1994-1995
Founding Partner, DiscusWare, LLC, 1999-2009; WebMO LLC, 2000-pres
Consultant, Coherent Lasers, 1986-1988; Laser Photonics, 1991-1993; Systems
Integration, 1992-1994
Graduate Student Instructor, University of California, Berkeley, 1982-1985
Research Associate, Institut für makromolekulare Chemie, Universität Freiburg, 1981
Teaching Assistant, Dartmouth College, 1979-1982

Honors and Awards

Schaap Research Fellow, Hope College, 2013, 2018
Academic Computing and Technology Award for Innovation, Hope College, 2013
American Chemical Society Fellow, 2010
James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry, 2009
American Association for the Advancement of Science Fellow, 2006
Camille and Henry Dreyfus Foundation Fellow, 2004
Excellence in Undergraduate Research, Indiana University, 2003
Sigma Xi Award for Scientific Outreach, Hope College, 1999
Provost's Award for Teaching Excellence, Hope College, 1998
Presidential Young Investigator Award, National Science Foundation, 1991
Chevron Chemistry Fellowship, U.C. Berkeley, 1986-1987
Bruce H. Mahan Memorial Teaching Award, U.C. Berkeley, 1983
Pre-Doctoral Graduate Fellowship, National Science Foundation, 1982-1985
Sigma Xi Scientific Research Society Prize, Dartmouth College, 1982
Elden Bennett Hartshorn Medal for Chemistry, Dartmouth College, 1982
Haseltine Chemistry-Physics Prize, Dartmouth College, 1982
Mina H. Warren Scholarship Prize, Dartmouth College, 1982
Francis L. Town Scientific Prize for Chemistry, Dartmouth College, 1980
Phi Beta Kappa Prize, Dartmouth College, 1980

Leon Burr Richardson Chemistry Prize, Dartmouth College, 1979

Service and Committees

Deans Council, Hope College, 2016-2019
Institutional Review Board, Hope College, Chair, 2016-2019
Institutional Animal Care and Use Committee, Hope College, Institutional Officer,
2016-2019
Administrative Affairs Board, Hope College, Member, 2016-2017; Chair 2017-2018
Council on Undergraduate Research, Chemistry Division Councilor, Diversity and
Inclusion Taskforce Member, 2013-2017, Program Review Liaison, 2017-2022
Academic Affairs Board, Hope College, Member, 2011-13; Chair 2013-14
Department Coordinator, Summer Research, 2003-2005; Teaching Assignments, 2005-
2007; Curriculum Revision, 2009-2012
Committee for Professional Training, American Chemical Society, Member, 2000-2004;
Vice-Chair, 2005; Chair, 2006-2008; Consultant, 2009-2010
Division of Physical Chemistry Executive Committee, American Chemical Society,
2006-2008
Beckman Scholar Executive Committee, Beckman Foundation, 2000-2002; Chair 2002-
2003
Physical Chemistry Committee, ACS DivCHED Examinations Institute, 1996-2001
External Reviewer: Wheaton College, Franklin & Marshall College, Hampden-Sydney
College, Lewis and Clark College, US Naval Academy, Colby College, Calvin
College, University of Detroit - Mercy, Gonzaga University

Professional and Honorary Societies

Council for Undergraduate Research (Councilor), 1988
American Chemical Society (Fellow), 1985
American Physical Society, 1984
Phi Beta Kappa, 1980
American Association for the Advancement of Science (Fellow), 1979

Publications, Grants, Seminars, and Workshops

78 Publications (30 with 41 undergraduate co-authors), 1983-2022
55 Grants and Awards for \$2,498,000, 1988-2022
124 Invited Seminars, 1988-2022
65 Symposia and Workshops organized, 2001-2022

Research Students and Post-Docs

85 Undergraduate Research Students
2 Post-Doctoral Scholars

Research and Professional Interests

Highly excited molecular states, molecular potential energy surfaces, gas phase chemical reaction theories, energy flow and transfer, chaotic systems, high-resolution laser spectroscopy, molecular beams, high-accuracy quantum chemistry, numerical algorithms, physical chemistry demonstrations, WWW software for education, curriculum revision and education reform, faculty development, academic leadership

Publications of William F. Polik (since 2010)

