

Richard Alan Loomis
Associate Professor of Chemistry
Washington University in Saint Louis

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Professional History:

- 2012-present: Core Member of the Institute for Materials Science and Engineering Washington University, Saint Louis, MO.
- 2010-present: Director of Graduate Studies, Department of Chemistry, Washington University, Saint Louis, MO.
- 2010-2011: Associate Director of the Center for Materials Innovation, Washington University, Saint Louis, MO.
- 2005-present: Associative Professor of Chemistry, Washington University, Saint Louis, MO.
- 2003-present: Member Center for Materials Innovation, Washington University, Saint Louis, MO.
Nanostructured Materials Thrust Area; Chair, 2006-2010.
- 1998-2005: Assistant Professor of Chemistry, Washington University, Saint Louis, MO.

Education:

- 1996-1998: National Research Council Postdoctoral Fellow, National Institute of Standards and Technology, University of Colorado, Boulder, CO. Advisor: Stephen R. Leone.
- 1996: Postdoctoral Fellow, University of Colorado, Boulder, CO. Advisor: Stephen R. Leone.
- 1989-1995: Ph.D. in Chemistry, University of Pennsylvania, Philadelphia, PA. Advisor: Marsha I. Lester.
- 1985-1989: B.S. with Honors, Dickinson College, Carlisle, PA. Advisor: John W. Luetzelschwab.

Research Interests:

Physical chemistry, chemical reaction dynamics, chemical kinetics, and molecular spectroscopy especially as these fields pertain to investigating intermolecular interactions and optical properties of nanostructured materials.

While the push toward faster and more efficient electronic circuitry relies on the ability to synthesize semiconductor structures on nanometer scales, the optical and electronic properties of these nanostructures are interesting in their own right. We are investigating quantum effects that arise from the reduced dimensionality of semiconductor nanodots and nanowires using absorption and fluorescence spectroscopy. Our group is also developing novel optical microscopy experiments that will enable us to use multiple femtosecond lasers to excite and monitor the dynamics of excitons in and along single nanostructures with temporal and spatial resolution.

The techniques implemented to investigate intermolecular interactions include femtosecond to nanosecond time scale linear and non-linear laser spectroscopy, quantum-mechanical wave packet dynamics and coherent control, and intramolecular and intermolecular energy redistribution. Molecular beam and supersonic expansion techniques are used to lower the internal energies of molecules and to form weakly bound pre-reactive complexes. These complexes represent the launching pad for the subsequent intermolecular dynamics experiments.

Awards:

- Washington University, Arts & Sciences David Hadas Teaching Award (2012).
- Washington University, Congress of the South Forty, Last Lecture (2012).
- Washington University, Student Life, Best Professor (2010).
- Washington University, Freshman Class Council – Outstanding Professor of the Year Award (2010).
- Washington University, Council of Students of Arts & Sciences Faculty Award (2008, 2004, 2000).
- Fellow of the Kavli Frontiers of Science (2008).
- Washington University, Graduate Student Senate – Outstanding Faculty Mentor Award (2008).
- Washington University, Graduate Student Senate – Special Recognition for Excellence in Mentoring (2007, 2001).
- National Science Foundation – CAREER Award (2004).
- David and Lucile Packard Fellowship in Science and Engineering (2001).

Research Corporation, Research Innovation Awardee (1999).
Camille and Henry Dreyfus New Faculty Awardee (1998).
National Research Council Postdoctoral Fellowship, NIST and University of Colorado (1996-8).
Chairman's Teaching Award, Department of Physics, University of Pennsylvania (1990).
Magna Cum Laude, Dickinson College (1989).
Horace Elton Rogers Science Award, for "Most Promising Science Student", Dickinson College (1988).
Dana Fellowship, "Young Researcher's Grant", Dickinson College (1988).
Charles Zugg Memorial Scholarship, for "Academic Excellence", Dickinson College (1986).

Research Grants Received:

NSF-DMR (#0906966; \$356,048 – 7/1/09 to 6/30/13), “Experimental Interrogation of Exciton Dynamics within One-Dimensional Semiconductor Quantum Materials.” (*Principal Investigator*)
NSF-CHE (#0346745; \$537,665 – 3/1/04 to 2/28/11), “Career: Experimental Investigation of the Dependence of Intermolecular Dynamics on Molecular Orientation.” (*Principal Investigator*)
David and Lucile Packard Fellowship in Science and Engineering (#2001-18985; \$625,000 – 10/1/01 to 9/30/08), “How Do Molecules React: Determining the Pathways of Radical-Molecule Bimolecular Reactions.” (*Principal Investigator*)
American Chemical Society – Petroleum Research Fund Series G (#36990-G 6; \$25,000 – 9/1/01 to 8/31/03), “Time-resolved Quantum-mechanical Studies of Photo-initiated Bimolecular Reaction Dynamics.” (*Principal Investigator*)
Research Corporation – Research Innovation Award (#RI0243; \$35,000 – 1/1/99 – 1/1/03), “Probing and Controlling Ultrafast Radical-Molecule Bimolecular Reaction Dynamics Using Femtosecond Pump-Probe and Optical Pulse Shaping Techniques.” (*Principal Investigator*)
Camille and Henry Dreyfus Foundation – New Faculty Award (#NF-98-053; \$25,000 – 9/1/98 to 8/31/00), “Probing and Controlling Ultrafast Radical-Molecule Bimolecular Reaction Dynamics.” (*Principal Investigator*)

Undergraduate Student Research Advisees:

