Curriculum Vitae

Amy S. Mullin

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Education and Professional Training

B.A. in Chemistry, with honors, University of California Santa Cruz	1985
Ph.D. in Physical Chemistry, University of Colorado, Boulder	1991
Postdoctoral Research in Molecular Collisions, Columbia University, New York	1992

Appointments

Clare Boothe Luce Assistant Professor, Department of Chemistry, Boston University	1994-2000
Associate Professor, Department of Chemistry, Boston University	2000-2005
Associate Professor, Dept. of Chemistry & Biochemistry, University of Maryland	2005-2010
Professor, Department of Chemistry & Biochemistry, University of Maryland	2010-present
ADVANCE Professor, CMNS, University of Maryland	2015-2019
Senior Editor, The Journal of Physical Chemistry, American Chemical Society	2015-present
Director, Chemistry Graduate Program, University of Maryland	2017-2018
Associate Chair for Graduate Studies, Chemistry & Biochemistry, University of Maryland	2018-present

Honors and Awards

1.	Elected to Sigma Xi	1991
2.	American Association of University Women Postdoctoral Fellow	1993-1994
3.	Clare Boothe Luce Professorship	1994-1999
4.	Office of Naval Research Young Investigator Award	1996-2000
5.	National Science Foundation CAREER Award	1996-2000
6.	American Young Leader, American Swiss Foundation	1998
7.	Camille Dreyfus Teacher Scholar	1999-2004
8.	Outstanding Mentor, Siemens Westinghouse High School Science Competition	2001
9.	JILA Visiting Fellow, University of Colorado and NIST	2001
10.	Fellow of the American Association for the Advancement of Science	2006
11.	General Research Board Semester Award, University of Maryland	2008
12.	Fellow of the American Physical Society (Atomic, Molecular and Optical Physics)	2008
13.	Creative Educator Award, College of Computer, Mathematical and Natural Science	2011
14.	Fellow of the Optical Society of America	2018

Other Affiliations

Photonics Center Faculty Member, Boston University	1999-2005
Associate Chair for Graduate Admissions in Chemistry, Boston University	2002-2004
Faculty Member, Chemical Physics Program, University of Maryland	2005-present

Acting Associate Director, Chemical Physics Program, University of Maryland 2007
Faculty Member, Maryland NanoCenter, University of Maryland 2010-present

Professional Memberships

1. Sigma Xi
2. American Chemical Society
3. American Physical Society
4. American Association for the Advancement of Science
5. Chemical Society of Washington
6. Optical Society of America
7. Alpha Chi Sigma, Professional Chemistry Fraternity

Professional Service and Activities

1. Organizing Committee, Pathways Program for Girls Interested in Careers in Science, Math and Engineering, Boston University 1994-2001
2. NSF Committee of Visitors Triennial Review, March 5-6, 1998
3. American Young Leader, American Swiss Foundation and U.S. Embassy to Switzerland, Basel, Switzerland, June 21-27, 1998
4. NSF Chemical Instrumentation Review Panel, Arlington, VA, May 1-3, 2000
5. Department of Energy Review Panel and Site Visit, Chemical Sciences Division, Argonne National Laboratory, November 4-7, 2001
6. Beckman Scholars Program Advisory Panel, Arnold and Mabel Beckman Foundation, 2001-2004, 2006-2007
7. Consultant, Whitten Labs, Winchester MA, 2004-2010
8. Program Committee, Division of Atomic, Molecular and Optical Physics (DAMOP) American Physical Society, 2003-2006
9. NSF Review Panel and Site Visit, Environmental Molecular Science Institute, University of California Irvine, July 19, 2004
10. Department of Energy Basic Energy Sciences Workshop on Basic Research Needs for Clean and Efficient Combustion of 21st Century Transportation Fuels, core writer and invited participant, October 30-November 1, 2006
11. Beckman Scholars Program Executive Committee, Arnold and Mabel Beckman Foundation, 2007-2011 (Chair 2010-2011)
12. American Association of University Women Fellowship and Grant Selection Panel, 2008-2011
13. NSF Graduate Research Fellowship Review Panel, February 13-14, 2009
14. Department of Energy Review Panel for Energy Frontier Research Centers, February 22-24, 2009
15. NSF Chemical Instrumentation Review Panel, Arlington, VA, October 25-26, 2010
16. Scientific Committee, 2012 International Chemistry Olympiad, 2010-2012

17. Editorial Board, Resource Letters, American Journal of Physics and the American Association of Physics Teachers, 2011-2013
18. Board Member, Chemical Society of Washington, 2011-2014
19. 2011 APS Sorting Meeting, Division of Chemical Physics, December 3, 2010
20. Department of Energy Early Career Proposal Review Panel, February 8, 2011
21. Invited Panelist, NASA Workshop on Origins, Carriers, and Implications of Mass-Independent Fractionation of Sulfur Isotopes (S-MIF), June 12-14, 2011
22. Team Leader for 2012 APS Sorting Meeting, Division of Chemical Physics, December 1-3, 2011
23. Board Member, Telluride Science Research Center, 2012-2015
24. APS Division of Chemical Physics Nominating Committee, 2012-2013
25. Editorial Board for the Journal *Atoms*, 2012-2014
26. NSF Chemical Instrumentation Proposal Review Panel, Arlington, VA, October 15-16, 2012
27. NSF Committee of Visitors Triennial Review, February 18-21, 2013
28. APS Division of Chemical Physics Councilor and Executive Committee, January 2013-2016
29. APS Representative to AAAS Section on Chemistry, 2013-2016
30. Treasurer, Mid-Atlantic Section, American Physical Society, 2014-2019
31. American Physical Society Board of Directors, 2014-2016
32. American Physical Society Council Steering Committee, 2014-2016
33. American Physical Society Committee on Committees, 2015-2016
34. APS Division of Chemical Physics Sorter's Meeting, December 10, 2015
35. American Physical Society Finance Committee, 2016
36. American Chemical Society National Award Selection Committee Chair, 2015-2017
37. American Physical Society Plyler Prize Selection Committee Vice-Chair and Chair, 2015-2016
38. NSF Chemistry Proposal Review Panel, Arlington VA February 11-12, 2016
39. APS Division of Chemical Physics Sorter's Meeting, December 8, 2016
40. Department of Energy Review and Site Visit, Gas Phase Chemical Physics, Chemical Sciences Division, Sandia National Laboratory, May 2-5, 2017
41. Editorial Advisory Board, Handbook of Chemistry and Physics, 2017-present
42. NSF Chemistry Proposal Review Panel, Alexandria, VA, February 22-23, 2018
43. American Physical Society Broida Prize Selection Committee, 2017-2020
44. NSF Chemistry Proposal Review Panel, Alexandria, VA, November 1-2, 2018
45. Vice Chair for Division of Chemical Physics, American Physical Society, 2019

Outreach and Professional Development Activities

1. "Chemistry in the Fast Lane: Dynamics of Highly Excited Molecules," Pathways Programs for Girls in Science, Boston University, Boston, Massachusetts, April 9, 1996 (invited talk)
2. "High Energy Chemistry: Laser Studies of Highly Excited Molecules," Research Internship Program, Boston University, Boston Massachusetts, July 31, 1996 (invited talk)