65. Keith T. Kuwata, Brent P. Krueger, Daniela Kohen, and William F. Polik, "Development of a Regional Computational Chemistry Consortium Centered around Undergraduate Research Conferences", *CUR Quarterly* **32**(4), 9-14 (2012).
66. John L. Davisson, Nicole R. Brinkmann, and William F. Polik, "Accurate and Efficient Calculation of Excited Vibrational States from Quartic Potential Energy Surfaces," *Molecular Physics*, **110**, 2587-2598 (2012).
67. R. Jay Mashl, Bernie Acs, Edee N. Wiziecki, J. R. Schmidt, and William F. Polik, "Enhancing Chemistry Teaching And Learning Through Computational Tools: A Computational Chemistry Cloud Prototype Using WebMO," Proceedings of The 7th International Multi-Conference on Society, Cybernetics and Informatics (IMSCI 2013), Post-Conference Edition, 2013, p. 7.
68. Andreana M. Rosnik and William F. Polik, "VPT2+K spectroscopic constants and matrix elements of the transformed vibrational Hamiltonian of a polyatomic molecule with resonances using Van Vleck perturbation theory", *Molecular Physics*, **112**, 261-300 (2014).
69. Nathan R. Vance and William F. Polik, "Understanding Firewalld in Multi-Zone Configurations", *Linux Journal*, September 2016, Issue 269, 80-93.
70. Nathan R. Vance, Michael L. Poublon and William F. Polik, "BYOC: Build Your Own Cluster, Part I - Design", *Linux Journal*, May 2017, Issue 277, 96-108.
71. Nathan R. Vance, Michael L. Poublon and William F. Polik, "BYOC: Build Your Own Cluster, Part II - Installation", *Linux Journal*, June 2017, Issue 278, 74-94.
72. Nathan R. Vance, Michael L. Poublon and William F. Polik, "BYOC: Build Your Own Cluster, Part III - Configuration", *Linux Journal*, July 2017, Issue 279, 70-98.
73. Nathan R. Vance and William F. Polik, "CLIC: Cluster In The Cloud", *Linux Journal*, November 2017, Issue 283, 100-112.
74. Eric W. Webb, Jonathan P. Moerdyk, Kyndra B. Sluiter, Benjamin J. Pollock, Amy L. Speelman, Eugene J. Lynch, William F. Polik and Jason G. Gillmore, "Experimental and computational electrochemistry of quinazolinespirohexadienones - differential electrochromic vs photochromic behavior", *Beilstein Journal of Organic Chemistry*, **15**, 2473-2485 (2019).
75. William F. Polik, Joanne L. Stewart, and Kenneth L. Brown, "Electrochemistry: Galvanic Cells and the Nernst Equation", <https://www.ionicviper.org/lab-experiment/electrochemistry-galvanic-cells-and-nernst-equation> (Virtual Inorganic Pedagogical Electronic Resource, 2020).

76. Howard A. Dobbs and William F. Polik, "Interfacing TTL and CMOS Logic Levels in the Laboratory", *Michigan Academician*, **47**, 21-30, doi.org/10.7245/0026-2005-47.1.21 (2020).
77. William F. Polik and J.R. Schmidt, "Web-Based Computational Chemistry Calculations in Education and Research", *WIREs Computational Molecular Science*, **12**:1, 1-22, e1544, <https://doi.org/10.1002/wcms.1554> (2021).
78. Grace M. Zwiers, Clayton G. Piehl, William F. Polik, "Before the Next Pandemic: Developing a Framework for Assessing Online Labs to Maximize Student Experience", *Michigan Academician*, submitted.
- A. Kristin K. Ellsworth, Jennifer D. Herdman, Brian D. Lajiness, James P. Lajiness, and William F. Polik, "Dispersed Fluorescence Spectroscopy of S₀ Vibrational Levels in Formaldehyde," preprint available.
- B. Nicole R. Brinkmann, John L. Davisson, Michael H. Cortez, and William F. Polik, "Computation of Quartic Potential Energy Surfaces and Excited Vibrational Levels of Water," preprint available.

