

*Curriculum Vitae*  
**JASON G. GILLMORE**  
PROFESSOR OF CHEMISTRY, HOPE COLLEGE, HOLLAND, MI  
*hope.edu/jason-gillmore*

**Professional Appointments:**

Professor of Chemistry, Hope College, Holland, MI; January 2016 to present.  
Schaap Research Fellow (endowed research line), October 2013 to present.  
Visiting Professor of Chemistry and Interim Associate Director of R&D, Michigan State University Bioeconomy Institute, Holland, MI; July 2018 to July 2019.  
Associate Professor of Chemistry, Hope College, Holland, MI; January 2010 to January 2016.  
Visiting Professor of Chemistry (Research), Arizona State University, Tempe, AZ; with Professor Devens Gust; August 2011 to May 2012.  
Assistant Professor of Chemistry, Hope College, Holland, MI; July 2004 to January 2010.

**Education:**

NIH Postdoctoral Traineeship, Center in Molecular Toxicology & Department of Chemistry, Vanderbilt University, Nashville, TN; with Professor Ned A. Porter, May 2003 to June 2004.  
Doctor of Philosophy in Chemistry, University of Rochester, Rochester, NY, April 2003.  
Major Advisor: Professor Joseph P. Dinnocenzo  
Thesis Title: *Photoinduced Cation Radical Isomerization Reactions in Polymeric Media – "Quantum Amplified Isomerization."*  
Master of Science in Chemistry, Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA, June 1998. Major Advisor: Professor James M. Tanko  
Thesis Title: *Evaluation of 1,1-Dimethyl-5,7,-di-t-butylspiro[2.5]octa-4,7-dien-6-one as a Mechanistic Probe for Single Electron Transfer.*  
Bachelor of Science in Chemistry (*cum laude*, Commonwealth Scholar, Psychology minor), VPI&SU, Blacksburg, VA, December 1996.

**Research:**

*Mechanistic & synthetic organic photochemistry, electrochemistry, and computational modeling, applied to responsive materials.* Hope College Chemistry Department, Holland, MI. July 2004 to present.  
*Organic synthesis, electrochemistry, and computation for battery applications.* With Dr. Tom Guarr, MSU Bioeconomy Institute, Organic Energy Storage Laboratory, Holland, MI. July 2018 to July 2019.  
*Reverse photochromes for molecular logic devices: synthesis and time-resolved spectroscopy.* With Prof. Devens Gust, Arizona State University Department of Chemistry & Biochemistry and the Center for Bio-inspired Solar Fuel Production, Tempe, AZ. August 2011 to May 2012.  
*Biologically relevant radical clocks to study lipid peroxidation.* With Prof. Ned A. Porter, Vanderbilt University Department of Chemistry and Center in Molecular Toxicology, Nashville, TN. May 2003 to June 2004.  
*Investigations of cation radical isomerizations in polymer matrices and conventional solvents.* With Prof. Joseph P. Dinnocenzo, University of Rochester Department of Chemistry and Center for Photoinduced Charge Transfer, Rochester, NY. September 1998 to May 2003.  
*Consultant.* Eastman Kodak Company, Rochester, NY. With Drs. Samir Farid and Douglas R. Robello. September 1999 to January 2003.  
*Evaluation of 1,1-dimethyl-5,7-di-t-butylspiro[2.5]octa-4,7-dien-6-one as a potential single electron transfer probe.* With Prof. James M. Tanko, VPI&SU, Blacksburg, VA. August 1995 through July 1998.  
*Model study relating to the cis-decalin system in the ongoing total synthesis of Popolohuanone E.* With Prof. John W. Benbow, Lehigh University, Bethlehem, PA. Summer 1995.  
*General research experience in organic synthesis.* Synthesizing intermediates for use in ongoing research into pseudosugars, with Prof. Tomas Hudlicky, VPI&SU, Blacksburg, VA. Spring 1995.

**Teaching:****Lecture Courses:**

- One semester Advanced Organic & Organometallic course (CHEM 421), Hope College
- One semester Advanced Spectroscopy course (CHEM 348), Hope College
- Two semester Organic Chemistry lecture and discussion (CHEM 221,231), Hope College
  - Implementing Peer Led Team Learning constructivist group problem solving sessions in place of traditional recitation/discussion (partial implementation 2004-10, 2015-present; full implementation 2010-2015)
  - Developed and implemented a concurrent Peer Leader training "course" (2010-2015)
- First Semester General Chemistry lecture and discussion (CHEM 125), Hope College
- Graduate TA: Substitute Organic Lecturer, Organic PLTL Workshop Leader, Honors Organic Lecture TA, UR
- Undergraduate Recitation Instructor: General Chemistry I & II, VPI&SU (inaugural position)

**Laboratory Courses:**

- Two semester Organic Chemistry Lab (CHEM 255,256A,256B), Hope College
  - Increasing incorporation of authentic research in elective half-semester "independent project" in CHEM 256B.
  - Two Semester Organic Chemistry Lab Coordinator (5-7 sections: combined lab lecture, lab prep), prior to hiring permanent Organic Lab Coordinator
- One semester Advanced Spectroscopy Lab (CHEM 348), Hope College
- First semester General Chemistry Lab (CHEM 113), Hope College
- One semester Introduction to Biological Chemistry (CHEM 103) Lab, Hope College
  - A one-semester non-majors General / Organic / Biochem service course for (pre-)nursing and kinesiology / exercise science and other allied health fields
- Graduate TA: Organic Chemistry Lab (UR, VPI&SU), Honors Organic Lab (UR), Organic Synthesis and Techniques (Honors/Majors) Lab (VPI&SU)