Kevin K. Maddox (A.B. Washington University, 2000); Present position unknown.
Andrew C. Crowther (A.B. Washington University, 2002); NSF Predoctoral Fellow 2002 – Ph.D. with F.F. Crim at the University of Wisconsin, Madison, 2008; currently a postdoc with L.E. Brus at Columbia Univ.
David B. Strasfeld (A.B. Washington University, 2004); Ph.D. with M. Zanni at the University of Wisconsin, Madison, 2009; currently a postdoc with M.G. Bawendi at MIT.
Jeffrey R. Lancaster (A.B. Washington University, 2005); Currently, a graduate student with N.J. Turro at Columbia University.
Elizabeth J. Fesser (A.B. Washington University, 2006); Currently, a graduate student at University of Illinois.
Lauren E. Buchanan (A.B. Washington University, 2008); NSF Predoctoral Fellow 2008 – Currently, graduate student with M. Zanni at the University of Wisconsin, Madison).
Joseph Brown (A.B. Washington University, 2008); Currently, student at Northwestern University School of Medicine).
John Cheairs (A.B. Washington University, 2008); Currently, a graduate student at University of Kentucky.
Jesse G. McDaniel (A.B. Washington University, 2008); Currently, a graduate student with J.R. Schmidt at the University of Wisconsin, Madison.
Michael A. Love, Jr. (A.B. Morehouse College, May 2009); Currently in medical school.
Sarah Rajaram (A.B. Washington University, 2010); currently a Ph.D. student with N. Trivedi at The Ohio State University.
Caryn K. Rubanovich (A.B. Washington University, 2013).
Lindsey K. Steinberg (A.B. Washington University, May 2013); Currently, a student at Washington University in Saint Louis Medical School.
Robert A. Burnett (A.B. Washington University, May 2013); Currently, an intern at the NIH Research Center.
Marilee Fisher (A.B. Washington University, May 2013).
Benjamin S. Hoener (A.B. Washington University, May 2013); Currently, a graduate student at Rice University.
Brian C. Lynch (A.B. Washington University, May 2013).
Max B. Wasserman (A.B. Washington University, May 2013).
Ethan Kahn (A.B. Washington University, expected May 2014).

Washington University Undergraduate Chemistry Major Advisees:

Neal Burton (A.B., 2001)
John T. Russell (A.B., 2002)
Jennifer Schwartz (A.B., 2002)
Beverly R. Chen (A.B., 2003)
Erin A. Geordi (A.B., 2003)
Brian P. Rajca (A.B., 2003)
Kathleen M. Antony (A.B., 2004)
Robert D. Cooper (A.B., 2004)
Bryce K. Fukunaga (A.B., 2004)
Navandra H. Gunawardena (A.B., A.M., 2004)
Kevin Mayo (A.B., 2004)
Jeremy O'Brien (A.B., 2004)
Laura A. Richards (A.B., 2004)
Corinna J. Yu (A.B., 2004)
Joshua Zwickl (A.B., 2004)
Sushant Govindan (A.B., 2006)
Emily E. Nuse (A.B., 2006)
Jane Ratner (A.B., 2007)
Jill Savla (A.B., 2007)
Kristen Voss (A.B., 2007)
Joseph Brown (A.B., 2008)
Lauren E. Buchanan (A.B., 2008)
Lonia R. Friedlander (A.B., 2008)
Myrtle M. Karam (A.B., 2010)

Jesse G. McDaniel (A.B., 2008)
Daniel R. Tilden (A.B., 2008)
Musa R. Abdelaziz (A.B., 2009)
Michael A. Bevilacqua (A.B., 2009)
Stephanie Brosius (A.B., 2009)
Christian A. Koziatek (A.B., 2009)
Nathania W. Hau (A.B., expected 2010)
Aaron L. Hecht (A.B., expected 2010)
Lucy Liu (A.B., expected 2010)
Lai Xue (A.B., expected 2010)
Harry J. Alper (A.B., expected 2011)
Zachary Buchbinder (A.B., expected 2011)
Hiu Y. Lam (A.B., expected 2012)
Brenden McDearmon (A.B., expected 2012)
Harris U. Onugha (A.B., expected 2012)
Robert M. Richler (A.B., expected 2012)
Gregory M. Schwartz (A.B., expected 2012)
Diana D. Shen (A.B., expected 2012)
Yue Shi (A.B., expected 2012)
Kurt W. Stahlfeld (A.B., expected 2012)
Brian C. Lynch (A.B., expected 2013)
Lindsey K. Steinberg (A.B., expected 2013)
Phillip S. Azanov (A.B., expected 2014)

Graduate Student Thesis Advisees:

Matthew D. Bradke (A.M., Washington University, 2001); currently a Senior Chemist with the Arkansas Department of Health, Little Rock, AR.
David S. Boucher (Ph.D., Washington University, 2006); currently an assistant professor at the College of Charleston, Charleston, SC.
Joshua P. Darr (Ph.D., Washington University, 2006); currently an assistant professor at the University of Nebraska, Omaha, NB.
John J. Glennon (Ph.D., Washington University, 2007); currently a Senior Staff Scientist with Lockheed Martin Coherent Technologies, Louisville, CO.
Kenneth W. Hartman (A.M., 2007); currently working for MO Department of Corrections.
Virginia L. Wayman (Ph.D., Washington University, 2012); currently an analyzer engineer with ExxonMobil, Baytown, TX.
Jessica Hoy (Ph.D., Washington University, 2013); currently a postdoctoral fellow at Brookhaven National Laboratory.
Jeremy T. Buckingham (A.M., 2009); currently working with Dr. Pepper in St. Louis, MO.
Ashley L. Reinitz (A.M., Washington University, 2010)
Kenny Buyle (A.M., Washington University, 2011)
Camille Makarem (Ph.D. student, 2009-present)
W. Matthew Sanderson (Ph.D. student, 2011-present)
Luis Mendoza (Ph.D. student, 2012-present)
Brian Wieliczka (Ph.D. student, 2012-present)

Postdoctoral Fellows:

Dr. Jeanette A. Fiss (Ph.D., University of Illinois – Chicago, 2000), 11/01/00-10/31/01; present position unknown.
Dr. Paul R. Winter (Ph.D., University of Colorado, 1999), 07/01/02-11/01/02; currently a Senior Chemist with Chemir Analytical Services, St. Louis, MO.
Dr. Bailin Zhang (Ph.D., Dalian Institute of Chemical Physics, 2002), 02/11/03-07/01/03; currently a postdoctoral fellow at Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan.
Dr. Kevin Raffael (Ph.D., Exeter – Exeter, U.K., 2003), 10/01/06-7/15/07.

Dr. Todd D. Jaeger (Ph.D., University of Georgia, 2004), 6/15/07-2/23/08; currently the North American Research Market Manager for CVI Melles Griot, Springfield, MO.

Dr. Jie Wei (Ph.D., Anhui Institute of Optics and Fine Mechanics, CAS), 7/01/10-6/01/12; currently a staff scientist in Earth & Planetary Sciences at Washington University.

Recent Collaborators:

Robert E. Blankenship (Wash. U.); *William E. Buhro* (Wash. U.); *Viktor Gruev* (Wash. U.); *Sophia E. Hayes* (Wash. U.); *Han Htoon* (CINT, LANL); *Victor I. Klimov* (CINT, LANL); *Anne B. McCoy* (The Ohio State Univ.); *David H. Parker* (Radboud Univ. Nijmegen).