Awards, Grants, and Support of William F. Polik (since 2010)

46. National Science Foundation, Cyberinfrastructure and Research Facilities, "Collaborative Research: Center for Studying Electronic Structure and Spectroscopy of Open-Shell and Electronically Excited Species", 9/1/06-8/31/11, \$187,500.
47. National Science Foundation, Major Research Instrumentation, "Acquisition of a Computer Cluster for Undergraduate Chemistry Research and Teaching by the Midwest Undergraduate Computational Chemistry Consortium (MU3C)", 7/1/10-6/30/13, co-PI with Brent P. Krueger, Scott E. Feller, Daniela Kohen, and Keith T Kuwata, \$299,942.
48. Hope College, Schaap Research Fellow, 7/1/13-6/30/18, \$15,000.
49. Arnold and Mabel Beckman Foundation, "Beckman Undergraduate Fellowship (Nathan R. Vance)", 5/1/16-7/31/17, \$28,000.
50. Hope College, Schaap Research Fellow, 7/1/18-6/30/23, \$25,000.
51. Gaussian, Inc., "G16 Upgrade - site license, binary code upgrade from G09", 9/1/17, \$4,500.
52. Council on Undergraduate Research, Institutional Enhanced CUR Membership (in recognition of 2017 Award for Undergraduate Research Accomplishments), 7/1/18-6/30/19, \$2,000.

53. Hope College, Wettack Student Fellowship – integrated chemistry and computer science research (Gregory Campbell), \$5,000, 5/13/19-7/19/19.
54. Hope College, Schaap Competitive Fund, Repair and Alignment of Nd:YAG Laser, \$5,000, 5/11/20-7/17/20.
55. Hope College, Schaap Competitive Fund, Data Analysis and File Storage Capability for Physical Chemistry Research, \$26,350, 2/15/20-4/30/22.

Seminars by William F. Polik (since 2010)

90. "ACS Guidelines for Chemical Safety Education in Undergraduate Chemistry Programs", Spring 2010 National ACS Meeting, San Francisco, CA, (CHAS 12), 3/22/10.
91. "ACS Guidelines", ACS Post-to-Faculty Workshop, Fall 2010 National ACS Meeting, Boston, MA, 8/20/10.
92. "How a National ACS Meeting Works", (PHYS 8), Fall 2010 National ACS Meeting, Boston, MA, 8/22/10.
93. "Using the 2008 ACS Guidelines to Promote Excellence and Improve Rigor in Undergraduate Chemistry Education", (PRES 10), Fall 2010 National ACS Meeting, Boston, MA, 8/23/10.
94. "History of the ACS CPT Guidelines and Approval Process", (CHED 38), Spring 2011 National ACS Meeting, Anaheim, CA, 3/27/11.
95. "Future Directions in Chemistry Education", University of Wisconsin, Madison, WI, 11/11/11.
96. "Measuring, Modeling, and Computing Resonances among Excited Vibrational States of Polyatomic Molecules", Michigan State University, East Lansing, MI, 2/26/13.
97. "The ACS Guidelines for Undergraduate Chemistry Education: Promoting Excellence, Rigor, and Innovation", PUI to Postdoc Program, Hope College, 4/11/13.
98. "WebMO: A Low-Cost Tool for Teaching State-of-the-Art Computational Chemistry", PUI to Postdoc Program, Hope College, 4/11/13.
99. "2013 Nobel Prize in Chemistry", Hope Academy of Senior Professionals, Holland, MI, 11/26/13