**Mentor/Supervisor:**

- Maintain a research group of 2-6 students/summer and 2-6 students/semester (average = 4.5 students)
  - 49 Hope College undergraduate research students since joining Hope faculty in Fall 2004, including one under-represented minority student, 43% female.  
(All but 6 did one or more summers; average = 1.5 summers + 2.7 semesters)
  - 8 external summer undergraduate research students since Fall 2004, including:
    - 3 under-represented minorities (one of whom transferred to Hope) and 2 foreign-born US citizens
    - 6 of these 8 externals were two-year college students, 2 of whom subsequently transferred to Hope
  - 4 REACH high school student researchers (2 each in Summers 2009 & 2015)
    - 3 under-represented minority and 1 low SES first generation college bound
  - Group alumni include:
    - American Chemical Society Scholars awardee, 2007-2008  
(national honors scholarship for underrepresented minority chemistry majors)
    - 2 Goldwater Scholars, 2008-2009; 1 Honorable Mention 2007-2008.
    - 1 NSF GRFP Awardee, 2010; 2 Honorable Mentions, 2009, 2010.
    - 1 Lindau Nobel Conferee, 2013
    - 1 *Scientific American* "30 under 30", 2013; 1 *Forbes* "30 under 30", 2015; 1 SNMMI "One to Watch", 2024
    - 2 Beckman Scholars, 2017-18, 2022-23
    - 1 DAAD Scholar, 2018
    - 7+ MDs, 1 DDS, 2 MPH, 1 DPT, 1 DC
    - 9 PhDs (1 tenure-track & 1 non-tenure-track faculty members), 5 MSs (1 non-tenure-track faculty)
    - several more PhDs, MSs, MDs, etc. in progress
- 95 CHEM 256B Organic Lab II seven week independent projects relating to my research, 79 of whom went on in undergraduate research in the natural and applied sciences, since 2005
- 58 unique CHEM 221/231 PLTL facilitators (all but a few serving 2 semesters, several 3-4, and two 6) trained and mentored in pedagogy, group facilitation, and organic chemistry content (2010-2015)
- 6 year-round bachelors level research associates and 8 undergraduate summer interns, MSU Bioeconomy Institute (2018-19)
- 2 graduate students & 1 postdoctoral scholar, Arizona State University (2011-12)
- Visiting 2<sup>nd</sup> year International Graduate Student (from Politecnico di Milano, Italy), Vanderbilt, 2003
- Visiting Summer Researchers (2 HS Teachers, 1 Undergrad), UR, NSF-REU (2001) & RET (2001, 2002)

**Institutional Service:**

Hope College Beckman Scholars Program: program administrator, 2018-2021; co-administrator 2021-2024  
President's Advisory Committee, Hope College, 2021-2023 (elected finalist by faculty, appointed by president)  
President's *ad hoc* Culture Task Force, Hope College, 2019-2020 (presidential appointment)  
Hope College Status Committee, 2014-2017; 2023-2026 (elected by faculty)  
(tenure/promotion, merit raises, internal grants, board & committee appts)  
Hope College Appeals & Grievances Committee, 2017-2018  
Founding Organizer, *Schaap Chemistry Symposium*, Hope College, Holland, MI, July 2017  
(co-organizer: July 2019, ~~July 2024 - cancelled~~, July 2023, July 2025 planned)  
Hope College *ad hoc* Committee on Benchmarking Faculty Compensation, 2016-2017  
Hope College Strategic Planning Steering Committee, 2014-2015 (presidential appointment)  
Hope College HHMI Steering Committee, 2012-2016  
Hope College Equity Advisor, 2021-present (serving on 9 searches to date for 11 hires: 3 faculty members, 2 office staff, 3 administrative staff at the director and associate director level, and 3 scientific/technical staff)  
Hope College Chemistry Faculty Search Committees (tenure-track searches unless noted):  
2005, 2006, 2012 (chair), 2013 (chair, term position), 2015 (chair, part-time positions), 2018 (chair, term position), 2024  
Hope College SHARP online summer research application and student management software,  
Development Team Faculty Coordinator: 2009-2011; Chemistry Department Liaison: 2007-2010  
Chair, Hope College Extracurricular Activities Committee, 2005-2008  
Hope College Health Professions Advisory Committee, 2008-2010  
Hope College Committee on Admissions and Financial Aid, 2010-2011  
Hope College Academic Computing Committee, 2013-2014  
Hope College Mentoring Program, mentor to three junior faculty members, 2012-2016, 2019-2021  
Chemistry Department Executive Committee, Hope College, 2021  
Chemistry Department Schaap Funding Committee, Hope College, 2020-2021  
Chemistry Department Awards Committee, Hope College, 2019-2021, 2022-present (chair 2022-present)  
Chemistry Department Strategic Partnerships Committee, Hope College, 2021-2022  
Chemistry Department Assessment Committee, Hope College, 2014-2018, chair 2015-2018  
Hope College Chemistry Department Self-Study, Internal & External Review, co-chair, 2017-2018.  
Seminar Coordinator, Hope College Chemistry Department, academic years 2007-08, 2008-09, 2014-15  
Coordinator of Professional / Graduate Opportunities advising for chemistry students, 2005-2009  
Advisor, Hope College Chemistry Club / ACS Student Affiliates chapter, 2005-2008  
(reactivated national chapter status, won three consecutive honorable mention chapter awards)  
Academic advisor: ca. 92 advisees since 2005, 4-15 (avg 10) in any given semester

**Professional Service:**

ACS Committee on the Petroleum Research Fund (fka PRF Advisory Board), 2020-2022; 2023-2025.