Teaching Experience at Washington University:

Freshman Seminar in Chemical Sciences, Chem 181 – a freshman-level seminar course with 30 students, (Fall, 2012).

Physical Properties of Quantum Nanostructures, Chem 543 – a graduate-level lecture course with 5 students, (Spring, 2012).

General Chemistry, Chem 111A – a freshman-level lecture course with 250-340 students in my sections and 600-840 students overall, (Fall, 2000, 04, 08, 09, 10, 11).

Physical Chemistry I, Chem 401 – a junior-level lecture course required for chemistry majors with ≈60 students, (Fall, 2001, 02, 06, 07).

Molecular Spectroscopy, Chem 584 – graduate level course with 4-16 students, (Spring, 2006, 08, 10).

Special Topics in Inorganic Chemistry, Chem 542 – a graduate-level lecture course with 17 students, including students from Engineering and Physics, (Fall, 2010).

Special Topics in Physical Chemistry: Modern Spectroscopy, Chem 580 – graduate level course with 14 students, (Spring, 2005).

Instrumental Methods: Physical Chemistry, Chem 445 – a junior/senior-level laboratory course with 19 students, (Spring, 2004).

Quantum Chemistry, Chem 422 – a senior-level lecture course that was an elective and required for honors with 25 & 50 students, (Fall, 1999 and Spring, 2001).

Special Topics in Physical Chemistry: Recent Advances in Probing Reaction Dynamics, Chem 580 – a graduate-level lecture course with 5 students, (Fall, 1998).

Washington University Service and Committee Activities:

Washington University Undergraduate Council (2012-).

Washington University Arts & Sciences Professor of the Practice Selection Committee, (2011-14).

Washington University Arts & Sciences Faculty Council, (2006-9) – Chair (2008-9).

Executive Committee of the Graduate Council – Chair, (2005-6, 2007-8, 2011-12).

Florence Moog Fellowships in the Biological Sciences and Chemistry Selection Committee, (2005-8, 2012-).

Faculty Associate for William Greenleaf Elliot College, (2005-8).

Graduate Council Teaching and Professional Development Committee, (2002-3; 2004-8; 2009-10; 2012-) – Chair (2002-3; 2005-6; 2013-).

Ervin and Enterprise Scholars Program Selection Committee, (2003-present).

Panelist for Washington University, Orientation for New Graduate Students in Arts & Sciences, (August, 2003 and 2004).

Department of Chemistry, Seminar Committee, (2001-6).

Residential Life, Residential Advisor Selection Committee, (2001).

Faculty Associate for Liggett/Koenig Residential College, (2000-1).

Washington University Arts & Sciences Graduate Council Departmental Representative, (1999-present).

Department of Chemistry, Graduate Work Committee, (1999-2008, 2010-present) – Chair (2004-8, 2010-present).

Department of Chemistry, Graduate Admissions and Recruitment Committee, (1998-2008) – Chair of Recruitment Committee (2002-8, 2010-present).

Department of Chemistry, Library Committee, (1998-2006).

Professional Activities:

Co-organizer of the Kavli Foundation and US National Academy of Sciences Frontiers in Science Symposia held jointly with the Indonesian National Academy of Sciences (July 12-15, 2012 in Solo, Indonesia and July 7-12, 2011 in Bogor, Indonesia).

Session Chair at the OSU International Symposium on Molecular Spectroscopy (2004, 2007).

Peer Review Panel for the 30th International Symposium on Combustion (January, 2004).

Review Panel for NSF-SBIR/STTR (March, 2003).

Scientific/technical consultant for Oakwood Medical Management, L.L.C., Saint Louis, MO (2000-1).

Co-organizer of "Reactions in Small Clusters Workshop", Telluride, CO (August 1-6, 1999).

Reviewer of proposals submitted to NSF, DOE, NASA ACS-PRF, and U.S. Civilian Research and Development.

Reviewer of manuscripts submitted to *Chemical Physics Letters*, *Chemical Physics*, *Chemistry of Materials*, *Journal of Chemical Physics*, *Journal of Physical Chemistry A*, *Journal of Physical Chemistry C*, *Journal of Physics B*, *Journal of the American Chemical Society*, *Nano Letters*, *Physical Chemistry Chemical Physics*.

Memberships:

American Chemical Society, American Physical Society - Divisions of Laser Science and Chemical Physics.

Publications:

55. J.J. Glennon, R. Tang, W.E. Buhro, and R.A. Loomis*, "Reversible photo-induced and chemical passivation of CdSe quantum wires", in preparation.
54. V.L. Wayman, P.J. Morrison, F. Wang, W.E. Buhro, and R.A. Loomis*, "Observation of the delocalization of 1D excitons over the entire lengths of CdSe quantum wires", submitted to *Nano Lett.*
53. V.L. Wayman, J.J. Glennon, L.E. Buchanan, R. Tang, W.E. Buhro, and R.A. Loomis*, "Observation of H-atom-like exciton levels in single semiconductor quantum wires", submitted to *Nature Mater.*
52. Y. Wang, Y. Zhang, F. Wang, D.E. Giblin, J. Hoy, H.W. Rohrs, M.L. Gross, R.A. Loomis, and W.E. Buhro*, "The magic-size nanocluster (CdSe)₃₄ as a low-temperature nucleant for cadmium selenide nanocrystals; room-temperature growth of crystalline quantum platelets", submitted to *J. Am. Chem. Soc.*
51. J.P. Darr* and R.A. Loomis*, "Dissociation dynamics of higher-order He₂···I³⁵Cl(B,v'=3) complexes", *Chem. Phys. Lett.*, **586**, 34-39 (2013). doi: 10.1016/j.cplett.2013.09.022.
50. J. Hoy, P.J. Morrison, L.K. Steinberg, W.E. Buhro, and R.A. Loomis*, "Excitation energy dependence of the photoluminescence quantum yields of core and core/shell quantum dots", *J. Phys. Chem. Lett.*, **4**, 2053-2060 (2013). doi: 10.1021/jz4004735.
49. Y.-H. Liu, F. Wang, J. Hoy, V.L. Wayman, L.K. Steinberg, R.A. Loomis*, and W.E. Buhro*, "Bright core-shell semiconductor quantum wires", *J. Am. Chem. Soc.*, **134**, 18797-18803 (2012). doi: 10.1021/ja3088218.
48. V.L. Wayman, P.J. Morrison, F. Wang, R. Tang, W.E. Buhro, and R.A. Loomis*, "Bound 1D excitons in single CdSe quantum wires", *J. Phys. Chem. Lett.*, **3**, 2627-32 (2012). doi: 10.1021/jz301210a.
47. Y. Wang, Y.-H. Liu, Y. Zhang, F. Wang, P.J. Kowalski, H.W. Rohrs, R.A. Loomis, M.L. Gross, and W.E. Buhro*, "Isolation of the magic-size CdSe nanoclusters [(CdSe)₁₃(n-octylamine)₁₃] and [(CdSe)₁₃(n-oleylamine)₁₃]", *Angew. Chem. Int. Ed.*, **51**, 6154-6157 (2012). doi: 10.1002/anie.201202380.
46. J. Wei, C. Makarem, A.L. Reinitz, J.P. Darr, and R.A. Loomis*, "Accurate measurement of the T-shaped and linear Ar···I₂(X,v''=0) binding energies using vibronic-specific I₂(B,v) fragment velocity-map imaging", *Chem. Phys.*, **399**, 172-9 (2012). doi: 10.1016/j.chemphys.2011.06.039.
45. F. Wang, V.L. Wayman, R.A. Loomis, and W.E. Buhro*, "Solution-liquid-solid growth of semiconductor quantum-wire films", *ACS Nano*, **5**, 5188-94 (2011). doi: 10.1021/nn201336z.
44. J.P. Darr, R.A. Loomis*, S.A. Ray-Helmus, and A.B. McCoy*, "Probing the dependence of long-range, four-atom interactions on intermolecular orientation: 3. Hydrogen and iodine", *J. Phys. Chem. A*, **115**, 7368-77 (2011). doi: 10.1021/jp201549d.
43. J. Wen, J. Harada, K. Buyle, K. Yuan, H. Tamiaki, H. Oh-oka, R.A. Loomis, and R.E. Blankenship*, "Characterization of an FMO variant of *chlorobaculum tepidum* carrying bacteriochlorophyll *a* esterified by geranylgeraniol", *Biochem.* **49**, 5455-63 (2010). doi: pdf/10.1021/bi1006805.