100. "Computational Chemistry Integrated throughout the Undergraduate Curriculum", Biennial Conference on Chemical Education, Grand Valley State University, Grandville, MI, 8/6/14
101. "ACS and ASBMB Departmental Certification", PUI to Postdoc Program, Hope College, 4/16/15.
102. "WebMO: A Low-Cost Tool for Teaching State-of-the-Art Computational Chemistry", PUI to Postdoc Program, Hope College, 4/16/15.
103. "Deploying WebMO at Your Institution", Chemistry Collaborations Workshops & Community of Scholars, San Jose State University, San Jose, CA, 6/19/15
104. "Measuring, Modeling, and Computing Resonances among Excited Vibrational States of Polyatomic Molecules", University of Colorado, Boulder, CO, 8/13/15.
105. "Measuring, Modeling, and Computing Resonances among Excited Vibrational States of Polyatomic Molecules", Virginia Tech, Blacksburg, VA, 10/19/15.
106. "Measuring, Modeling, and Computing Resonances among Excited Vibrational States of Polyatomic Molecules", Georgia Tech, Atlanta, GA, 12/10/15.
107. "Chemical Computation Made Easy!", Chemistry Department Symposium, Hope College, 4/16/15.
108. "Using WebMO throughout the Chemistry Curriculum to Explore Molecular Shapes, Conformations, Energy Surfaces, Spectroscopy, Orbitals, and Symmetry", Mid-Atlantic Regional Meeting, American Chemical Society, Hershey, PA, 6/4/17.
109. "Developing Software to Broaden Usage and Lower Barriers", Computer Science Colloquium, Hope College, 9/21/17.
110. "Convergent Research at Hope College", Senior Seminar Colloquium, Hope College, 11/9/17.
111. "Developing Software to Broaden Usage and Lower Barriers", Thirtieth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference, online conference, 2/1/18.
112. "Achieving an Institution-Wide Culture and Practice in Undergraduate Research: Best Practices from AURA 2017 Awardees", Council on Undergraduate Research (CUR), online webinar, 5/15/18.
113. "Key Components of Undergraduate Research Outcomes", Quality Assurance in Undergraduate Research Symposium, Oakland University, Rochester, MI 9/28/18.

114. "Integrating Computational Chemistry into the Curriculum Using WebMO", MACTALAC 2018 Annual Meeting, Hillsdale College, Hillsdale, MI, 10/19-20/18.
115. "Using WebMO throughout the Chemistry Curriculum," 51st Midwest Theoretical Chemistry Conference (MWTCC), Notre Dame University, South Bend, IN, 6/6/19.
116. "Integrating Computational Chemistry throughout the Curriculum using WebMO," Molecular Computation and Visualization in Undergraduate Education (MoleCVUE), Keynote/Plenary Address, Wesleyan University, Middleton, CT, 6/13/19.
117. "Using WebMO throughout the Chemistry Curriculum," Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference, Ohio State University, Columbus, OH, 7/19/19.
118. "Visualizing First-Order Split Proton NMR Spectra from ab initio NMR Calculations", Thirty-Fourth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference, online conference, 2/6/20.
119. "WebMO 20: New Features and Support for Online Activities", Molecular Computation and Visualization in Undergraduate Education (MoleCVUE), Keynote/Plenary Address, Moravian College (virtual), Bethlehem, PA, 6/12/20.
120. "Pure Vibrational Spectroscopy and Polyad Quantum Numbers of Formaldehyde", Fall 2020 National ACS Meeting (virtual), San Francisco, CA, 8/17/20.
121. "Developing Software to Broaden Usage and Lower Barriers", Scholars at Home Lecture Series (virtual), Invited Talk, 11/11/20.
122. "WebMO Overview and Editor", Molecular Computation and Visualization in Undergraduate Education (MoleCVUE), Keynote/Plenary Address, SUNY Oneonta, NY, 6/16/22.
123. "What is WebMO", 27th Biennial Conference on Chemical Education (BCCE), Purdue University, West Lafayette, IN, 8/3/22.
124. "Development and Implications of a Quantum Mechanical Worldview", Guild of Scholars Annual Meeting, Albuquerque, NM, 10/29/22.

Symposia and Workshops Organized by William F. Polik (since 2010)

29. "Fourteenth Midwest Undergraduate Computational Chemistry Conference," Co-organizer, online (127 posts by 22 participants on 13 posters from 9 institutions), 2/8/10-2/11/10.