Panel 4 Chair since October 2023;

Panel 4 Representative to the Planning Committee since October 2022

Board member, *Reaction Mechanisms Conference*, 2018-2026.

Organizer/moderator, *RMC Undergraduate Context Session*, 2024

RCSA Cottrell Scholars Program subcommittee on Cottrell Scholars Regional Meetings Prescriptive Models, 2020.

CUR *Silvia Ronco Innovative Mentorship Award*, inaugural awards committee member, 2022, 2023, 2024.

Founding Organizer, *Biennial P<sub>3</sub> ("Postdoc to PUI Prof") Workshop*, co-sponsored by NSF, ACS, and Hope College, Holland, MI, April 2011, April 2013, April 2015.

Co-organizer, ACS-sponsored annual *P<sub>3</sub> Workshop*, Furman University, Greensboro, SC, April 2016.

Now fully funded by ACS and co-organized by ACS and rotating local hosts in perpetuity.

Subsequent workshops occurred in March 2017 (Trinity U, TX) & April 2018 (U of San Diego, CA), with change in ACS leadership this was incorporated into ACS P2F workshop in 2019.

Presenter/panelist/co-organizer, *ACS "Postdoc to Faculty" (P2F) Workshop*, annually 2010-2015.

Executive Board, ACS New Faculty Workshop & Mentoring Program, 2014-2015.

Subject Matter Expert, *ACS Career Pathways* learning systems architecture – Fall 2011, Fall 2012.

Reviewer for:

NSF, RCSA, ACS PRF, MJ Murdock Charitable Trust

13 panels (NSF CAT, NSF GRFP x 3, NSF CRIF, ACS PRF x 6, RCSA x 1, RCSA/CUR-Chem x 1)  
+ 23 additional ad hoc reviews, since 2006

*J. Org. Chem.*, *J. Phys. Chem.*, *Phys. Chem. Chem. Phys.*, *J. Phys. Org. Chem.*, *J. Chem. Ed.*,  
*Chemical Educator*, *Org. Lett.*, *Org. Prep. Proced. Int.*, *ACS Symposia Series* – 27  
manuscripts since 2009

External Program Reviews – three 2-day PUI Chemistry Department site visits (Apr 2012, May 2013, Dec 2023)

Tenure/promotion packages – four external cases (since 2011); ten internal cases as recommender  
(since 2011); 37 internal cases on Status Committee (2014-2016, 2023-present)

External examiner on one graduate thesis since March 2014

Internal Grants – HHMI FRA (2012, 2013, 2014), Nyenhuis Faculty Development Grants (2015, 2016, 2017, 2024),  
Schaap Competitive Grants (2020, 2021)

Science Outreach:

2014, 2017 hosted visit of two Holland Christian Rose Park Elementary first grade classes for a morning of chemistry and biology demonstrations and activities

2016 classroom visit / demo to Holland Christian Rose Park Elementary Kindergarten classes

2004-2012 hosted annual visits of Western Michigan Christian High School advanced chemistry classes to Hope College for a day of tours, demonstrations, and laboratory activities

2000, 2001 National Chemistry Week activities, Rochester Museum & Science Center

2001 demonstrations for "Bring your child to work" days, University of Rochester

1999-2000 several elementary school classroom visits & demos, Rochester City Schools

**Professional Affiliations:**

American Chemical Society, Member, 2003-present; Student Member, 1997-03; Student Affiliate, 1993-96

Organic Division, 1997 to present; Division of Chemical Education, 2000 to present

Inter-American Photochemical Society, 2007 to present

Materials Research Society, 2017 to present

Council on Undergraduate Research, 2004 to present

Midwestern Association of Chemistry Teachers in Liberal Arts Colleges, 2005 to present