42. Y.-H. Liu, V.L. Wayman, P.C. Gibbons, R.A. Loomis*, and W.E. Buhro*, “Origin of high photoluminescence efficiencies in CdSe quantum belts”, *Nano Lett.*, **10**, 352-7 (2010). doi: 10.1021/nl0714583.
41. J.J. Glennon, R. Tang, W.E. Buhro, R.A. Loomis*, D.A. Bussian, H. Htoon, V.I. Klimov*, “Exciton localization and migration in individual CdSe quantum wires at low temperatures”, *Phys. Rev. B*, **80**, 081303(R)/1-081303(R)/4 (2009). doi: 10.1103/PhysRevB.80.081303.
40. Y. Zhang, K. Vidma, D.H. Parker*, and R.A. Loomis, “Photodissociation of the linear Ar-I₂ van der Waals complex: velocity-map imaging of the I₂ fragment”, *J. Chem. Phys.* **130**, 104302/1-104302/9 (2009). doi: 10.1063/1.3075561.
39. D.S. Boucher, J.P. Darr, D.B. Strasfeld, and R.A. Loomis*, “Spectroscopic identification of higher-order rare gas-dihalogen complexes with different geometries: He_{2,3}···Br₂ and He_{2,3}···ICl”, *J. Phys. Chem. A*, **112**, 13393-401 (2008). doi: 10.1021/jp808368j.
38. J.P. Darr, R.A. Loomis*, and A.B. McCoy, “Probing the dependence of long-range, four-atom interactions on intermolecular orientation: 2. Molecular deuterium and iodine monochloride”, *J. Phys. Chem. A*, **112**, 9494-502 (2008). doi: 10.1021/jp802917f.
37. J.P. Darr and R.A. Loomis*, “Experimental interrogation of the multidimensional He + ICl(*E*,*v*[†]) and He + ICl(*β*,*v*[†]) intermolecular potential energy surfaces”, *J. Chem. Phys.*, **129**, 144306/1-144306/11 (2008). doi: 10.1063/1.2990661.
36. J.J. Glennon, W.E. Buhro, and R.A. Loomis*, “Simple surface-trap-filling model for photoluminescence blinking spanning entire CdSe quantum wires”, *J. Phys. Chem. C*, **112**, 4813-7 (2008). doi: 10.1021/jp710067b.
35. D.S. Boucher and R.A. Loomis*, “Stabilization of different conformers of weakly bound complexes to access varying excited-state intermolecular dynamics”, *Adv. Chem. Phys.*, **138**, 375-419 (2008). doi: 10.1002/9780470259474.ch7.
34. J.P. Darr, A.C. Crowther, and R.A. Loomis*, “Probing the dependence of long-range, four-atom interactions on intermolecular orientation: 1. Molecular hydrogen and iodine monochloride”, *J. Phys. Chem. A*, **111**, 13387-96 (2007). doi: 10.1021/jp076465u.
33. J.J. Glennon, R. Tang, W.E. Buhro*, and R.A. Loomis*, “Synchronous photoluminescence intermittency (blinking) along whole semiconductor quantum wires”, *Nano Lett.*, **7**, 3290-5 (2007). doi: 10.1021/nl0714583.
32. S.A. Ray, A.B. McCoy*, J.J. Glennon, J.P. Darr, E.J. Fesser, J.R. Lancaster, and R.A. Loomis*, “Experimental and theoretical investigations of the He···I₂ rovibronic spectra in the I₂ B–X, 20–0 region”, *J. Chem. Phys.*, **125**, 164314/1-164314/9 (2006). doi: 10.1063/1.2363378.
31. J.P. Darr and R.A. Loomis*, “Vibrational relaxation dynamics of I³⁵Cl(*B*,*v*[′]) induced by low-temperature collisions with He atoms”, *Phys. Chem. Chem. Phys.*, **7**, 3323-30 (2005). doi: 10.1039/b508229c.
30. D.S. Boucher, D.B. Strasfeld, R.A. Loomis*, J.M. Herbert, S.A. Ray, and A.B. McCoy*, “Characterization of the T-shaped and linear conformers of a rare gas–homonuclear dihalogen complex: He···⁷⁹Br₂(*X*,*v*[″]=0)”, *J. Chem. Phys.*, **123**, 104312/1-104312/14 (2005). doi: 10.1063/1.2006675.
29. J.P. Darr, J.J. Glennon, R.A. Loomis*, “Observation of bound-free transitions of the linear Ar···I₂(*X*,*v*[″]=0) complex in and above the I₂ B–X region”, *J. Chem. Phys.*, **122**, 131101/1-131101/4 (2005). doi: 10.1063/1.1885001.
28. J.P. Darr, R.A. Loomis*, and A.B. McCoy, “The dissociation dynamics of He···ICl(*B*,*v*[′]=2,3) complexes with varying amounts of internal energy”, *J. Chem. Phys.*, **122**, 044318/1-044318/12 (2005). doi: 10.1063/1.1829971.
27. D.S. Boucher, J.P. Darr, M.D. Bradke, R.A. Loomis*, and A.B. McCoy*, “A combined experimental/theoretical investigation of the He + ICl interactions: Determination of the binding energies of the T-shaped and linear He···I³⁵Cl(*X*,*v*[″]=0) conformers”, *Phys. Chem. Chem. Phys.*, **6**, 5275-82 (2004). doi: 10.1039/b411914b.
26. D.B. Strasfeld, J.P. Darr, and R.A. Loomis*, “Experimental characterization of the Ne + ICl(*X*,*v*[″]=0) and Ne + ICl(*B*,*v*[′]=2) intermolecular potentials”, *Chem. Phys. Lett.*, **397**, 116-22 (2004). doi: 10.1016/j.cplett.2004.08.083.