30. "Implementing a Dual-Path General Chemistry Curriculum", Chemistry Department Retreat, 12 faculty participants, 5/4/10.
31. "PHYS Undergraduate Workshop", Symposium at fall 2010 national ACS meeting, Boston, MA, 8/22/10.
32. "Redefining the Chemistry Major Requirements", Chemistry Department Retreat, 12 faculty participants, 12/14/10.
33. "Sixteenth Midwest Undergraduate Computational Chemistry Conference," Co-organizer, Online Conference (207 posts by 22 participants on 17 posters from 10 institutions), 2/21/11-2/23/11.
34. "WebMO Developer's Meeting," Co-organizer, University of Wisconsin, 8/18/11-8/19/11.
35. "Eighteenth Midwest Undergraduate Computational Chemistry Conference," Co-organizer, Online Conference (211 posts by 31 participants on 21 posters from 9 institutions), 2/7/12-2/9/12.
36. "Managing Multiple Priorities", Retreat, 12 faculty participants, Hope College Chemistry Department, 5/7/12.
37. "Summer Retreat to Plan for Revising the Guidelines for Approval of Undergraduate Chemistry Programs," Co-organizer, ACS Committee on Professional Training, Denver, CO, 6/28/12-7/1/12.
38. "Twentieth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (202 posts by 28 participants on 12 posters from 7 institutions), 2/5/13-2/7/13.
39. "Writing in the Chemistry Curriculum", Retreat, 12 faculty participants, Hope College Chemistry Department, 12/12/13.
40. "Twenty-Second Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (283 posts by 28 participants on 15 posters from 10 institutions), 2/17-19/14
41. "Professional Goals and Boundaries", Retreat, 12 faculty participants, Hope College Chemistry Department, 5/1/2014.
42. "WebMO Hands-On Workshop", 2014 Biennial Conference on Chemical Education, Grand Valley State University, Allendale, MI, 8/4/14.

43. "Creative Uses of Computational Chemistry and Visualization in the Undergraduate Curriculum", 2014 Biennial Conference on Chemical Education, Grand Valley State University, Allendale, MI, 8/6/14-8/7/14.
44. "Strategies for Accomplishing Your Goals", Retreat, 12 faculty participants, Hope College Chemistry Department, 12/12/14
45. "Twenty-Fourth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (313 posts by 38 participants on 22 posters from 13 institutions), 2/16-19/15.
46. "Deploying WebMO in the Cloud", Chemistry Collaborations Workshops & Community of Scholars, 20 faculty participants, San Jose State University, San Jose, CA, 6/19/15
47. "Twenty-Sixth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (269 posts by 41 participants on 20 posters from 12 institutions), 2/1-4/16.
48. "Twenty-Eighth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (320 posts by 40 participants on 20 posters from 9 institutions), 2/6-9/17.
49. "16th Annual Celebration of Undergraduate Research and Creative Performance", Hope College, Holland, MI, 4/21/17.
50. "WebMO Overview and Hand-On Workshop", 12 faculty participants, Mid-Atlantic Regional Meeting, American Chemical Society, Hershey, PA, 6/4/17.
51. "Molecular Computation and Visualization in Undergraduate Education (MoleCVUE) - Hands-On WebMO Workshop", 25 faculty participants, Wesleyan University, Middleton, CT, 6/12/19.
52. "Responsible Conduct of Research Training – Case Studies" (100+ summer research students), Hope College, Holland, MI, 6/26/17.
53. "Thirtieth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (234 posts by 34 participants on 20 posters from 10 institutions), 1/29/18- 2/1/18.
54. "17th Annual Celebration of Undergraduate Research and Creative Performance" (382 students from 28 departments and programs presenting research on 247 posters with over 900 visitors), Hope College, Holland, MI, 4/13/18.
55. "Responsible Conduct of Research Training – Role Playing of Individual Responsibility" (120 students with production of an original play illustrating research ethics issues), Hope College, Holland, MI, 6/18/18.

56. "WebMO Hands-On Workshop", 25th Biennial Conference on Chemical Education (BCCE), 18 faculty participants, University of Notre Dame, South Bend, IN, 7/29/18
57. "Faculty Activity Reporting (FAR) Workshops", Hope College, Holland, MI, 10/18 – 2/19.
58. "Thirty-Second Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (284 posts by 36 participants on 20 posters from 12 institutions), 2/4-7/19.
59. "18th Annual Celebration of Undergraduate Research and Creative Performance" 300+ Hope students from 28 departments and programs presenting research on 201 posters with over 900 visitors, Hope College, Holland, MI, 4/12/19.
60. "Hands-On WebMO Workshop", Molecular Computation and Visualization in Undergraduate Education (MoleCVUE), 20 faculty participants, Wesleyan University, Middleton, CT, 6/12/19.
61. "Responsible Conduct of Research Training - Ethical Decision Making Frameworks" (130 summer research students and faculty at a workshop to investigate ethical decision making practices), Hope College, Holland, MI, 6/28/19.
62. "Thirty-Fourth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (272 posts by 39 participants on 16 posters from 12 institutions), 2/3-6/20.
63. "Thirty-Fifth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (304 posts by 38 participants on 17 posters from 9 institutions), 7/28-31/20.
64. "Thirty-Sixth Midwest Undergraduate Computational Chemistry Consortium (MU3C) Conference", online (149 posts by 25 participants on 13 posters from 8 institutions), 2/15-18/21.
65. "Computational Chemistry in the Classroom", 27th Biennial Conference on Chemical Education (BCCE), 35 faculty participants, Co-organizer, Purdue University, West Lafayette, IN, 8/3/22.