Interservice Emerging Scholars Network, 2004 to present

**Professional Development:**

Hope College PRISM "Safe Spaces" training, Hope College, November 2022  
Dr. Darris Means "FirstGen Advising & Mentoring" virtual training, Hope College, February 2022  
Dr. Monica Cox "Stop Playing Diversity" & "Accomplice Training" sessions, DEI Workshop Series, Hope College, April 2021  
Hope Equity Advisor Resource Training (HEART), Hope College, March 2021  
Search Committee Training, Hope College, 2006, 2012, 2018, 2022  
Division of Natural & Applied Sciences Antiracism Team, Hope College, September 2020 – present  
Open Chemistry Collaborative in Diversity Equity's *National Diversity Equity Workshop* for chemistry department chairs or their senior faculty representatives, Alexandria, VA, April 2019.  
Cottrell Scholars Collaborative working group meeting, "Promoting Adoption of Research and Inquiry-Based Lab Curricula", Chicago, IL, December 2016  
Cottrell Scholar Conferences, Tucson, AZ: July 2016 ("Building Bridges"); July 2018 ("Personalizing Education: Exploring Approaches and Resources to Promote Student Success"); July 2022 ("Creativity and Innovation in STEM Education")  
Cottrell Scholar Virtual Conferences, Online: July 2020 ("Online Education"), July 2021 ("Reimagining Higher Education")  
ACS/CSC Academic Leadership Training workshop, Washington, DC, February 2016  
Great Lakes Colleges Association Academic Leadership Initiative Institute, Ann Arbor, MI, October 2015  
CITI online human subjects training course (certificate), 2008, refreshers 2012, 2015.  
*Faith & Scholarship Discussion Series*, participant 2012, 2013, 2014, 2015, 2019, 2021; presenter in 2013  
Faculty Writing Camp, Hope College, June 2014, May 2017  
NSF Undergraduate Research Centers – PI & collaborators workshop, Santa Clara, CA, September 2006.  
*"In the Context..." missional workshop*, Hope College, June 2006  
CUR Dialog on Grantsmanship, Washington, DC, April 2005. (participant)  
PKAL Leadership Initiative seminar on Building Research Rich Learning Environments, Hope College, Holland, MI, April 2005. (participant/presenter)  
Hope College Mentoring Program, mentee 2005 to 2007 (mentor 2012 to 2016, 2019 to present)  
Hope College Teaching Enhancement Workshop, August 2004 plus monthly dinner meetings throughout ay2004/5. (participant; contributed as a panelist in future years)  
Pew Midstates Science & Mathematics Consortium New Faculty Workshop, Holland, MI, July 2004. (participant; contributed as a panelist in future years)  
Academic Careers in Chemistry Workshop, Eastern Analytical Symposium, Somerset, NJ, November 2003. (competitive application process; supplemental travel award)  
Co-organizer / Student Chair, Peer-Led Team Learning Regional Leaders' Symposium, Nazareth College, Rochester, NY, November 2001.  
Peer-Led Team Learning: The Workshop Project, national dissemination activities, 1999 to 2003.

**Awards and Honors:**

Hope Forward inaugural Positive Impact Award, April 2022  
Hope College Athletics' Most Valuable Professor Award ("for impacting and transforming the lives of Hope College student-athletes"), February 2016  
Hope College Vanderbush-Weller Award ("for extraordinary contributions to the lives of students"), April 2015  
Research Corporation for Science Advancement Cottrell Scholar, April 2015  
(Class of 2006, retroactive – 3% of CCSA awardees over prior 25 years)  
Hope College Janet L. Andersen Excellence in Teaching Award, January 2015  
Henry Dreyfus Teacher-Scholar, Camille & Henry Dreyfus Foundation, August 2014  
Inaugural Hope College Schaap Research Fellow (an endowed research line), 2013-2023 (renewable every 5 yrs)  
NSF Faculty Early CAREER Development award, April 2010  
NSF Physical Organic Young Investigators Worskhop invitee, January 2010  
Gordon Research Conference on Photochemistry Travel Award, July 2007  
Project Kaleidoscope, Faculty for the 21<sup>st</sup> Century, Class of 2006  
Research Corporation Cottrell College Science Award, June 2006  
Dreyfus Foundation Start-up Award, August 2004  
NIH Training Grant, Vanderbilt Center in Molecular Toxicology, 2003-2004  
Hooker Fellow, University of Rochester, 2000-2003; Sproull Fellow, University of Rochester, 1998-2003  
Sherman Clarke Fellow, Department of Chemistry, University of Rochester, 1998-2003  
Departmental Tuition Waiver and Assistantship, Chemistry Department, VPI&SU, 1997-1998  
National Merit Scholar, University Funded, VPI&SU, 1993-1996  
National Starch Corporation Merit Scholarship, Chemistry Department, VPI&SU, 1993-1996  
Merck Award for Excellence in Organic Chemistry as an Undergraduate, 1996  
Golden Key and Phi Kappa Phi National Honor Societies, 1995 to Present

**Community Service:**

Assistant Sparring Coach (volunteer), Competition Team, Fuzion Martial Arts, Holland, MI – 2022-present  
Demonstration Team, Fuzion Martial Arts, Holland, MI – 2019-2020  
Local Missions Team, Calvary CRC, Holland 49424 – 2016-present (a founding member)  
"Ambassador" to Doors of Hope, City on a Hill, Zeeland – 2022-present  
Prayer Team, Calvary CRC, Holland 49424 – 2013-2020, 2022-present  
Renewal Lab Team, Calvary CRC & the Center for Church Renewal – 2021-2022  
BLOCK Ministry, Rochester, NY – 1999-2003 (a founding member)  
inner-city servant evangelism and community development, now Hope Initiatives, Rochester, NY  
Men's Ministry servant-leadership team, Bethel Full Gospel Church, Rochester, NY – 1999