3. Meta Katsenstein Memorial Lecture Series, Massachusetts Institute of Technology, April 3, 1997 (invited research and mentoring talk)
4. "Making Chemical Movies with Lasers: Speed, Spin, Wiggle and Wag," Boston University Food for Thought Lecture Series, September 23, 1997 (invited talk)
5. Keynote Address for Pathways '98, Program for Girls Interested in Science, Engineering and Math, Boston University, April 15, 1998 (invited mentoring talk)
6. Clare Boothe Luce Professors Symposium, New York, New York, March 12, 1998 (invited participant)
7. New York Academy of Sciences: "Choices and Successes: Women in Science and Engineering," New York, New York, March 12-13, 1998 (invited participant)
8. "Take a Mentee to Lunch: Humanizing the Junior Faculty Experience," Symposium on Mentoring, Division of Chemical Education, National Meeting of the American Chemical Society, Anaheim, California, March 21-26, 1999 (invited mentoring talk with Prof. Mort Hoffman)
9. "Putting Out Molecular Fires: Laser Studies of Chemical Relaxation," Boston University Research Internship Program for High School Students, July 21, 1999 (invited research talk)
10. "Making Great Posters for Science, Fame and Fun," Undergraduate Research Opportunities Program, Boston University, July 28, 1999 (invited mentoring talk)
11. "Making the Transition from Postdoctoral Fellow to PI," Bunting Institute for Advanced Study, Harvard University, November 1, 2000 (invited mentoring talk)
12. Committee on the Advancement of Women Chemists (COACh) Workshop on Strategic Negotiations, New Orleans, April, 2003 (workshop participant)
13. Women in Science Symposium, Boston University, February 20, 2004 (invited panelist)
14. Workshop on "Balancing Work and Home," College of Chemical and Life Sciences, University of Maryland, December 10, 2007 (invited panelist)
15. ACS Preparing for Life After Graduate School (PfLAGS) Workshop, University of Maryland, January 16, 2008 (invited mentoring talk)
16. Committee on the Advancement of Women Chemists (COACh) Workshop on Leadership, New Orleans, April 5, 2008 (workshop participant)
17. Professional development panel on Women in Science, National Organization of Black Chemists and Chemical Engineers, University of Maryland, November 4, 2010 (invited panelist)
18. Provocateur for "The Matter of Origins," Liz Lerman Dance Exchange, University of Maryland, September 9-12, 2010. Supported by the NSF.
19. NSF Fellowship Application Question and Answer Session, Graduate Student Organization in Chemistry and Biochemistry, University of Maryland, October 6, 2014
20. Women in STEM Leadership: Clare Boothe Luce 25th Anniversary Professors Conference, Fordham University, New York City, NY November 8-9, 2015
21. Consultant to AAAS program in Settling Up Your First Laboratory, June 2016
22. Invited panelist at Career Development Seminar on Grant Proposal Writing, University of Maryland Graduate Student Organization, April 28, 2017

2. Research and Scholarly Activities

a. Books Edited

Highly Excited Molecules: Relaxation, Reaction and Structure, Amy S. Mullin and George C. Schatz, editors (ACS Books, Washington, D.C. 1997)

b. Book Chapters

"Dynamics of Highly Excited States in Chemistry: An Overview," Amy S. Mullin and George C. Schatz in *Highly Excited Molecules: Relaxation, Reaction and Structure*, Amy S. Mullin and George C. Schatz, editors (ACS Books, Washington, D.C. 1997)

c. Articles in Refereed Journals

1. "The effect of solvation on intrinsic rates of proton transfer," C. F. Bernasconi, R. D. Bunnell, Dahv A. V. Kliner, A. S. Mullin, Peter Pacshalis and F. Terrier, Studies in Organic Chemistry (Amsterdam) **31**, 583-592 (1987)
2. "Kinetics of ionization of nitromethane and phenylnitromethane by amines and carboxylate ions in Me_2SO-water mixtures: Evidence of ammonium ion-nitrate ion complex formation in Me_2SO-rich solvent mixtures," C. F. Bernasconi, D. A. Kliner, A. S. Mullin and J. X. Ni, Journal of Organic Chemistry **53**, 3342-3351 (1988)
3. "The visible photoabsorption spectrum of Ar_3^+," Nancy E. Levinger, Doug Ray, Kermit K. Murray, Amy S. Mullin, C. P. Schulz and W. C. Lineberger, Journal of Chemical Physics **89**, 71-74 (1988)
4. "Gas-Phase SN_2 and E_2 reactions of alkyl halides," Charles H. DePuy, Scott Gronert, Amy Mullin and Veronica M. Bierbaum, Journal of the American Chemical Society **112**, 8650-8655 (1990)
5. "Characterization of triplet states in doubly-charged positive ions: Assignment of the $^3\prod_g - {}^3\Sigma_u^+$ electronic transition in N_2^{++}," Diane M. Szaflarski, Amy S. Mullin, Kazushige Yokoyama, M. N. R. Ashfold and W. C. Lineberger, Journal of Physical Chemistry **95**, 2122-2124 (1991)
6. "Triplet state spectroscopy and photofragmentation dynamics of N_2^{++}," Amy S. Mullin, Diane M. Szaflarski, Kazushige Yokoyama, Gustav Gerber and W. C. Lineberger, Journal of Chemical Physics **96**, 3636-3648 (1992)
7. "Autodetachment spectroscopy of vibrationally excited acetaldehyde enolate anion CH_2CHO" Amy S. Mullin, Kermit K. Murray, C. P. Schulz, Diane M. Szaflarski and W. C. Lineberger, Chemical Physics **166**, 207-213 (1992)
8. "Experimental methods for probing structure and dynamics of gas-phase molecular dications," Kazushige Yokoyama, Diane M. Szaflarski, Amy S. Mullin and W. C. Lineberger, in Optical Methods for Time- and State-Resolved Chemistry, SPIE **1638**, 264-272 (1992)
9. "Autodetachment dynamics of acetaldehyde enolate anion, CH_2CHO^-," Amy S. Mullin, Kermit K. Murray, C. P. Schulz and W. C. Lineberger, Journal of Physical Chemistry **97**, 10281-10286 (1993)
10. "Some rotations like it hot: Selective energy partitioning in the state-resolved dynamics of collisions between CO_2 and highly vibrationally excited pyrazine," Amy S. Mullin, James Z. Chou, Juenghee Park, George W. Flynn and Ralph E. Weston, Jr., Chemical Physics **175**, 53-70 (1993)

11. "Gas-phase infrared spectroscopy of N_2O in an equilibrium cell at 10 and 5 K," Kenneth A. Ross, Daniel R. Willey, Amy S. Mullin, S. K. Schowen, L. Zheng and George W. Flynn, Journal of Molecular Spectroscopy **169**, 66-72 (1995)
12. "Molecular supercollisions: Evidence for large energy transfer in the collisional quenching of highly vibrationally excited pyrazine by CO_2," Amy S. Mullin, Chris A. Michaels and George W. Flynn, J. Chemical Physics **102**, 6032-6045 (1995)
13. "Long and short range interactions in the temperature dependent collisional excitation of the anti-symmetric stretching CO_2 (00^01) and highly vibrationally excited pyrazine," Chris A. Michaels, Amy S. Mullin, Jeunghee Park, James Z. Chou and George W. Flynn, Journal of Chemical Physics **102**, 6682-6695 (1995)
14. "Translational and rotational excitation of CO_2 (00^00) vibrationless state in the collisional quenching of highly vibrationally excited perfluorobenzene: Evidence for impulsive collisions accompanied by large energy transfers," Chris A. Michaels, Zhou Lin, Amy S. Mullin and George W. Flynn, Journal of Chemical Physics **106**, 7055-7071 (1997)
15. "The collisional deactivation of highly vibrationally excited pyrazine by a bath of carbon dioxide: Excitation of the infrared inactive (10^00), (02^00) and (02^20) bath vibrational modes," Chris A. Michaels, Amy S. Mullin, Jeunghee Park, James Z. Chou and George W. Flynn, Journal of Chemical Physics **108**, 2744-2755 (1998)
16. "Supercollision energy dependence: State-resolved energy transfer in collisions between highly vibrationally excited pyrazine (E_{vib} = 37,900 cm^{-1} and 40,900 cm^{-1}) and CO_2," Mark C. Wall and Amy S. Mullin, Journal of Chemical Physics **108**, 9658-9667 (1998)
17. "State-resolved collisional relaxation of highly vibrationally excited pyridine (E_{vib}=38,000 cm^{-1}) and CO_2: Influence of a permanent dipole moment," Mark C. Wall, Brian A. Stewart and Amy S. Mullin, Journal of Chemical Physics **108,** 6185-6196 (1998)
18. "An independent determination of supercollision energy loss magnitudes and rates in highly vibrationally excited pyrazine with E_{vib}=36,000 to 41,000 cm^{-1}," Mark C. Wall, Andrew S. Lemoff and Amy S. Mullin, Journal of Physical Chemistry **102**, 9101-9105 (1998)
19. "State-resolved studies of collisional quenching of highly vibrationally excited pyrazine by water: The case of the missing V→RT supercollision channel," Margaret Fraelich, Michael S. Elioff and Amy S. Mullin, Journal of Physical Chemistry **102,** 9761-9771 (1998)
20. "Observation of an energy threshold for large ΔE collisional relaxation of highly vibrationally excited pyrazine (E_{vib}=31,000 to 41,000 cm^{-1}) by CO_2," Michael S. Elioff, Mark C. Wall, Andrew S. Lemoff and Amy S. Mullin, Journal of Chemical Physics **110,** 5578-5588 (1999)
21. "State-resolved collisional relaxation of highly vibrationally excited pyridine by H_2O: Role of strong electrostatic attraction in V→RT energy transfer," Margaret Fraelich, Michael S. Elioff, Rebecca L. Sansom and Amy S. Mullin, Journal of Chemical Physics **111**, 3517-3525 (1999)
22. "Unraveling the energy dependence in large ΔE V→RT energy transfer: separation of ΔE and probability in the collisional relaxation of highly vibrationally excited pyrazine (E_{vib} = 36,000 cm^{-1}

to 41,000 cm^{-1}) by CO_2," Mark C. Wall, Andrew S. Lemoff and Amy S. Mullin, Journal of Chemical Physics **111**, 7373-7382 (1999)