25. A.B. McCoy*, J.P. Darr, D.S. Boucher, P.R. Winter, M.D. Bradke, and R.A. Loomis*, "A combined experimental/theoretical investigation of the He + ICl interactions: I. The ro-vibronic spectrum of He...ICl complexes in the ICl B-X, 3-0 region", *J. Chem. Phys.*, **120**, 2677-85 (2004). doi: 10.1063/1.1636693.
24. J.P. Darr and R.A. Loomis*, "Experimental observation of competing pathways in the relaxation of ICl* in a He supersonic expansion", *Faraday Discuss.*, **127**, 213-26 (2004). doi: 10.1039/b316117j.
23. H. Yu, J. Li, R.A. Loomis, P.C. Gibbons, L-W. Wang, and W.E. Buhro*, "Cadmium selenide quantum wires and the transition from 3D to 2D confinement", *J. Am. Chem. Soc.*, **125**, 16168-9 (2003). doi: 10.1021/ja037971+.
22. J.P. Darr, A.C. Crowther, and R.A. Loomis*, "Direct measurement of the binding energy of the linear He...I^{35,37}Cl(X) isotopomers", *Chem. Phys. Lett.*, **378**, 359-67 (2003). doi: 10.1016/S0009-2614(03)01343-5.
21. D.S. Boucher, M.D. Bradke, J.P. Darr, and R.A. Loomis*, "Preferential stabilization of different isomers of weakly bound complexes", *J. Phys. Chem. A*, **107**, 6901-4 (2003). doi: 10.1021/jp035284z.
20. H. Yu, J. Li, R.A. Loomis, L.-W. Wang*, and W.E. Buhro*, "2D vs. 3D quantum confinement in indium phosphide; experimental comparison of quantum wires and quantum dots", *Nature Mater.* **2**, 517-20 (2003). doi:10.1038/nmat942.
19. M.D. Bradke and R.A. Loomis*, "Spectroscopic observation of the preferentially stabilized, linear He...ICl(X ¹Σ⁺) complex", *J. Chem. Phys.*, **118**, 7233-44 (2003). doi: 10.1063/1.1562622.
18. J.P. Reid, R.A. Loomis, and S.R. Leone*, "Competition between N-H and N-D bond cleavage in the photodissociation of NH₂D and ND₂H", *J. Phys. Chem. A*, **104**, 10139-49 (2000). doi: 10.1021/jp001065r.
17. J.P. Reid, R.A. Loomis, and S.R. Leone*, "The effect of parent zero-point motion on the ND₂ (\tilde{A}) rotational state distribution in the 193.3 nm photolysis of ND₃", *Chem. Phys. Lett.*, **324**, 240-8 (2000). doi: 10.1016/S0009-2614(00)00605-9.
16. J.P. Reid, and R.A. Loomis, and S.R. Leone*, "Characterization of dynamical product-state distributions by spectral extended cross-correlation: Vibrational dynamics in the photofragmentation of NH₂D and ND₂H", *J. Chem. Phys.*, **112**, 3181-91 (2000). doi: 10.1063/1.480902.
15. R.A. Loomis, J.P. Reid and S.R. Leone*, "Photofragmentation of ammonia at 193.3 nm: Bimodal rotational distributions and vibrational excitation of NH₂(\tilde{A})", *J. Chem. Phys.*, **112**, 658-69 (2000). doi: 10.1063/1.480677.
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Presentations:

89. J. Hoy, V.L. Wayman, L.K. Steinberg, Y.-H. Liu, F. Wang, P.J. Morrison, W.E Buhro, and R.A. Loomis, “Dynamics of 1D excitons in CdSe and CdTe/CdS core-shell quantum wires.” 2013 MRS Spring Meeting & Exhibit, San Francisco, CA, April 2, 2013. (Invited Talk)
88. R.A. Loomis, “Interrogation of the competing relaxation pathways involved in the dissociation of excited-state rare gas-dihalogen complexes.” Molecular Energy Transfer Gordon Research Conference, Ventura, CA, January 13-18, 2013. (Invited Talk)
87. R.A. Loomis, “Can quantum mechanics be observed on the macroscopic scale in semiconductor nanostructures?” Department of Chemistry and Biochemistry, College of Charleston, Charleston, SC, September 23, 2012. (Departmental Seminar)
86. R.A. Loomis, “Experimental interrogation of the competing relaxation pathways of Ar···I₂(B,v’).” Molecular and Ionic Clusters Gordon Research Conference, Ventura, CA, January 29-February 3, 2012. (Hot Topics Talk)
85. R.A. Loomis, “Achieving the reality of 1-D excitons in semiconductor quantum wires.” Department of Materials Science and Engineering, Stanford University, Stanford, CA, December 9, 2011. (Departmental Seminar)
84. R.A. Loomis, “Delocalization of bound, 1-D excitons in single CdSe quantum wires.” Clusters, Nanocrystals & Nanostructures Gordon Research Conference, Mount Holyoke College, South Hadley, MA, July 24-29, 2011. (Poster)
85. R.A. Loomis, “1-D excitons in single CdSe quantum wires.” Department of Materials Science and Engineering, Stanford University, Stanford, CA, December 9, 2011. (Departmental Seminar)
83. R.A. Loomis, “Colloidal semiconductor nanowires: Can they behave as model 1-D quantum systems?” Department of Chemistry, Texas A&M, College Station, April 5, 2011. (Departmental Seminar)
82. R.A. Loomis, “Colloidal semiconductor nanowires: Can they behave as model 1-D quantum systems?” Department of Physical Chemistry, Peking University, Beijing, China, March 9, 2011. (Departmental Seminar)
81. R.A. Loomis, “Colloidal semiconductor nanowires: Can they behave as model 1-D quantum systems?” Department of Chemistry, Hefei National Laboratory for Physical Sciences at Microscale, USTC, Hefei, China, March 7, 2011. (Departmental Seminar)
80. R.A. Loomis, “Colloidal semiconductor nanowires: Can they behave as model 1-D quantum systems?” Saint Louis Award Symposium, St. Louis, MO, October 15, 2010. (Invited Talk)
79. R.A. Loomis, “Hot lasers, fast particles, and snapshots of quantum cats.” Science on Tap Lecture Series – Washington University in St. Louis, St. Louis, MO, May 26, 2010. (Invited Talk)
78. R.A. Loomis, “Spectroscopic characterization of 1-D excitons in semiconductor quantum wires.” American Physical Society National Meeting, Portland, OR, March 14-19, 2010. (Contributed Talk)