**Funded grant support (>\$1,800,000 external + >\$300,000 internal since July 2004):**

- Research Corporation, Cottrell Instrumentation Supplement, "Into the Future — Updating a GC and GC/MS Instrumentation Suite at Hope College to Extend Instrument Life and Improve Network Security", PI: J.G. Gillmore, co-PI: J.B. Johnson, \$12,000 (+ \$12,000 Hope College match), 2020-2021.
- NSF/MPS/CHE "MRI: Acquisition of a high resolution LC/MS/MS to enable undergraduate chemical and biochemical research across six disciplines in the natural and applied sciences at Hope College," PI: K.E. Dittenhafer-Reed; co-PIs: J.G. Gillmore, M.L. Smith, J.W. Peterson, K.L. Brown, 2020-2023, \$320,498.
- NSF/CISE/OAC "MRI: Acquisition of a High Performance Computing Cluster for Undergraduate Chemistry Research and Teaching by the Midwest Undergraduate Computational Chemistry Consortium (MU3C)," PI: B.P. Krueger (Hope); co-PIs: J.G. Gillmore (Hope), D. Kohen (Carleton), K.T. Kuwata (Macalester), E. Speetzen (UW Stevens Point), 2019-2022, \$400,400.
- Schaap Competitive Funding: Acquisition of an atmospheric pressure chemical ionization (APCI) source for LC/MS, PI: M. Philben; co-PIs: J. Gillmore, E. Sanford, M. Smith, K. Dittenhafer-Reed, 2021, \$11,223.
- Schaap Competitive Funding: Support for a Fifth Undergraduate Researcher in the Gillmore Research Group studying Long Wavelength Azo Dyes, 2021, \$4,952.
- Schaap Competitive Funding: Partial Support of an Ultraviolet-Visible-Near Infrared Spectrometer, Hope College Chemistry Department, 2020, \$18,759.
- American Chemical Society Petroleum Research Fund type UR grant "Increasing Structural Diversity of Long-Wavelength Azo Dyes to Tune Wavelength and Add Synthetic Handles," 2019-2022, \$70,000
- Arnold & Mabel Beckman Foundation, Beckman Scholars Program award: PI, 2018-21, \$104,000; co-PI, 2021-24, \$104,000
- Research Corporation, Cottrell Scholars Collaborative, "Book proposal: *Lead Better, Disrupt Barriers, and Have an Impact*", 2023-25, \$25,000 (co-PI on a team of 22 Cottrell Scholars)
- Research Corporation, Cottrell Scholars Collaborative, "Partnering with CUREnet and Professional Societies for Dissemination of CURE Curricula", 2018-20, \$25,000 (co-PI on a team of 11 Cottrell Scholars)
- Research Corporation, Cottrell Scholars Collaborative, "Promoting Adoption of Research and Inquiry-Based Lab Curricula", 2016-18, \$25,000 (co-PI on a team of 19 Cottrell Scholars)
- Hope College Sherman Fairchild Fellowship (student Marcus Brinks), Summer 2018, \$6,000
- Michigan Space Grant Consortium, Seed Grant, "The Synthesis of Red-Shifted Azobenzene Dye Monomers for Incorporation in Photomechanical Materials", Summer 2016, \$5,000 MSGC + 5,000 Hope College match
- Michigan Space Grant Consortium, Undergraduate Fellowship Program, student Marcus Brinks, Summer 2018, \$2,500  
student Brandon Derstine, Summer 2016, \$2,500; renewal Summer 2017, \$2,500  
student Sean Gitter, Summer 2017, \$2,500
- Henry Dreyfus Teacher-Scholar Award, Camille & Henry Dreyfus Foundation, unrestricted research award, \$60,000, August 2014 – July 2020
- Schaap Research Fellow, Hope College Chemistry Department, unrestricted research endowment, \$60,000 over first 5 years, \$15k/yr thereafter, October 2013 – June 2023 (renewable in 5 year increments)
- NSF/MPS/CHE/CSDM, "CAREER: Photochromic Photooxidants – developing electron deficient photochromes to gate sensitivity toward photoinduced charge transfer." 2010-2016, \$549,000
- American Chemical Society Graduate & Postdoctoral Scholars Office  
"Additional support for the *Biennial Midwest "Postdoc to PUI Professor" Workshop*."
  - April 2011, \$10,000 + in kind; April 2013, \$12,000 + in kind; April 2015, \$12,600 + in kind
  - 2016-2019, ACS assumed full sponsorship and organization of the *P<sub>3</sub> Workshop* as an annual event hosted by rotating co-organizers at research intensive PUIs around the US; 2019-present ACS merged with their existing annual *Postdoc to Faculty Workshop*.
- Jean Dreyfus Boissevain Undergraduate Scholarships for Excellence in Chemistry, unsolicited award to the Hope College Chemistry Dept (dept named Amy Speelman / Gillmore as student/mentor), 2008, \$5,500
- Research Corporation, Cottrell College Science Award, Grant # CC6653: "Photochromic Photooxidants: developing a series of electron poor photochromes to gate photoinduced charge transfer." 2006-2009, \$43,219 (RC) + 19,871 (Hope College match) = \$63,090 <retroactively named to Cottrell Scholars class of 2006>
- Camille and Henry Dreyfus Foundation, Start-up Award Program, "Perimidinespirocyclohexadienone Photochromic Photooxidants: developing a series of photochromic reactions to allow gating of photoinduced charge transfer initiation of cation radical reactions". 2004-2009, \$30,000

Hope College: Start-up Funds, 2004-2007, \$116,600; additional competitive internal support in 2007, 2008, 2010 totaling \$12,000 + one semester half-load teaching reduction reassigned to research

### Pending grant support:

Research Corporation, Cottrell SEED Award, "Synthesis, photochemistry and computation of more robust long-wavelength BF<sub>2</sub>-coordinated azo dyes, 2024-2026, \$60,000 - PENDING

### Publications, externally peer-reviewed:

(*corresponding author*; <sup>†</sup>*undergraduate co-author*; <sup>‡</sup>*high school student co-author*; <sup>§</sup>*under-represented minority*)