23. "Vibrational energy gain in the ν_2 bending mode of water via collisions with hot pyrazine (E_{vib}=37900 cm^{-1}): Insights into the dynamics of energy flow" Michael S. Elioff, Rebecca Sansom and Amy S. Mullin, Journal of Physical Chemistry A **104**, 10304-10311 (2000)
24. "Methylation effects in state resolved quenching of highly vibrationally excited azabenzenes (E_{vib}~38500 cm^{-1}). I. Collisions with water," Michael S. Elioff, Maosen Fang and Amy S. Mullin, Journal of Chemical Physics **115**, 6990-7001 (2001)
25. "Methylation effects in state resolved quenching of highly vibrationally excited azabenzenes (E_{vib} ~38500 cm^{-1}). II. Collisions with carbon dioxide," Jeunghee Park, Lawrence Shum, Andrew S. Lemoff, Kathryn Werner and Amy S. Mullin, Journal of Chemical Physics **117**, 5221-5233 (2002)
26. "Energy-dependent quantum state resolved relaxation of highly vibrationally excited pyridine (E_{vib} =36990-40200 cm^{-1}) through collisions with CO_2," Jeunghee Park, Ziman Li, Andrew S. Lemoff, Craig Rossi, Michael S. Elioff and Amy S. Mullin, Journal of Physical Chemistry A **106**, 3642-3650 (2002)
27. Erratum: Methylation effects in state resolved quenching of highly vibrationally excited azabenzenes (E_{vib}~38500 cm^{-1}). I. Collisions with water," [Journal of Chemical Physics **115**, 6990-7001 (2001)] Michael S. Elioff, Maosen Fang and Amy S. Mullin, Journal of Chemical Physics **117**, 6880 (2002)
28. "Trajectory study of supercollision relaxation in highly vibrationally excited pyrazine and CO_2" Ziman Li, Rebecca Sansom, Sara Bonella, David F. Coker and Amy S. Mullin, Journal of Physical Chemistry A. **109**, 7658-7666 (2005)
29. "State-resolved collisional quenching vibrationally excited pyrazine (E_{vib}=37000 cm^{-1}) with DCl," Ziman Li, Ekaterina Korobkova, Kathryn Werner, Lawrence Shum and Amy S. Mullin, Journal of Chemical Physics **123**, 174306 (2005)
30. "Relaxation dynamics of highly vibrationally excited picoline isomers (E_{vib} =38300 cm^{-1}) with CO_2: The role of state density in impulsive collisions," Elisa M. Miller, Liat Murat, Nicholas Bennette, Mitchell Hayes and Amy S. Mullin, Journal of Physical Chemistry A **110**, 3266-3272 (2006)
31. "Direct determination of collision rates beyond the Lennard-Jones model through state-resolved measurements of strong and weak collisions," Daniel K. Havey, Qingnan Liu, Ziman Li, Michael Elioff, Maosen Fang, Joshua Neudel and Amy S. Mullin, Journal of Physical Chemistry A **111**, 2458-2460 (2007)
32. "Alkylation effects on strong collisions of highly vibrationally excited alkylated pyridines with CO_2" by Qingnan Liu, Juan Du, Daniel K. Havey, Ziman Li, Elisa M. Miller and Amy S. Mullin, Journal of Physical Chemistry A **111**, 4073-4080 (2007)
33. "Collisions of highly vibrationally excited pyrazine with HOD: State-resolved probing of strong and weak collisions," Daniel K. Havey, Qingnan Liu, Ziman Li, Michael Elioff and Amy S. Mullin, Journal of Physical Chemistry A **111**, 13321-13329 (2007)

34. "Energy-dependent dynamics of large-ΔE collisions: Highly vibrationally excited azulene (E_{vib}= 20,100 and 38,500 cm^{-1}) with CO_2," Liwei Yuan, Juan Du and Amy S. Mullin, Journal of Chemical Physics **129**, 014303/1-11 (2008)
35. "Dynamics of weak and strong collisions: Vibrationally excited pyrazine(E_{vib}=37900 cm^{-1}) with DCl," Juan Du, Liwei Yuan, Shizuka Hsieh, Felix Lin and Amy S. Mullin, Journal of Physical Chemistry A **112**, 9396-9404 (2008)
36. "Energy transfer dynamics in the presence of preferential hydrogen bonding: Collisions of highly vibrationally excited pyridine-h_5, -d_5, and -f_5 with water," Qingnan Liu, Daniel K. Havey and Amy S. Mullin, Journal of Physical Chemistry A **112**, 9509-9515 (2008)
37. "Effects of alkylation on deviations from Lennard-Jones collision rates for highly excited aromatic molecules: Collisions of methylated pyridines with HOD" Qingnan Liu, Daniel K. Havey, Ziman Li and Amy S. Mullin, Journal of Physical Chemistry A **113**, 4387-4396 (2009)
38. "Full state-resolved energy gain profiles of CO_2 (J=2-80) from Collisions with Highly Vibrationally Excited Molecules. I. Relaxation of Pyrazine (E=37900 cm^{-1})" Daniel K. Havey, Juan Du and Amy S. Mullin, Journal of Physical Chemistry A **114**, 1569-1580 (2010)
39. "Spectroscopy of molecules in very high rotational states using an optical centrifuge," Liwei Yuan, Carlos Toro, Mack Bell and Amy S. Mullin, Faraday Disc. **150**, 101-110 (2011), DOI: 10.1039/C0FD00021C
40. "Dynamics of molecules in extreme rotational states," Liwei Yuan, Sam Teitelbaum, Allison Robinson and Amy S. Mullin, PNAS **108**, 6872-6877 (2011), DOI: 10.1073/pnas.1018669108
41. "Inhibited rotational quenching in oriented ultra-high rotational states of CO_2," Carlos Toro, Qingnan Liu, Geraldine O. Echebiri and Amy S. Mullin, Molecular Physics **111**, 1892-1901 (2013); Special Issue: Manipulating Molecules via EM Fields: A Festschrift for Bretislav Friedrich
42. "Full State-Resolved Energy Gain Profiles of CO_2 from Collisions with Highly Vibrationally Excited Molecules. II. Energy-Dependent Pyrazine (E = 32 700 and 37 900 cm^{-1}) Relaxation," Juan Du, Nicholas A. Sassin, Daniel K. Havey, Kailin Hsu, and Amy S. Mullin, J. Phys. Chem. A **117** (46), 12104−12115 (2013)
43. "Performance of a high resolution mid-IR optical parametric oscillator transient absorption spectrometer," Geraldine O. Echebiri, Matthew D. Smarte, Wendell W. Walters and Amy S. Mullin, Optics Express **22**, 14885-14895 (2014); selected for publication in Virtual Journal for Biomedical Optics (VJBO)
44. "The International Year of Light and the chemistry classroom," Amy S. Mullin and John T. Fourkas, Viewpoint in J. Phys. Chem. Lett. **6**, 3882-3883 (2015)
45. "State-specific collision dynamics of molecular super rotors with oriented angular momentum" Matthew J. Murray, Hannah M. Ogden, Carlos Toro, Qingnan Liu, David A. Burns, Millard H. Alexander and Amy S. Mullin, Journal of Physical Chemistry A **119**, 12471-12479 (2015); Special Issue: Dynamics of Molecular Collisions XXV: Fifty Years of Chemical Reaction Dynamics