77. R.A. Loomis, "Spectroscopic characterization of the quantum-mechanical nature of excitons in semiconductor nanowires." Department of Chemistry, Xiamen University, Xiamen, China, March 5, 2010.
76. R.A. Loomis, "Spectroscopic characterization of the quantum-mechanical nature of excitons in semiconductor nanowires." Department of Chemistry, East China Normal University, Shanghai, China, March 2, 2010.
75. R.A. Loomis, "Energetics and dynamics of excitons within single CdSe quantum wires." Clusters, Nanocrystals & Nanostructures Gordon Research Conference, Mount Holyoke College, South Hadley, MA, July 19-24, 2009. (Poster)
74. R.A. Loomis, "Photochemistry within single semiconductor quantum wires." Department of Chemistry, University of Missouri, Kansas City, Kansas City, MO, April 23, 2009. (Departmental Seminar)
73. R.A. Loomis, "Quantum mechanics: What, where, why and when?" Kansas City Section of ACS, Awards Ceremony, Kansas City, Kansas City, MO, April 22, 2009. (Invited Talk)
72. R.A. Loomis, "Spectroscopy and dynamics of higher-order rare gas-dihalogen complexes with different geometries." Molecular Energy Transfer Gordon Research Conference, Ventura, CA, January 18-23, 2009. (Poster)
71. R.A. Loomis, "Spectroscopy and dynamics of multiexciton states in single CdSe quantum wires." American Chemical Society National Meeting, New Orleans, LA, April 5-10, 2008. (Contributed Talk)
70. R.A. Loomis, J.J. Glennon, D.A. Bussian, H. Htoon, V.I. Klimov, R. Tang, W.E. Buhro, "Energetic relaxation of excitons prepared within single CdSe quantum wires." American Chemical Society National Meeting, New Orleans, LA, April 5-10, 2008. (Poster)
69. R.A. Loomis, "Interrogation of the energetics and dynamics of excitons prepared within single CdSe quantum wires." Department of Chemistry, Pittsburgh State University, Pittsburgh, KS, February 1, 2008. (Departmental Seminar)
68. R.A. Loomis, "Probing the details of the full dimensionality of intermolecular potential energy surfaces." Department of Chemistry, University of Missouri, Kansas City, Kansas City, MO, January 31, 2008. (Departmental Seminar)
67. R.A. Loomis, "Interrogation of the energetics and dynamics of excitons prepared within single CdSe quantum wires." Department of Chemistry, Northwest Missouri State University, Maryville, MO, January 30, 2008. (Departmental Seminar)
66. R.A. Loomis, "Experimental interrogation of the spectroscopy and dynamics within single CdSe quantum wires." Department of Physical Chemistry, Peking University, Beijing, China, September 19, 2007. (Departmental Seminar)
65. R.A. Loomis, "Dissociation dynamics of hydrogen-dihalogen complexes." Dynamics of Molecular Collisions Conference, Santa Fe, NM, July 8-13, 2007. (Poster)
64. R.A. Loomis and J.J. Glennon, "Spectroscopy and dynamics within single cadmium selenide quantum wires." 62nd Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, June 18-22, 2007. (Invited Talk)
63. R.A. Loomis, "Dissociation dynamics of hydrogen-dihalogen complexes." 62nd Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, June 18-22, 2007. (Contributed Talk)
62. R.A. Loomis, "Characterization of the photophysics within single CdSe quantum wires at low temperature." Center of Integrated Nanotechnologies, Sandia and Los Alamos National Laboratories, Albuquerque, NM, April 18, 2007. (Invited Talk)
61. R.A. Loomis, "Experimental interrogation of the photophysics within CdSe nanostructures and its dependence on dimensionality." University of Georgia, Athens, GA, February 1, 2007. (Departmental Seminar)
60. R.A. Loomis, "Experimental interrogation of the photophysics within CdSe nanostructures and its dependence on dimensionality." Notre Dame University, South Bend, IN, January 18, 2007. (Departmental Seminar)
59. R.A. Loomis, "Probing the details of the full dimensionality of intermolecular potential energy surfaces." Department of Chemical Physics, University of Science and Technology of China, Hefei, Anhui, China, October 11, 2006. (Departmental Seminar)