21. "Intramolecular Oxidative Diaryl Coupling of Tetrasubstituted Diphenylamines for Preparation of Bis(trifluoromethyl) Dimethyl Carbazoles." Duda, A.M.<sup>†</sup>; Giurini, M.T.<sup>†</sup>; Gillmore, J.G.; Guarr, T.F. *SynOpen* **2021**, 5, 308-313. ([DOI:10.1055/a-1662-7462](https://doi.org/10.1055/a-1662-7462))
20. "Experimental and computational electrochemistry of quinazolinespirohexadienones – differential electrochromic vs. photochromic behavior." Webb, E.W.<sup>†</sup>; Moerdyk, J.P.<sup>†</sup>; Sluiter, K.B.<sup>†</sup>; Pollock, B.J.<sup>†</sup>; Speelman, A.L.<sup>†</sup>; Lynch, E.J.<sup>†</sup>; Polik, W.F.; Gillmore, J.G. *Beilstein J. Org. Chem.* **2019**, 15, 2473–2485. ([DOI:10.3762/bjoc.15.240](https://doi.org/10.3762/bjoc.15.240)) part of a special thematic issue on Molecular Switches
19. "Synthesis of 5,6-Diaminoacenaphthylene by Reduction of Sterically Crowded Nitro Groups with Sodium Dithionite," Dood, A.J. (Prins)<sup>†</sup>; Fisher, P.A.<sup>†</sup>; Bodden, C.L.<sup>‡,§</sup>; Peterson, L.J.<sup>†</sup>; Lindberg, K.A.<sup>†</sup>; Coeling, T.A.<sup>†</sup>; Yarbrough, D.C.<sup>†</sup>; Gillmore, J.G. *SynOpen* **2018**, 2, 312-315. ([DOI:10.1055/s-0037-1610406](https://doi.org/10.1055/s-0037-1610406))
18. "Chapter 6. Resourcing, Scalability, and Sustainability of CUREs," Fuller, A.A.; Gillmore, J.G.; Ogilvie, C.A. in *Expanding the CURE Model: Course-based Undergraduate Research Experience*, R. Waterman and J.M. Heemstra, Eds., Research Corporation for Science Advancement: Tucson, AZ, 2018, in trade paperback, or download free at <http://rescorp.org/gdresources/publications/Expanding-the-CURE-Model.pdf>.
17. "Incorporating Authentic Research in an Optional Component of the Second Semester Organic Laboratory Course." Smith, T.L.; Gillmore, J.G.; Scogin, S.C. *Chem. Educator* **2017**, 22, 177-184.
16. "Throwing away the cookbook: implementing course-based undergraduate research experiences (CUREs) in chemistry." Heemstra, J.M.; Waterman, R.; Antos, J.M.; Beuning, P.; Bur, S.; Columbus, L.; Feig, A.L.; Fuller, A.A.; Gillmore, J.G.; Leconte, A.; Pomerantz, W.; Prescher, J.; Stanley, L. invited chapter in *Educational and Outreach Projects from the Cottrell Scholars Collaborative, Vol. 1* Waterman, R.; Feig A., Eds. ACS Symposium Series (Volume 1248): Washington, DC, 2017 (online, [DOI: 10.1021/bk-2017-1248](https://doi.org/10.1021/bk-2017-1248); print edition: Oxford University Press, 2018.)
15. "Fast Colorimetric Titrations Protocol for the Quantification of Boron Tribromide." Barbu, B.N.<sup>†</sup>; Kosak, T.M.<sup>†</sup>; Prins, A.J.<sup>†</sup>; Gillmore, J.G.; Korich, A.L. *Tet. Letters* **2016**, 57, 3746-3748. ([DOI: 10.1016/j.tetlet.2016.07.017](https://doi.org/10.1016/j.tetlet.2016.07.017))

<work published prior to second promotion>

14. "Building and Testing Correlations for the Estimation of One-electron Reduction Potentials of a Diverse Set of Organic Molecules." Méndez-Hernández, D.D.; Gillmore, J.G.; Montano, L.A.<sup>†</sup>; Gust, D.; Moore, T.A.; Moore, A.L.; Mujica, V. *J. Phys. Org. Chem.* **2015**, 28, 320-328. ([DOI: 10.1002/poc.3413](https://doi.org/10.1002/poc.3413))
13. "Modulating short wavelength fluorescence with long wavelength light." Copley, G.; Gillmore, J.G.; Crisman, J.; Kodis, G.; Gray, C.<sup>†</sup>; Cherry, B.; Sherman, B.; Liddell, P.A.; Frank, N.; Moore, A.L.; Moore, T.A.; Gust, D. *J. Am. Chem. Soc.* **2014**, 136 (34), 11994-12003. ([DOI: 10.1021/ja504879p](https://doi.org/10.1021/ja504879p))
12. "Synthesis and structural investigation of an 'oxazinoquinolinespirohexadienone' that only exists as its long-wavelength ring-opened quinonimine isomer." Pollock, B.J.<sup>†</sup>; Sikes, C.A.<sup>†</sup>; Ter Louw, R.P.<sup>†</sup>; Hawken, S.R.<sup>†</sup>; Speelman, A.L.<sup>†</sup>; Lynch, E.J.<sup>†</sup>; Stanford, D.J.; Wheeler, K.A.; Gillmore, J.G. *J. Org. Chem.* **2012**, 77 (19), 8689-8695. ([DOI: 10.1021/jo3016083](https://doi.org/10.1021/jo3016083))
11. "Expanding and testing a computational method for predicting the ground state reduction potentials of organic molecules on the basis of empirical correlation to experiment." Lynch, E.J.<sup>†</sup>; Speelman, A.L.<sup>†</sup>; Curry, B.A.<sup>‡,§</sup>; Murillo, C.S.<sup>‡,§</sup>; Gillmore, J.G. *J. Org. Chem.* **2012**, 77 (15), 6423-6430. ([DOI: 10.1021/jo300853k](https://doi.org/10.1021/jo300853k))
10. "Successful Student Transitions from the Community College to the Four-Year College Facilitated by Undergraduate Research." Higgins, T.B.; Brown, K.L.<sup>§</sup>; Gillmore, J.G.; Johnson, J.B.; Peaslee, G.F.; Stanford, D.J. *Counc. Undergrad. Res. Q.* **2011**, 31 (3), 16-22. [www.cur.org/publications/curquarterly](http://www.cur.org/publications/curquarterly)