46. "Impulsive collision dynamics of CO super rotors from an optical centrifuge," Matthew J. Murray, Hannah M. Ogden, Carlos Toro, Qingnan Liu and Amy S. Mullin, Chem Phys Chem **17**, 3692-3700 (2016), DOI: 10.1002/cphc.201600871
47. "Anisotropic kinetic energy release and gyroscopic behavior of CO_2 super rotors from an optical centrifuge" Matthew J. Murray, Hannah M. Odgen and Amy S. Mullin, J. Chem. Phys. **147**, 154309 (2017)
48. "Importance of rotational adiabaticity in collisions of CO_2 super rotors with Ar and He" Matthew J. Murray, Hannah M. Ogden and Amy S. Mullin, J. Chem. Phys. **148**, 084310 (2018)
49. "In situ polymerization threshold detection of 3-color systems and a study of the time dependence," Hannah M. Ogden, Amy S. Mullin, Sandra A. Gutierrez Razo, Nikolaos Liaros, John T. Fourkas and John Petersen, SPIE Proceedings Vol. 10584, Novel Patterning Technologies 2018, 1058419 (2018)
50. "The effect of CO rotation from shaped pulse polarization on reactions that form C_2," Hannah M. Ogden, Tara J. Michael, Matthew J. Murray, Qingnan Liu, Carlos Toro and Amy S. Mullin, submitted to PCCP, November 6, 2018

d. Book Reviews

1. "Advances in Chemical Physics, Volume 138," Amy S. Mullin, Journal of the American Chemical Society **130**, 11241-11242 (2008)

e. Invited Research Presentations

1. Chemistry Department, Barnard College, Columbia University, New York, New York, April 7, 1994
2. Chemistry Department, Brandeis University, Waltham, Massachusetts, February 15, 1995
3. Chemistry Department, Connecticut College, New London, Connecticut, March 28, 1995
4. Chemistry Department, Boston College, Chestnut Hill, Massachusetts, March 31, 1995
5. Chemistry Department and Biochemistry, University of South Carolina, Columbia, South Carolina, September 8, 1995
6. Chemistry Department, University of Massachusetts, Boston, Massachusetts, October 3, 1995
7. Chemistry Department, Rhode Island College, Providence, Rhode Island, October 20, 1995
8. Physics Department, Wesleyan University, Middletown, Connecticut, November 9, 1995
9. Symposium on "Recent Developments in Vibrational Spectroscopy" at PACIFICHEM '95, International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December 18, 1995
10. NSF Workshop on Large Molecule Energy Transfer, McLaren Vale, South Australia, July 7-11, 1996
11. Symposium on "Highly Excited States: Relaxation, Reactions and Structure" at the American Chemical Society National Meeting, Orlando, Florida, August 28, 1996
12. Chemistry Department, Merrimack College, N. Andover, Massachusetts, October 9, 1996
13. Chemistry Department, MIT, Cambridge, Massachusetts, October 22, 1996

14. Chemistry Department, University of Massachusetts, Amherst, Massachusetts, October 24, 1996
15. Chemistry Department, Tufts University, Medford, Massachusetts, January 21, 1997
16. Chemistry Department, Syracuse University, Syracuse, New York, April 22, 1997
17. Dr. Meta Katsenstein Memorial Lecture Series, Chemistry Department, Massachusetts Institute of Technology, Cambridge, Massachusetts, October 1, 1997
18. Office of Naval Research Energetic Materials Workshop, Annapolis, MD January 27-29, 1998
19. National Meeting of the American Chemical Society in Dallas, Texas, March 29-April 2, 1998
20. Chemistry Department, University of Texas, Austin, April 3, 1998
21. Phillips Laboratories, Chemical Processes in the Space Environment Division, Hanscom Air Force Base, Massachusetts, April 14, 1998
22. Institut für Physikalische Chemie, Universität Göttingen, Germany, June 10, 1998
23. Institut für Physik, Universität Würzburg, Germany, June 12, 1998
24. Gordon Research Conference on Atomic and Molecular Interactions, June 29-July 3, 1998
25. Gordon Research Conference on Vibrational Spectroscopy and Molecular Dynamics, July 26-31, 1998
26. University of Connecticut, Wesleyan and Yale Joint Chemical Physics Seminar, September 15, 1998
27. Chemistry Department, University of Washington, Seattle, October 2, 1998
28. Chemistry Department, University of Oregon, Eugene, OR, October 5, 1998
29. Chemistry Department, Pacific Northwest Laboratories, October 6, 1998
30. Chemistry Department, University of California, San Diego, October 9, 1998
31. Chemistry Department, University of Southern California, October 12, 1998
32. Chemistry Department, University of California, Irvine, October 13, 1998
33. Chemistry Department, College of the Holy Cross, Worchester, MA, October 23, 1998
34. Chemistry Department, Colorado State University, Fort Collins, October 29, 1998
35. Chemical Physics Colloquium, JILA and the University of Colorado, October 30, 1998
36. Chemistry Department, Columbia University, November 16, 1998
37. Chemistry Department, University of Illinois, Urbana-Champaign, November 18, 1998
38. Chemistry Department, Northwestern University, November 20, 1998
39. Chemistry Department, Cornell University, December 4, 1998
40. Chemistry Department, Georgia Institute of Technology, January 21, 1999
41. Chemistry Department, Emory University, January 22, 1999
42. Chemistry Department, Merrimack College, January 27, 1999
43. Chemistry Department, Massachusetts Institute of Technology, March 2, 1999
44. Chemistry Department and Chemical Biology, Harvard University, March 3, 1999
45. Symposium on Unimolecular Reactions and Intramolecular Dynamics, Division of Physical Chemistry, National Meeting of the American Chemical Society, Anaheim, California, March 21-26, 1999
46. Chemistry Department, Ohio State University, Columbus, April 19, 1999
47. Chemistry Department, University of Wisconsin, Madison, April 20, 1999

48. Chemistry Department, University of Chicago, April 21, 1999
49. 24th Informal Conference on Photochemistry, San Juan, Puerto Rico, April 9-14, 2000
50. Symposium on "Chemistry in Extreme Environments" at the 220th National Meeting of the American Chemical Society, Washington D.C., August 20-25, 2000
51. Chemistry Department, University of Richmond, Richmond, VA, September 15, 2000
52. Chemistry Department, University of Massachusetts, Dartmouth, MA, October 4, 2000
53. Chemical Physics After Dark, JILA, University of Colorado, February 27, 2002
54. 25th Informal Conference on Photochemistry, Coral Gables, FL June 2-7, 2002
55. Gordon Research Conference, Atomic and Molecular Interactions, Roger Williams University, July 7-12, 2002
56. Modern Optics and Spectroscopy Seminar Series, Massachusetts Institute of Technology, Cambridge, MA October 22, 2002
57. Chemistry Department, Brandeis University, Waltham, MA February 9, 2003
58. Chemistry Department, University of Oregon, Eugene, OR February 9, 2004
59. Chemistry Department, University of Idaho, Moscow, ID February 10, 2004
60. Symposium on "Intermolecular Interactions and Reactions Involving Ions and Open-Shell Species" at the American Chemical Society Meeting, Anaheim, CA March 31, 2004
61. Chemistry Department and Biochemistry, University of Maryland, May 3, 2004
62. Symposium on "Combustion Chemistry: From Elementary Reactions to Extensive Reaction Mechanisms" at the American Chemical Society Meeting, Philadelphia, PA August 23, 2004
63. Tufts University, Chemistry Department, Medford, MA September 28, 2004
64. Telluride Scientific Research Conference on "Condensed Phase and Gas Phase Vibrational Dynamics," Telluride, CO August 6-13, 2005
65. Chemistry Department, The University of Pennsylvania, Philadelphia, PA, February 2, 2006
66. Symposium on Promises and Challenges in Chemical Dynamics in honor of Richard Bersohn, American Physical Society National Meeting, Baltimore, MD March 13-14, 2006
67. Department of Energy, Office of Basic Energy Sciences 27th Annual Combustion Research Conference, Wintergreen, VA, May 30-June 2, 2006
68. Symposium on Frontiers in Molecular Dynamics: Experiment and Theory, American Chemical Society 232nd National Meeting, San Francisco, September 10-14, 2006
69. Symposium on Chemistry in Extreme Environments, American Chemical Society 232nd National Meeting, San Francisco, September 10-14, 2006
70. Chemistry Department and Chemical Engineering, Shanghai Jiao Tong University, Shanghai, China, April 16, 2007
71. Chemistry Department, Fudan University, Shanghai, China, April 18, 2007
72. Chemistry Department, University Science and Technology, Hefei, China, April 20, 2007
73. Dalian Institute of Chemical Physics, Chinese Academy of Science, Dalian, China, April 23, 2007
74. Chemistry Department, Tsinghua University, Beijing, China April 25, 2007
75. Institute of Chemistry, Chinese Academy of Science, Beijing, China, April 26, 2007
76. Dynamics of Molecular Collisions Meeting, Santa Fe, New Mexico July 8-13th 2007