58. R.A. Loomis, "Probing the details of the full dimensionality of intermolecular potential energy surfaces." Key Laboratory of Molecular Reaction Dynamics, Beijing, China, October 10, 2006. (Departmental Seminar)
57. R.A. Loomis, "Probing bimolecular interactions with atomic resolution." Hope College, Holland, MI, September 22, 2006. (Departmental Seminar)
56. R.A. Loomis, "Probing bimolecular interactions with atomic resolution." Calvin College, Grand Rapids, MI, September 21, 2006. (Departmental Seminar)
55. J.P. Darr and R.A. Loomis, "Spectroscopic identification of multiple conformers of *o,p*-H₂···ICl and *o,p*-H₂···I₂ complexes." American Physical Society National Meeting, Baltimore, MD, March 12-17, 2006. (Contributed Talk)
54. J.J. Glennon, R. Tang, W.E. Buhro, and R.A. Loomis, "Observation of synchronous photoluminescence intensity fluctuations within single CdSe quantum wires." American Physical Society National Meeting, Baltimore, MD, March 12-17, 2006. (Contributed Talk)
53. R.A. Loomis, "Probing bimolecular interactions with atomic resolution." Morehouse College, Atlanta, GA, January 31, 2006. (Departmental Seminar)
52. R.A. Loomis, "Experimental interrogation of the photophysics within CdSe nanostructures and its dependence on dimensionality." Emory University, Atlanta, GA, January 30, 2006. (Departmental Seminar)
51. R.A. Loomis, "The interactions of rare gas atoms with dihalogen molecules: finding the surprise ending of an old story." Marquette University, Milwaukee, WI, November 4, 2005. (Departmental Seminar)
50. R.A. Loomis, "The interactions of rare gas atoms with dihalogen molecules: finding the surprise ending of an old story." Brigham Young University, Provo, UT, October 7, 2005. (Departmental Seminar)
49. R.A. Loomis, "The interactions of rare gas atoms with dihalogen molecules: finding the surprise ending of an old story." University of Wisconsin-Madison, Madison, WI, October 4, 2005. (Departmental Seminar)
48. R.A. Loomis, "Spectroscopic interrogation of the multi-dimensional intermolecular potentials of rare gas-dihalogen complexes.", 230th American Chemical Society National Meeting, Washington, DC, August 28 – September 1, 2005. (Invited Talk)
47. J.P. Darr, J.J. Glennon, and R.A. Loomis, "Identification of bound-free transitions of the linear Ar···I₂ complex throughout the I₂ B–X region." 230th American Chemical Society National Meeting, Washington, DC, August 28 – September 1, 2005. (Contributed Talk)
46. J.P. Darr and R.A. Loomis, "The origin of the Ar···I₂ B–X continuum excitation signal below and above the I₂(B) dissociation limit: bound-free transitions of the linear complex." 60th Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, June 20-24, 2005. (Contributed Talk)
45. R.A. Loomis, "Spectroscopic interrogation of the multi-dimensional intermolecular potentials of rare gas atoms and dihalogens." 60th Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, June 20-24, 2005. (Contributed Talk)
44. R.A. Loomis, "The dependence of intermolecular dynamics on internal energy within rare gas-dihalogen complexes." Molecular Energy Transfer Gordon Research Conference, Buellton, CA, January 9-15, 2005. (Invited Talk)
43. R.A. Loomis, "The characterization of the subtle dependences of intermolecular interactions on molecular orientation." U.S. National Academy of Sciences, Beckman Frontiers of Science Symposium, Irvine, CA, November 4-6, 2004. (Invited Participant)
42. J.P. Darr, D.S. Boucher, D.B. Strasfeld, R.A. Loomis, and A.B. McCoy, "The experimental and theoretical interrogation of the intermolecular potential energy surfaces of rare gas-dihalogen systems." Atomic and Molecular Interactions Gordon Research Conference, New London, NH, July 11-16, 2004. (Poster)
41. J.P. Darr and R.A. Loomis, "Observation of competing pathways in the relaxation of ICl* in a He supersonic expansion." 59th Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, June 21-26, 2004. (Contributed Talk)
40. R.A. Loomis, "The spectroscopic characterization of multidimensional intermolecular potential energy surfaces." University of Pittsburgh, Pittsburgh, PA, May 6, 2004. (Departmental Seminar)

39. R.A. Loomis, "The spectroscopic characterization of multidimensional intermolecular potential energy surfaces." University of California-San Diego, San Diego, CA, April 20, 2004. (Departmental Seminar)
38. R.A. Loomis, "The spectroscopic characterization of multidimensional intermolecular potential energy surfaces." University of Southern California, Los Angeles, CA, April 19, 2004. (Departmental Seminar)
37. R.A. Loomis, "Characterizing the intermolecular potential energy surfaces that dominate dynamics at low temperatures." Saint Louis University, Saint Louis, MO, April 16, 2004. (Departmental Seminar)
36. J.P. Darr and R.A. Loomis, "The competing pathways of ICl* relaxation in a He supersonic expansion." Faraday Discussion 127, Non-adiabatic Effects in Chemical Dynamics, Saint Catherine's College, Oxford, UK, April 5-7, 2004. (Invited Talk)
35. R.A. Loomis, "The characterization of intermolecular interactions at very low temperatures: Even for dihalogens with rare gas atoms, it's not so simple!" University of California, Irvine, Irvine, CA, January 20, 2004. (Departmental Seminar)
34. R.A. Loomis, "The characterization of intermolecular interactions at very low temperatures: Even for dihalogens with rare gas atoms, it's not so simple!" Southern Illinois University, Carbondale, IL, January 16, 2004. (Departmental Seminar)
33. R.A. Loomis, "Determining the precise pathways of bimolecular reactions." University of Southern Indiana, Evansville, IN, November 18, 2003. (Departmental Seminar)
32. R.A. Loomis, "The somewhat complicated interactions and dynamics of dihalogen molecules with rare gas atoms at low temperatures." University of Pennsylvania, Philadelphia, PA, November 6, 2003. (Departmental Seminar)
31. R.A. Loomis, "The somewhat complicated interactions and dynamics of dihalogen molecules with rare gas atoms at low temperatures." JILA, University of Colorado, Boulder, CO, October 31, 2003. (Departmental Seminar)
30. R.A. Loomis, "The somewhat complicated interactions and dynamics of dihalogen molecules with rare gas atoms at low temperatures." The Ohio State University, Columbus, OH, October 13, 2003. (Departmental Seminar)
29. R.A. Loomis, "The somewhat complicated interactions and dynamics of dihalogen molecules with rare gas atoms at low temperatures." Columbia University, New York, NY, October 8, 2003. (Departmental Seminar)
28. R.A. Loomis, "The somewhat complicated interactions and dynamics of dihalogen molecules with rare gas atoms at low temperatures." Combustion Research Facility, Sandia National Laboratory, Livermore, CA, August, 6 2003. (Departmental Seminar)
27. J.P. Darr, D.S. Boucher, A.C. Crowther, and R.A. Loomis, "The formation, interaction, and dissociation of the linear and T-shaped He...ICl weakly bound complexes." Spectroscopy and Dynamics on Multiple Surfaces Workshop, Telluride, CO, July 20-27, 2003. (Invited Talk)
26. R.A. Loomis, "The dynamics of ICl in a He supersonic expansion." Dynamics of Molecular Collisions Conference, Lake Tahoe, CA, July 13-18, 2003. (Invited Talk)
25. J.P. Darr, D.S. Boucher, A.C. Crowther, and R.A. Loomis, "The formation, interaction, and dissociation of the linear and T-shaped He...ICl weakly bound complexes." Dynamics of Molecular Collisions Conference, Lake Tahoe, CA, July 13-18, 2003. (Poster)
24. R.A. Loomis, "The Intermolecular Interactions and Dynamics of Molecules at Very Low Temperatures: It's Not So Simple." University of Nevada, Reno, NV, April 11, 2003. (Departmental Seminar)
23. R.A. Loomis, "The Intermolecular Interactions and Dynamics of Molecules at Very Low Temperatures: It's Not So Simple." University of California, Davis, CA, April 10, 2003. (Departmental Seminar)
22. R.A. Loomis, "The Intermolecular Interactions and Dynamics of Molecules at Very Low Temperatures: It's Not So Simple." University of North Carolina, Chapel Hill, NC, April 2, 2003. (Departmental Seminar)
21. R.A. Loomis, "Watching Chemistry in Real-time: Catching Reactions in the Act and Teaching Them to Do What You Want Them to Do." CASW's 40th Annual New Horizons in Science Briefing, Washington University, Saint Louis, MO, October 27-30, 2002. (Invited Talk)