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9. "Synthesis and photochemistry of two quinoline analogs of the perimidinespirohexadienone family of photochromes." Moerdyk, J.P.<sup>†</sup>; Speelman, A.L.<sup>†</sup>; Kuper, K.E. III<sup>†</sup>; Heiberger, B.R.<sup>†</sup>; Ter Louw, R.P.<sup>†</sup>; Zeller, D.J.<sup>†</sup>; Radler, A.J.<sup>†</sup>; Gillmore, J.G. *J. Photochem. Photobiol. A* **2009**, 205, 84-92.



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8. "Efficient Computational Methods for Accurately Predicting Reduction Potentials of Organic Molecules." Speelman, A.L.<sup>†</sup>; Gillmore, J.G. *J. Phys. Chem. A* **2008**, *112* (25), 5685-5690. (featured on cover) (DOI: [10.1021/jp800782e](https://doi.org/10.1021/jp800782e))

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7. "Peroxyl Radical Clocks." Roschek, B. Jr.; Tallman, K.A.; Rector, C.L.; Gillmore, J.G.; Pratt, D.A.; Punta, C.; Porter, N.A. *J. Org. Chem.* **2006**, *71* (9), 3527-3532. (DOI: [10.1021/jo0601462](https://doi.org/10.1021/jo0601462))
6. "Quantum Amplified Isomerization: A New Concept for Polymeric Optical Materials." Gillmore, J.G.; Neiser, J.D.; McManus, K.A.; Roh, Y.; Dombrowski, G.W.; Brown, T.G.; Dinnocenzo, J.P.; Farid, S.; Robello, D.R. *Macromolecules* **2005**, *38* (18), 7684-7694. (DOI: [10.1021/ma050348k](https://doi.org/10.1021/ma050348k))
5. "Cyclopropyl Carbonyl → Homoallyl-Type Ring Opening of Ketyl Radical Anions. Structure/Reactivity Relationships and the Contribution of Solvent/Counterion Reorganization to the Intrinsic Barrier." Tanko, J.M.; Gillmore, J.G.; Friedline, R.; Chahma, M. *J. Org. Chem.* **2005**, *70* (10), 4170-4173. (DOI: [10.1021/jo047917r](https://doi.org/10.1021/jo047917r))
4. "Optical Recording Material." Robello, D.R.; Dinnocenzo, J.P.; Farid, S.; Gillmore, J.G. US patents 6969578 B2 (Nov 29, 2005), 200040038146 A1 (Feb 26, 2004); European patent 1391886 A1 (Feb 25, 2004); Japanese patent 2004078224 A (March 11, 2004).
3. "Quantum Amplified Isomerization: A New Chemically Amplified Imaging System in Solid Polymers." Robello, D.R.; Dinnocenzo, J.P.; Farid, S.; Gillmore, J.G.; Thomas, S.W. III<sup>†</sup>. In *Chromogenic Phenomena in Polymers: Tunable Optical Properties*; Jenekhe, S.A., Kiserow, D.J., Eds.; ACS Symposium Series 888; American Chemical Society: Washington, DC, 2004; pp 135-146. (Chapter DOI: [10.1021/bk-2005-0888.ch010](https://doi.org/10.1021/bk-2005-0888.ch010))
2. "Radical ion probes. 11. Reaction of 1,1-dimethyl-5,7-di-*t*-butylspiro[2.5]octa-4,7-dien-6-one with 5-hexenyl magnesium bromide." Gillmore, J.G.; Tanko, J.M. *Tetrahedron Lett.* **1998**, *39* (48), 8795-8798. (DOI: [10.1016/S0040-4039\(98\)01975-3](https://doi.org/10.1016/S0040-4039(98)01975-3))
1. "Radical Ion Probes. 8. Direct and Indirect Electrochemistry of 5,7-Di-*tert*-butylspiro-[2.5]octa-4,7-dien-6-one and Derivatives." Phillips, J.P.; Gillmore, J.G.; Schwartz, P.<sup>‡</sup>; Brammer, L.E., Jr.; Berger, D.J.; Tanko, J.M. *J. Am. Chem. Soc.* **1998**, *120* (1), 195-202. (DOI: [10.1021/ja972795o](https://doi.org/10.1021/ja972795o))

### Publications, not externally peer-reviewed:

(corresponding author; <sup>†</sup>undergraduate co-author; <sup>‡</sup>high school student co-author; <sup>§</sup>under-represented minority)

6. "Writing the Research Plan for Your Academic Job Application." Gillmore, J.G. *ACS Graduate & Postdoctoral Scholars Bulletin [Online]* **2012**, Article 2. (last accessed May 14, 2015); Reformatted and reprinted as a feature article in: *ACS Graduate & Postdoctoral Chemist [Online]*, **September 2013**, pp. 6-8. (last accessed July 28, 2015)
5. "PLTL impacts a career – from peer leader to the professoriate." Gillmore, J.G. *Progressions: The Peer-Led Team Learning Project Newsletter* **2010**, *12* (1), online at [www.pltl.org](http://www.pltl.org) or [digitalcommons.hope.edu](http://digitalcommons.hope.edu).