77. Telluride Research Conference: Condensed Phase and Gas Phase Vibrational Dynamics, Telluride, CO August 6-10, 2007
78. Chemistry Department, Johns Hopkins University, October 23, 2007
79. Chemistry Department, Swarthmore College, October 25, 2007
80. Symposium on Spectroscopic Probes of Chemical Dynamics in Gaseous and Condensed Phase, American Chemical Society Meeting, Philadelphia, PA August 17-21, 2008
81. Department of Chemistry, James Madison University, Harrisonburg, VA, September 5, 2008
82. Department of Chemistry and Biochemistry, University of Missouri, St. Louis, September 8, 2008
83. Department of Energy, Office of Basic Energy Sciences 30th Annual Combustion Research Conference, Warrenton, VA, May 26-29, 2009
84. CRN-IMIP, Laboratories of the National Research Council, Institute for Inorganic Methodologies and Plasmas, Rome, Italy, July 10, 2009
85. 7th International Conference on Tunable Diode Laser Spectroscopy in Zermatt, Switzerland July 13-17, 2009
86. Institute of Chemical Science and Engineering, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, July 17, 2009
87. Symposium on Chemical Reaction Dynamics in Gaseous and Condensed Phases, American Chemical Society 238th National Meeting, Washington D.C. August 16-20, 2009
88. Department of Chemistry, University of Washington, Seattle, October 14, 2009
89. Department of Chemistry and Biochemistry, University of Maryland, November 4, 2009
90. 2nd Workshop on "New Challenges for Theory in Chemical Dynamics," Telluride Science Research Center, Telluride, CO January 3-8, 2010
91. Department of Chemistry, University of North Carolina, Chapel Hill, February 15, 2010
92. American Physical Society National Meeting, Portland OR, March 15-18, 2010
93. Faraday Discussions, Frontiers in Spectroscopy, Basel, Switzerland March 6-8, 2011
94. 3rd Workshop on "New Challenges for Theory in Chemical Dynamics," Telluride Science Research Center, Telluride, CO January, 2012
95. Symposium on Impact of Ultrafast Lasers in Chemical Physics: Advances in Nonlinear Spectroscopies, Light Sources and Applications, American Physical Society National Meeting, Boston MA, February 26 - March 3, 2012
96. Symposium on 35 Years of Molecular Dynamics in honor of F. Fleming Crim, University of Wisconsin, Madison, May 25-26, 2012
97. Department of Energy, Office of Basic Energy Sciences 33th Annual Combustion Research Conference, Potomac, MA, May 29-June 1, 2012
98. Plenary Lecture at the 67th International Symposium on Molecular Spectroscopy, Columbus, Ohio, June 18-22, 2012
99. Workshop on "Spectroscopy and Dynamics on Multiple Potential Energy Surfaces," Telluride Science Research Center, Telluride, CO July 9-13, 2012
100. Plenary Lecture at Stereodynamics 2012 Conference, Paris, France, October 22-26, 2012

101. Session on Strong-Field Ionization and Laser Control at DAMOP Annual Meeting, Quebec City, Quebec, Canada, June 3-7, 2013
102. Multi-Agency Coordination Committee for Combustion Research (MACCCR) 6th Annual Fuel and Combustion Research Review, Arlington, VA Sept 24, 2013
103. 4th Workshop on "New Challenges for Theory in Chemical Dynamics," Telluride Science Research Center, Telluride, CO January 12-17, 2014
104. Mesilla Chemical Dynamics Workshop in honor of Sally Chapman, Mesilla New Mexico, Feb 1-4, 2014
105. American Chemical Society Affiliates Faculty Research Seminar, University of Maryland April 24, 2014
106. California Institute of Technology, Chemical Physics Seminar Series, October 14, 2014
107. Waterloo Chemical Physics Meeting, November 7, 2014
108. Division of Laser Science Symposium, American Physical Society March Meeting, San Antonio, Texas, March 2-6, 2015
109. Dynamics of Molecular Collisions, Asilomar, CA, July 12-17, 2015
110. Department of Chemistry, University of Southern California, September 28, 2015
111. Advances in Quantum Dynamics from Spectroscopy to Reactions Symposium, Pacifichem, International Chemical Congress of Pacific Basin Societies, December 15-20, 2015
112. 5th Workshop on "New Challenges for Theory in Chemical Dynamics," Telluride Science Research Center, Telluride, CO January, 2016
113. Department of Chemistry and Biochemistry, University of Maryland, College Park, MD March 9, 2016
114. Department of Chemistry, Boston University, Boston MA, April 28, 2016
115. Department of Chemistry, Amherst College, Amherst MA, April 29, 2016
116. Telluride Research Science Center, June 2016
117. Telluride Research Science Center, July 2016
118. Stereodynamics 2016, Taipei, Taiwan, November 6-11, 2016
119. Department of Chemistry, University of Texas San Antonio, April 21, 2017
120. APS Division of Atomic, Molecular and Optical Physics Meeting, Sacramento, CA June 5-9, 2017
121. Dynamics of Molecular Collisions, Granlibakken, Tahoe City, California, July 9-14, 2017
122. 6th Workshop on "New Challenges for Theory in Chemical Dynamics," Telluride Science Research Center, Telluride, CO January, 2018
123. Strong Field Chemistry Symposium, ACS National Meeting, Boston, MA August 20, 2018
124. New Spectroscopic Techniques for Astrochemistry, ACS National Meeting, Boston, MA August 22, 2018
125. Department of Chemistry, University of Missouri, Columbia, MO October 12, 2018
126. Modern Optics and Spectroscopy Seminar Series, MIT, October 23, 2018
127. Pacific Conference on Spectroscopy and Dynamics, San Diego, CA January 24-27, 2019
128. HighRus-2019 Conference on High Resolution Spectroscopy, Nizhny Novgorod, Russia, July 1-5, 2019.

129. Dynamics of Molecular Collisions, Big Sky, Montana, July 7-12, 2019

f. Contracts and Grants

Prior research support

1. American Association of University Women, 1993-1994, $25,000
   American Postdoctoral Research Fellowship
2. Henry Luce Foundation, 1994–1999, $380,145 (includes salary and research support)
   Clare Boothe Luce Professorship
3. American Chemical Society Petroleum Research Fund, 1995-1997, $20,000
   "Investigating the reaction dynamics of highly vibrationally excited molecules using state-resolved transient spectroscopy," Amy S. Mullin (PI)
4. National Science Foundation Research Planning Program, 1995-1997, $18,000
   "Prelude to hot chemistry: Preliminary studies on the collisional dynamics of highly vibrationally excited molecules," Amy S. Mullin (PI)
5. Office of Naval Research Young Investigator Award, 1996-2000, $528,000
   "Dynamics of highly excited azabenzenes," Amy S. Mullin (PI)
6. National Science Foundation CAREER Award, 1996-2000, $362,500
   "Dynamics of highly excited hydrocarbons: From supercollisions to super-reactions"
   Amy S. Mullin (PI)
7. Camille Dreyfus Teacher Scholar Award, 1999-2004, $60,000, Amy S. Mullin (PI)
8. National Science Foundation Chemistry Division, 2000-2003, $350,750
   "Dynamics of highly excited hydrocarbons: From Supercollisions to super-reactions"
   Amy S. Mullin (PI)
9. National Science Foundation, Chemistry Division, 2004-2005, $50,000
   "Planning a Collaborative Undergraduate Research Center at Boston University"
   Standish Hartman (PI), Amy S. Mullin (co-PI), Sharon Prado (co-PI), Raymond Turner (co-PI) and John Snyder (co-PI)
10. Department of Energy Basic Energy Sciences, 2003-2007, $439,300
    "Dynamics of activated molecules," Amy S. Mullin (PI)
11. National Science Foundation Chemistry Division, 2003-2007, $417,600
    "Dynamics of highly excited hydrocarbons: From supercollisions to super-reactions"
    Amy S. Mullin (PI)
12. Department of Energy Basic Energy Sciences, 2007-2010, $506,400
    "Dynamics of Activated Molecules"
    Amy S. Mullin (PI)
13. Arnold and Mabel Beckman Foundation, 2007-2010, $115,800
    "Beckman Scholars Program at the University of Maryland"
    Michael Doyle (PI), Amy S. Mullin (co-PI) and John Fourkas (co-PI)
    Supports research for 6 undergraduate students in the Department