Undergraduate Research Students of William F. Polik (since 2010)

65. Kent C. Kammermeier '11, 1/10-5/11, Development of a Pulsed Electric Discharge Nozzle for Radical Production, M.S. in Physical Chemistry from UC Colorado - Boulder, U.S. Navy Officer

66. Howard A. Dobbs '13, 3/10-5/12, Free-Jet Vibration-Rotation Spectroscopy of Unstable Species, Ph.D. in Chemical Engineering, UC Santa Barbara; Employed at Raytheon
67. Robert A. Polik (high school student), 6/10-7/10, Computer Interfacing the Physical Chemistry Laboratory, Chemical Engineering at University of Michigan, Employed at 3M Corporation
68. Nathan Redder (high school student), 6/10-7/10, Computer Interfacing the Physical Chemistry Laboratory, Nuclear Engineering at College at University of Michigan, U.S. Navy Officer
69. Andreana M. Rosnik '13, 9/10-7/13, Transforming the Vibrational Hamiltonian of a Polyatomic Molecule using Van Vleck Perturbation Theory, Ph.D. in Chemistry, UC Berkeley
70. R. Jeffrey Largent '11, 4/11-7/11, Algorithmic Determination of Point Groups in Nearly Symmetric Molecules, M.S. in Computer Science from Indiana University
71. Benjamin J. Pollock '13, 9/12-5/13, Computation of Photochrome Reaction Pathways, M.S. in Chemistry, University of Wisconsin at Madison; Employed at Thermo Fischer Scientific
72. Joshua A. Kammeraad '13, 1/13-5/14, Predicting and Fitting Mixed Vibrational States to a Multi-Resonant Hamiltonian, Ph.D. in Chemistry, University of Michigan
73. Richard C. Edwards '17, 1/13-7/14, Development of Computational Chemistry Educational Resources, Chemical Industry
74. Nathan R. Vance '17, 1/13-7/17, Computer Clusters, Android Apps, and Cloud Computing, Ph.D. in Computer Science, Notre Dame
75. Daniel J. SantaLucia '16, 5/15-4/16, Calculation of Tetrathiooxalate Complexes, Ph.D. in Chemistry, University of Wisconsin, Madison
76. Kyra D. Ross '20, 3/17-11/20, Laser Repair and Alignment, Pfizer Process Engineer
77. Peter E. Timperman '18, 5/17-5/18, PyScan: Computer Interfacing of Laboratory Instrumentation, Software Engineer, Snapdragon Chemistry, Waltham, MA
78. Julian N. Payne '19, 12/17-4/19, Interfacing Laboratory Instrumentation with a Raspberry Pi, Software Consultant, Cognizant, Munich, Germany
79. Gregory J. Campbell '19, 1/19-8/20, Cloud-Based Chemistry Applications, Acumen Solutions, Cleveland, OH

80. Carl I. Best '23, 5/19-8/20, OmniScan: Interfacing Laboratory Instruments with Python, Holland Hospital IT Customer Support, Holland MI
81. Claire J. Benedict '23, 9/19-11/20, Alignment of Laser System and Monochromator Repair, Hope student
82. Anna Prins '22, 7/20-8/20, Interfacing Laboratory Instruments with Python, Code Blue Corporation
83. Grace Zwiers '22, 1/21-9/21, Developing a Framework for Assessing Online Labs to Maximize Student Experience, P.A. program, Midwestern University
84. Colin D. Bradley '23, 5/22-8/22, WebMO Video Tutorials, Hope student
85. Caleb D. Brzezinsky '26, 9/22-pres, Layered Quantum Chemistry Calculations, Hope student