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4. "Photoinduced Cation Radical Isomerization Reactions in Polymeric Media – 'Quantum Amplified Isomerization'" Gillmore, J.G., Ph.D. Thesis, University of Rochester, Rochester, NY, April 2003.
3. "Quantum Amplified Isomerization: Photoinitiated Electron Transfer Chain Reactions in Dewarbenzene Substituted Polymers." Robello, D.R.; Farid, S.; Dinnocenzo, J.P.; Gillmore, J.G. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2002**, *43* (1), 165-166.
2. "Quantum Amplified Isomerization: A New Chemically Amplified Imaging System." Robello, D.R.; Dinnocenzo, J.P.; Farid, S.; Gillmore, J.G.; Thomas, S.W. III<sup>†</sup>. *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2001**, *42* (2), 717-718.
1. "Evaluation of 1,1-dimethyl-5,7-di-*t*-butylspiro[2.5]octa-4,7-dien-6-one as a mechanistic probe for single electron transfer." Gillmore, J.G., M.S. Thesis, Virginia Polytechnic Institute & State University, Blacksburg, Virginia, June 1998.

### Manuscripts in preparation:

(corresponding author; <sup>†</sup>undergraduate co-author; <sup>‡</sup>high school student co-author; <sup>§</sup>under-represented minority)

- "Calculating Vis-NIR Absorbances of Novel Azo Dyes through Correlation of TD-DFT to Experiment." Bradley, C.D.<sup>†</sup>; Gillmore, J.G.

**Professional Presentations (independent career since 2004):****Invited research lectures, seminars, conference talks (32):**

Purdue University (2024)  
Open Science Presentations, SciencePalooza, Twitch livestream (2022)  
CUR / ACS-PRF invited research and grantsmanship talk in a [webinar](#) on Writing Grant Proposals and PRF Funding Opportunities for PUIs (2020)  
Oakland University (2020),  
Haverford College (2018),  
Lafayette College (2018),  
Barnard College (2018),  
Princeton University (2018),  
Yale University (2018),  
ExxonMobil (2018),  
Ohio Photochemical Society (2018),  
Valparaiso University (2017, 2010),  
Gentex Corporation (2017, 2010),  
Dreyfus Foundation Teacher-Scholar Symposium (New York, NY, 2016),  
36<sup>th</sup> Reaction Mechanisms Conference (St. Louis, MO, 2016),  
248<sup>th</sup> ACS National Meeting ORGN Small Splash Big Waves Symposium (San Francisco, 2014),  
U of Southern Mississippi (2012),  
Arizona State University (2011),  
Eastern Illinois University (2011),  
NSF Physical Organic Young Investigators Workshop (Austin, 2010),  
Ball State University (2010),  
Johns Hopkins U (2009),  
Gustavus Adolphus College (2009),  
Bowling Green State U (2009),  
Washington U (St. Louis, 2008),  
Hope College Winter Happening (2008),  
31<sup>st</sup> Reaction Mechanisms Conference (College Park, MD, 2006),  
Calvin College (2006, 2023),  
Andrews University (2005)

***Contributed national conference talks/posters on research by undergraduates (29) and PI (14):***

Beckman Scholars Symposium: August 2018, August 2023  
Materials Research Society National Meeting: April 2017 (Phoenix)  
American Institute of Chemical Engineers National Meeting: 2016, 2017 (best poster award), 2018  
International Chemical Congress of Pacific Basin Societies (Honolulu): **Pacificchem 2015 (x3)**  
ACS National Meetings: Indianapolis 2023, Chicago 2022 (x2), Boston 2015, San Francisco 2014 (x4),  
Philadelphia 2012, **San Diego 2012**, Philadelphia 2008 (x2), Chicago 2007,  
San Francisco 2006 (x2)  
Gordon Research Conferences: **2013 Physical Organic GRC, 2007 Photochemistry GRC**  
Reaction Mechanisms Conferences: 2024 (x2), **2022**, 2018 (x4), 2016, **2012**, 2010 (x2), **2008, 2006**  
Inter-American Photochemical Society Winter Meetings: **2019, 2017, 2013, 2009**  
plus 46 regional undergraduate meeting presentations, 45 local talks and 88 local poster presentations.

***PI presentations on faculty careers and pedagogy (44):***

*Faculty Careers at Undergraduate Institutions:* 8 invited talks and 13 invited workshop panels  
(3 as organizer and 6 as co-organizer)  
*Peer Led Team Learning:* 9 invited workshop presentations, 3 invited talks, 1 contributed talk  
*2YC to PUI pipeline:* 1 invited & 1 contributed talk  
*Incorporating authentic research into the undergraduate organic laboratory course:* 3 invited talks; 1 invited &  
4 contributed posters