14. Ellen Williams Distinguished Postdoctoral Fellowship, University of Maryland NanoCenter, for research in time-domain nanoscience, 2010-2012, $62,484
15. Arnold and Mabel Beckman Foundation, 2011-2014 $115,800
    "Beckman Scholars Program at the University of Maryland"
    Michael Doyle (PI), Amy S. Mullin (co-PI) and John Fourkas (co-PI)
    Supports research for 6 undergraduate students in the Department
16. National Science Foundation, Transforming Undergraduate Education in Science, Phase 1, 2011-2014, $199,815
    "Transforming Advanced Chemistry Laboratories to Prepare Students for Challenges in Nanotechnology, Energy and the Environment," Daniel Falvey (PI), Amy Mullin (co-PI), Bonnie Dixon (co-PI) and Neil Blough(co-PI)
17. Department of Energy, Basic Energy Sciences, 2010-2016, $709,615
    "Dynamics of Activated Molecules" Amy S. Mullin (PI)
18. National Science Foundation, Division of Chemistry, 2011-2015 $571,000
    "Spinning Molecules into Reactive States with an Optical Centrifuge"
    Amy S. Mullin (PI)
19. NASA Astrobiology Program, 2013-2017, $1,341,895 total ($479,464 for Mullin)
    A Collaborative Experimental-Theoretical Investigation of Key Pathways in Atmospheric Photochemistry Related to the Origin of Sulfur Mass-Independent Fractionation, Millard Alexander (PI), Amy S. Mullin (co-PI), Hua Guo (co-PI) and Bill Poirier (co-PI)
20. Arnold and Mabel Beckman Foundation, 2014-2017, $156,000
    "Beckman Scholars Program at the University of Maryland"
    Janice Reutt-Robey (PI), Amy S. Mullin (co-PI), Michael Doyle (co-PI) and John Fourkas (co-PI)
    Supports research for 6 undergraduate students in the Department

Current research support

21. NSF SNM Proposal Titled "SNM: Three-Color Photolithography for Scalable, Large-Area, Low-Cost Nanomanufacturing" $1.5 million, 1/1/2015-12/31/2018 ($431,843 for Mullin); PI: John Fourkas, Co-PIs: Amy S. Mullin, Daniel E. Falvey and Gottlieb Oehrlein
22. NSF Chemistry, 2018-2021, $500,000 "Dynamics of Molecules in Extreme Rotational States Made in an Optical Centrifuge" A. S. Mullin (PI)

Pending proposals

4. Service

Symposia and Conferences Organized

1. Symposium on Highly Excited States: Relaxation, Reactions and Structure" at the 212th National Meeting of the American Chemical Society, co-organized with George C. Schatz, Orlando, FL August 25-29, 1996

2. Symposium on Molecules in Strong Optical Fields, 38th Annual Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physics Society, in conjunction with the Division of Atomic and Molecular Physics of the Canadian Association of Physics, Calgary, Alberta, Canada, June 8, 2007
3. Program Committee, 40 Years of Ion Chemistry, University of Colorado, Boulder, CO, June 13, 2009
4. Program Committee, Quantum Africa 4, April 2016-2017, held in Tunis 2018
5. Co-Organizer (with Wendell T. Hill, III), American Physical Society Mid-Atlantic Section Meeting, University of Maryland, College Park, November 9-10, 2018

Alumni Relations and Development Activities

1. Meet Your Terp Neighbor Events, Potomac, MD, August 24, 2008 and November 13, 2011
2. Collaborated with Dr. Erik B. Young (University of Maryland Biochemistry B.S. 1974, M.D. 1979) in making laboratory measurements on volatile organic compounds in output of corona discharge air purifiers in preparation for FDA approval and patent applications, Spring 2009
3. Organized and hosted professional development seminar for graduate students and postdoctoral fellows by Dr. Patrizia Barone (University of Maryland Chemistry B.S. 1978) "You – the Brand… A Successful Career in Chemistry," Department of Chemistry and Biochemistry, June 3, 2009

Campus Service (D=Department, C=College, U=University)

1994 – 1995 Undergraduate Affairs Committee (D)
Faculty Search Committee (D)
Graduate Affairs Committee (D)
Organizing Committee for the Pathways Program (U)

1995 – 1996 Faculty Search Committee (D)
Graduate Affairs Committee (D)
Organizing Committee for the Pathways Program (U)

1996 – 1997 Chair, Physical Chemistry Seminar Series (D)
Graduate Affairs Committee (D)
Organizing Committee for the Pathways Program (U)
Clare Boothe Luce Graduate Fellowship Selection Committee (U)

1997 – 1998 Chair, Physical Chemistry Seminar Series (D)
Natural Science Curriculum Committee, College of Arts and Science (C)
Organizing Committee for the Pathways Program (U)
Trustee Scholar Selection Committee (U)

Changing Landscape of Higher Education, Committee for Re-accreditation (U)

1998 – 1999 Natural Science Curriculum Committee (C)
Organizing Committee for the Pathways Program (U)
Changing Landscape of Higher Education, Committee for Re-accreditation (U)
Clare Boothe Luce Graduate Fellowship Selection Committee (U)

1999 – 2000 Organizing Committee for the Pathways Program (U)
Boston University Faculty-Student Conversazione (U)

2000 – 2001 Chair's Advisory Committee (D)
Faculty Search Committee (D)
Chair, Space Renovation Committee (D)
Organizing Committee for the Pathways Program (U)
Undergraduate Research Opportunities Program Faculty Advisory Panel (U)

2001 – 2002 Chair, Space Renovation Committee (D)
Departmental Colloquium Committee (D)
Organizer and Chair, Faculty Research Lunch Seminar Series (D)
Undergraduate Research Opportunities Program Faculty Advisory Panel (U)
University Laser Safety Committee (U)

2002 – 2003 Chair, Graduate Admissions Committee (D)
Faculty Search Committee (D)
Departmental Colloquium Committee (D)
Organizer and Chair, Faculty Research Lunch Seminar Series (D)
Undergraduate Research Opportunities Program Faculty Advisory Panel (U)
Clare Boothe Luce Graduate Fellowship Selection Committee (U)
University Laser Safety Committee (U)

2003 – 2004 Chair, Graduate Admissions Committee (D)
Organizer and Chair, Faculty Research Lunch Seminar Series (D)
Undergraduate Laboratory Renovation Committee (D)
University Tenure and Promotions Committee (U)

2004 – 2005 Organizer and Chair, Faculty Research Lunch Seminar Series (D)
Clare Boothe Luce Graduate Fellowship Selection Committee (U)

2005 – 2006 Faculty Search Committee, Organic Chemistry (D)

Faculty Mentoring Committee (D)
Bioscience Day Poster Judge (C)
Task Force for Chemistry 4 Curriculum Development (D)
Organizer and host of Visit Maryland Day dinner to recruit new graduate students in Chemistry and Biochemistry (D)