20. D.S. Boucher, J.P. Darr, A.C. Crowther, and R.A. Loomis, "Experimental interrogation of the He + ICl(X,v''=0) and He + ICl(B,v') interactions and dissociation dynamics." Atomic and Molecular Interactions Gordon Research Conference, Bristol, RI, July 7-12, 2002. (Poster)
19. R.A. Loomis and M.D. Bradke, "Laser-induced fluorescence spectra of the linear He...ICl(X $^1\Sigma^+$) Complex." 57th Ohio State University International Symposium on Molecular Spectroscopy, Columbus, OH, June 17-21, 2002. (Contributed Talk)
18. R.A. Loomis and D.S. Boucher, "Using Femtosecond Pulse Shaping to Control and Interrogate the Evolution of Bimolecular Reaction Dynamics." Quantum Control of Atomic and Molecular Motion Gordon Research Conference, South Hadley, MA, July 29-August 2, 2001. (Poster)
17. M.D. Bradke and R.A. Loomis, "Experimental investigation of He...ICl intermolecular levels and dynamics: Evidence for a linear isomer in the ground state." Dynamics of Molecular Collisions Conference, Copper Mountain, CO, July 15-20, 2001. (Poster)
16. R.A. Loomis, "Using Lasers and Quantum Chemistry to Determine the Pathways of Chemical Reactions." University of Missouri – Saint Louis, Saint Louis, MO, April 9, 2001. (Departmental Seminar)
15. R.A. Loomis, "How can reactions be monitored and controlled experimentally in small clusters." Reactions in Small Clusters Workshop, Telluride, CO, August 1-6, 1999. (Invited Talk)
14. R.A. Loomis, "Probing and controlling bimolecular reaction dynamics using pre-reactive complexes as a launching pad." Reactions in Small Clusters Workshop, Telluride, CO, August 1-6, 1999. (Invited Talk)
13. R. Uberna, R.A. Loomis, and S.R. Leone, "Coherent control of the Li₂ E $^1\Sigma_g^+$ ionization probability using ultrashort optical pulse shaping techniques." Atomic and Molecular Interactions Gordon Research Conference, New London, NH, June 28-July 3, 1998. (Poster)
12. R.A. Loomis, J.P. Reid, and S.R. Leone, "The role of tunneling in the alignment of product species following the photodissociation of ammonia species." Atomic and Molecular Interactions Gordon Research Conference, New London, NH, June 28-July 3, 1998. (Poster)
11. R.A. Loomis, J.P. Reid, and S.R. Leone, "Mechanisms and dynamics of alkyl radical/atom reactions determined by time-resolved Fourier transform infrared emission spectroscopy." 215th American Chemical Society National Meeting, Dallas, TX, March 29-April 2, 1998. (Poster)
10. R.A. Loomis and S.R. Leone, "Photodissociation dynamics of jet-cooled species using time-resolved FTIR emission spectroscopy." 13th Interdisciplinary Laser Science Conference, Long Beach, CA, October 12-17, 1997. (Contributed Talk)
9. R.A. Loomis and S.R. Leone, "Photodissociation dynamics of jet-cooled ammonia using time-resolved FTIR emission spectroscopy." Dynamics of Molecular Collisions Conference, Gull Lake, MN, July 20-25, 1997. (Poster)
8. R.A. Loomis and S.R. Leone, "Photodissociation dynamics of ammonia species cooled in a supersonic expansion." Molecular Energy Transfer Gordon Research Conference, Ventura, CA, January 5-10, 1997. (Poster)
7. R.A. Loomis, J.K. Klaassen, J. Lindner, P.G. Christopher, and S.R. Leone, "Vibrational deactivation and nascent vibrational state distributions of HOI / OH formed in the reaction of alkyl iodides + O / alkyl radicals + O atoms." Molecular Energy Transfer Gordon Research Conference, Ventura, CA, January 5-10, 1997. (Poster)
6. R.A. Loomis and M.I. Lester, "Stabilization of reactants in a weakly bound complex: OH-H₂ and OH-D₂." Dynamics of Molecular Collisions Conference, Asilomar, CA, July 16-21, 1995. (Poster)
5. R.A. Loomis, R.L. Schwartz, and M.I. Lester, "Cavity ring-down absorption spectroscopy of halogen systems." 10th Interdisciplinary Laser Science Conference, Dallas, TX, October 2-7, 1994. (Contributed Talk)
4. R.A. Loomis, R.L. Schwartz, and M.I. Lester, "Cavity ring-down absorption spectroscopy of halogen systems." 208th American Chemical Society National Meeting, Washington, DC, August 21-26, 1994. (Poster)
3. R.A. Loomis, R.L. Schwartz, and M.I. Lester, "Cavity ring-down absorption spectroscopy of halogen systems." Electronic Spectroscopy Gordon Research Conference, Andover, NH, August 14-19, 1994. (Poster)

2. L.C. Giancarlo, R.A. Loomis, M.T. Berry, M.I. Lester, and D.C. Clary, "Experimental determination of the intermolecular bending potential in OH-Ar ($A^2\Sigma^+$)." 204th American Chemical Society National Meeting, Washington, DC, August 23-28, 1992. (Poster)
1. R.A. Loomis, L.C. Giancarlo, M.T. Berry, and M.I. Lester, "Experimental determination of the intermolecular bending potential in OH-Ar ($A^2\Sigma^+$)." Atomic and Molecular Interactions Gordon Research Conference, New London, NH, July 20-24, 1992. (Poster)