2006 – 2007 Mentoring Committee for Sohelia Ibrahim (D)
Faculty Advisory Committee (2006-2008) (D)
Graduate Affairs Committee (2006-2009) (D)
Search Committee for Undergraduate Stockroom Manager (D)
Organizer "Interdisciplinary Problems in Chemistry and Physics" Seminars (D)
Search Committee for Lecturers in Chemistry (D)
Acting Associate Director, Chemical Physics Program (U)
Organizer and host of Visit Maryland Day dinner to recruit new graduate students in Chemistry and Biochemistry (D)

2007 – 2008 Mentoring Committee for Sohelia Ibrahim (D)
Faculty Advisory Committee (2006-2008) (D)
Graduate Program Committee (2006-2009) (D)
Review Committee to Reappoint Departmental Chair (C)
Discussion Leader at Departmental Retreat (D)
Beckman Scholar Program Committee (D)
Organizer and host of Visit Maryland Day dinner to recruit new graduate students in Chemistry and Biochemistry (D)

2008 – 2009 Mentoring Committee for Sohelia Ibrahim (D)
Graduate Program Committee (2006-2009) (D)
Graduate Awards Subcommittee, Chair (D)
Beckman Scholar Program Committee (D)
Organizer and host of Visit Maryland Day dinner to recruit new graduate students in Chemistry and Biochemistry (D)

2009 – 2010 Graduate Awards Subcommittee, Chair (D)
Mentoring Committee for Sohelia Ibrahim (D)
Beckman Scholar Program Committee (D)
Search Committee for Faculty Member in Theoretical Chemistry (D)
College of Chemical and Life Sciences Faculty Advisory Committee (C)
Banneker Key Selection Committee (U)

2010 – 2011 Curriculum Committee (D)
Chemistry Graduate Affairs Committee (D)
Beckman Scholar Program Committee (D)
Lecturer Search Committee (D)
Faculty Search Committee in Chemical Engineering (U)
Natural Science Faculty Board for General Education (U)
Mentoring Committee for Prof. Zhihong Nie (D)
Mentoring Committee for Dr. Bonnie Dixon (D)

2011 – 2012 College APT Committee, co-Chair (C)
Natural Science Faculty Board for General Education (U)
Research and Support Award Selection Committee (U)
Commission to Investigate Safety in the Undergraduate Laboratories (D)
Chemistry Graduate Affairs Committee (D)
Beckman Scholar Program Committee (D)
Curriculum Committee (D)
Lecturer Search Committee (D)
Undergraduate Awards and Honors Subcommittee (D)
Chair, Mentoring Committee for Prof. Zhihong Nie (D)
Chair, Mentoring Committee for Dr. Bonnie Dixon (D)
Mentoring Committee for Dr. Earle Stone (D)

2012 – 2013 College APT Committee, Chair (C)
Natural Science Faculty Board for General Education (U)
Research and Support Award Selection Committee (U)
Merit, Pay and Awards Committee (D)
Safety Awareness Subcommittee (D)
Chemistry Graduate Affairs Committee (D)
Beckman Scholar Program Committee (D)
Curriculum Committee (D)
Chair, Mentoring Committee for Prof. Zhihong Nie (D)
Chair, Mentoring Committee for Dr. Bonnie Dixon (D)
Mentoring Committee for Dr. Earle Stone (D)

2013 – 2014 Chair, Merit Pay and Awards Committee (D)
Chemistry Graduate Affairs Committee (D)
Beckman Scholar Program Committee (D)
Faculty Advisory Committee (D)
Organizer, ANE/PhysChem/ChemPhys Seminars (D)

Organizer, 2nd year Physical Chemistry Graduate Student Seminars (D)
Mentor for Prof. Zhihong Nie (D)
Chair, Mentoring Committee for Dr. Bonnie Dixon (D)
Mentoring Committee for Dr. Earle Stone (D)

2014 – 2015 Chair, Merit Pay and Awards Committee (D)
Chemistry Graduate Affairs Committee (D)
Graduate Admissions Committee (D)
Graduate Awards Subcommittee (D)
Safety Awareness Subcommittee (D)
Beckman Scholar Program Director (D)
Organizer, ANE/PhysChem/ChemPhys Seminars
Organizer, 2nd year Physical Chemistry Graduate Student Seminars
Mentor for Prof. Zhihong Nie (D)
Chair, Mentoring Committee for Dr. Bonnie Dixon (D)
Mentoring Committee for Dr. Earle Stone (D)

2015 – 2016 APT Appeals Committee (U)
Chemistry Graduate Admissions Committee (D)
Safety Awareness Committee (D)
Beckman Scholar Program Director (D)
Search Committee for Facilities Manager (D)
Mentor for Prof. Zhihong Nie (D)
ADVANCE Professor (U)

2016 – 2017 Joint Provost University Senate Diversity Task Force (U)
Restricted Research Subcommittee, University Research Council (U)
ADVANCE Professor (U)
Graduate Admissions Committee (D)
Beckman Scholar Program Director (D)
Wing One Planning Task Force (D)
Chemistry/Biochemistry Ad Hoc Committee (C)
Search Committee for Chair of Computer Science (C)
Internal Review Subcommittee for Zhihong Nie (D)
Mentor for Dr. Elizabeth Griffith, Instructor (D)
Facilities, Space and Resources Committee (D)
Search Committee for Grant Coordinator (D)

2017 – 2018 ADVANCE Professor (U)

Director of Chemistry Graduate Program (U, D)
Chemistry Graduate Awards Subcommittee (D)
Wing One Planning Task Force (D)
TerpAllies Program (U)

2018 – 2019 ADVANCE Professor (U)
Associate Chair for Graduate Studies (D)
TerpAllies Program (U)

Teaching, Mentoring and Advising

a. Courses taught

Fall 1994	Chemistry 551, Chemical Kinetics and Dynamics
Fall 1995	Chemistry 351, Physical Chemistry I
Spring 1996	Chemistry 551, Chemical Kinetics and Dynamics
Fall 1996	Chemistry 351, Physical Chemistry I
Spring 1996	Chemistry 102 and 110, General Chemistry II
Fall 1997	Chemistry 101, General Chemistry
Spring 1998	Chemistry 352, Physical Chemistry II
Fall 1998	Chemistry 551, Chemical Kinetics and Dynamics
Spring 1999	Chemistry 352, Physical Chemistry II
Fall 1999	Chemistry 751, Quantum Dynamics of Excited States
Spring 2000	Chemistry 352, Physical Chemistry II
Fall 2000	Chemistry 651, Molecular Quantum Mechanics I
Fall 2001	Chemistry 651, Molecular Quantum Mechanics I
Fall 2002	Chemistry 651, Molecular Quantum Mechanics I
Spring 2003	Chemistry 458/658, Chemical Kinetics and Dynamics
Fall 2003	Chemistry 109, General and Quantitative Analytical Chemistry I
Fall 2003	Chemistry 801, Graduate Research Methods and Scholarly Writing
Spring 2004	Chemistry 458/658, Chemical Kinetics and Dynamics
Fall 2004	Chemistry 109, General and Quantitative Analytical Chemistry I
Fall 2004	Chemistry 801, Graduate Research Methods and Scholarly Writing
Spring 2005	Chemistry 458/658, Chemical Kinetics and Dynamics
Fall 2005	Chemistry 482, Physical Chemistry II
Fall 2006	Chemistry 482, Physical Chemistry II
Spring 2007	Chemistry 682, Chemical Kinetics and Dynamics
Fall 2007	Chemistry 690, Quantum Chemistry I
Spring 2008	Review of laboratory curricula for Chemistry 483 and 484 Labs
Fall 2008	Teaching release through a Semester Award from the General Research Board
Fall 2008	Chemistry 611, Professional Skills for New Graduate Students

Spring 2009	Chemistry 682, Chemical Kinetics and Dynamics
Fall 2009	Chemistry 482, Physical Chemistry II
Spring 2010	Chemistry 276, General Chemistry IV for Majors
Fall 2010	Chemistry 131, General Chemistry I
Spring 2011	Chemistry 689, Interfacing Instruments with LabVIEW
Fall 2011	Chemistry 146, General Chemistry I for Majors
Spring 2012	Chemistry 276, General Chemistry IV for Majors
Fall 2012	Chemistry 689, Instrument Interfacing with LabVIEW
Spring 2013	Chemistry 276, General Chemistry IV for Majors
Fall 2013	Chemistry 481, Physical Chemistry I
Spring 2014	Chemistry 276, General Chemistry IV for Majors
Fall 2014	Chemistry 481, Physical Chemistry I
Spring 2015	Chemistry 688M, Instrument Interfacing with LabVIEW
Fall 2015	Chemistry 690, Quantum Chemistry I
Fall 2016	Chemistry 690, Quantum Chemistry I
Spring 2017	Chemistry 682, Kinetics and Dynamics
Fall 2017	Chemistry 690, Quantum Chemistry I
Fall 2017	Chemistry 611, Professional Skills for New Graduate Students
Winter 2018	Chemistry 612, Scientific Presentations
Spring 2018	Chemistry 682, Kinetics and Dynamics
Fall 2018	Chemistry 690, Quantum Chemistry I

b. Curriculum Development

1. Development of Chemistry 271 General Chemistry and Energetics in coordination with Chemistry 272 General Bio-analytical Chemistry Laboratory, 2005
2. Curricula review for Chemistry 483 and 484 Labs, 2008
3. Development of new p-chemistry lab modules in coordination with NSF TUES grant 2011 – 2014

c. Teaching Awards

1. Outstanding Mentor, Siemens Westinghouse High School Science Competition, 2001
2. Creative Educator Award, College of Computer, Mathematical and Natural Science, University of Maryland, 2011

d. Advising Activities

1. Faculty advisor for undergraduate majors in Chemistry, Boston University, 1994-2005 (~15 per year)
2. Faculty advisor for incoming graduate students in Chemistry, University of Maryland, 2006 – 2011 (2-15 per year)
3. Faculty advisor for Beckman Scholars, University of Maryland, 2007 – 2017

4. Faculty mentor on committee for Dr. Sohelia Ebrahimian, 2006 – 2010
4. Chair of mentoring committee for Dr. Bonnie Dixon, 2010 – 2016
4. Chair of mentoring committee for Prof. Zhihong Nie, 2011 – 2017
5. Mentoring committee for Dr. Earl Stone, 2011 – 2015
6. Mentor for Dr. Elizabeth Griffith (2016 – 2017)
7. Internal review committee for Prof. Zhihong Nie (2016 – 2017)

e. Advising: Research Direction

Undergraduates	*Time period*	*Honors and subsequent institution*
Cynthia Polsky	1994 – 1995	University of Arizona
Marc Kennedy	1995 – 1996	US Naval Academy
Andrew Lemoff	1996 – 1999	University of California, Berkeley
Amy Schneider	Summer 1998	Wesleyan University
Craig Rossi	1998 – 1999	
Rebecca Sansom	1998 – 2001	Goldwater Scholar, Harvard University Faculty at Brigham Young University
Lawrence Shum	1999 – 2000	
Kathryn Werner	1999 – 2000	Temple University
Jonathan Shapiro	Summer 2000	Boston University Medical School
Joshua Neudel	2000 – 2001	Teaching chemistry at Newton High School
Megan Stanifer	2002 – 2003	Brown University
Andrew Kim	2002 – 2003	
Elisa Miller	2003 – 2005	Beckman Scholar; University of Colorado
Alison Werner	2003 – 2004	
Mitchell Hayes	2003 – 2004	
Nicholas Bennett	2004 – 2005	Princeton University
Michael Nagle	2004 – 2005	
Donald Wilhelm	2006	
Lina Aybinder	2006	Rollinson Fellow
Rachel Bell	2007	Rollinson Fellow
Felix Lin	2007 – 2008	Honors Thesis student
Sam Teitelbaum	2007 – 2010	Beckman Scholar, MIT PhD program
Kailin Hsu	2008	Banneker-Key Scholar, UMd Medical School
Matthew Smarte	2009 – 2012	Beckman Scholar, Caltech PhD program
Mack Bell	2010 – 2011	Medical School
Wendell Walters	2010 – 2012	Purdue University PhD program
Akshay Gandhi	2010 – 2011	Science Education Masters Program
Jill Cleveland	2012 – 2013	
Alice Kunin	2012 – 2014	University of California, Berkeley

Lindsay Michocki	2012 – 2015	University of Michigan
Christopher Bognar	2012 – 2015	US Naval Academy
Grace Benson	2013 – 2015	High School Chemistry Teacher
Henry Danchi	2014 – 2016	Medical School
David Burns	2014 – 2016	Johns Hopkins University
Andrew Pommersheim	2016 – 2017	

Masters Students

Emily Wilson	1996 – 1997	Smithsonian Institution
Maosen Fang	2000 – 2001	Boston University
Katya Korobkova	2000 – 2001	University of Chicago
Liat Murat	2002 – 2004	
Allison Robinson	2008 – 2010	
Jun-Mei Chao	2008 – 2010	
Christine McCarl	2012 – 2014	

PhD Students

Michael Elioff (1996 – 2001) PhD 2001

Dissertation title: Collisional Dynamics of Highly Vibrationally Excited Molecules

Postdoctoral Fellow, Sandia National Laboratory 2001-2003

Current Position: Assistant Professor, Millersville University

Ziman Li (2000 – 2005) PhD 2005

Dissertation title: Dynamics of Collisional Quenching and Deuterium Abstraction Reactions of Vibrationally Hot Molecules

Postdoctoral Fellow, Aerodyne Research, MA 2005-2006

Current Position: Staff Scientist, Armstrong Pharmaceuticals, Quincy, MA

Qingnan (Philip) Liu (2004 – 2008) PhD 2008

Dissertation title: Collisional Quenching Dynamics and Reactivity of Highly Vibrationally Excited Molecules

Subsequent position: Postdoctoral Fellow, Texas A&M University, Prof. Simon North; Currently at NIST Gaithersburg

Juan Du (2004 – 2010) PhD 2010

Dissertation title: State-resolved Quenching Dynamics in Collisions of Vibrationally Excited Molecules

Subsequent position: Postdoctoral Fellow at the State University of New York (SUNY) Albany with Prof. Lei Zhu

Geraldine Echebiri (2009 – 2014) PhD 2014

Dissertation title: Quenching dynamics of high energy molecules with HCl

Subsequent position: Research associate, University of Maryland

Matthew J. Murray (2012 – 2017) PhD 2017

Dissertation title: Collision dynamics of highly oriented super rotor molecules from an optical centrifuge

Subsequent position: Postdoctoral Research Fellow, Naval Research Laboratories

Hannah M. Ogden	2014 – present
Paul B. Diss	2015 – present
Tara J. Michael	2017 – present
Christopher Lukowski	2017 – present
Madison McIlroy	2018 – present

Postdoctoral Fellows

Dr. Mark C. Wall	1995 – 1998	Ph.D. University of Nevada, Reno Staff Scientist, MIT Chemistry Department
Dr. Margaret Fraelich	1996 – 1998	Ph.D University of Texas, Austin Research Scientist, Fresnel Technologies
Ziman Li	2005 – 2006	Ph.D. Boston University Research Scientist, Aerodyne Research
Daniel K. Havey	2006 – 2008	Ph.D. University of Colorado, Boulder NRC Postdoctoral Fellow, NIST, Gaithersburg Assistant Professor, James Madison University
Liwei Yuan	2006 – 2011	Ph.D. Dalian Institute, Chinese Academy of Sciences Research Scientist, FDA
Nicholas Sassin	2008 – 2010	PhD University of Nevada, Reno Department of Defense Specialist
Carlos Toro	2010 – 2014	PhD University of Central Florida ACS Publications, Managing Editor
Qingnan Liu	2011– 2013	PhD University of Maryland Postdoctoral Fellow, Texas A&M
Evan Collins	2019 – present	PhD Johns Hopkins University

Visiting Professors

Prof. Brian Stewart	1997 – 1998	Dept of Physics, Wesleyan University
Prof. Jeunghee Park	1999 – 2000	Dept of Chemistry, Korea University
Prof. Shikura Hseih	2006 – 2007	Smith College, Trinity College
Prof. Jane Van Doren	2007 – 2008	College of the Holy Cross

High School Interns in Physics and Chemistry

Jamie Lui	Summer 2000	
Kirsten Frieda	Summer 2001	Harvard University, Stanford Univ, Caltech

		Siemens Westinghouse Semifinalist
Jonathan Fritz	Summer 2004	Washington University, St. Louis
Sophia Jarful	Summer 2008	Summer Research Intern