

Samuel A. Abrash  
Associate Professor  
Department of Chemistry  
University of Richmond  
Richmond, VA 23173  
(804) 289-8248

Education:

B.A., Chemistry, University of Chicago, 1981  
Ph. D. (Physical Chemistry), University of California, Berkeley, 1987  
Postdoctoral Fellowship, University of Pennsylvania, 4/1987-7/1990.

Experience:

Department of Chemistry, University of Richmond, Assistant Professor, 1990 to 1996; Associate Professor, 1996 to Present; Visiting Scientist, James Franck Institute, University of Chicago, 1997-1998.

Research Experience:

Virginia Commonwealth University, 9/9/2005 - , Research Advisor, M. Samy El-Shall. Topic: Reactions of Ions in Small Acetylene Clusters in the Gas Phase.

University of Chicago, 9/1/1997 – 8/31/1998, Research Advisors, Karl F. Freed and Laurie Butler. Topic: High level ab initio calculations on the excited states of radicals important in nonadiabatic photochemical processes.

University of Pennsylvania, 4/1987-7/1990, Research Advisor, Professor Robin M. Hochstrasser. Topic: Ultrafast studies of the isomerization of cis stilbene in hydrocarbon solutions

University of California, Berkeley, 9/1981-3/1987, Research Advisor, Professor George C. Pimentel. Topic: Wavelength Dependence Studies of the Photochemistry of Weakly Bound Complexes in Inert Gas Matrices

Argonne National Labs, 6/1981-8/1981, Research Advisor, John R. Miller. Topic: Long distance electron transfer in glassy matrices.

Research Interests:

Photochemistry and Dynamics of Weakly Bound Complexes in Inert Gas Matrices; Photochemistry of Organic Silicon Compounds on Triplet Surfaces; Ab Initio Calculations of the Ground and Excited State Potential Energy Surfaces of Weakly Bound Complexes

Classes Taught:

Chemistry 103-104, Fall '92 - Spring '97  
Chemistry 103-104 Laboratory, Fall '91 - Spring '92  
Chemistry 110, Fall '98 - present  
Chemistry 309-310, Fall '90 - present  
Chemistry 309-310 Laboratory, Fall '90 - present  
4 Independent Studies

- Chemical Dynamics for Lisa Lindstrom and Karen Busenlener, WC '91, Fall '90 and Spring '91
- Molecular Spectroscopy for Shawn Atencio, RC '92, Fall '91 and Spring '92
- Advanced Quantum Mechanics for Dora Paolucci, WC '93, Fall '92 and Spring '93
- Molecular Spectroscopy for Robert Zehner, RC '94, Fall '93 and Spring '94

Grants Received:

External Grants

Research Corporation, May 1991, \$32,000.

PRF Type G Grant, September 1992, \$18,000.00.

PRF Supplemental Faculty Grant, December 1993, \$5,000.00.

Thomas F. and Kate Miller Jeffress Foundation, January 1994, \$22,325.00.

Thomas F. and Kate Miller Jeffress Foundation, May 1995, \$15,918.00.

Thomas F. and Kate Miller Jeffress Foundation, May 1996, \$10,000.00

NSF Research Opportunity Award, June 1997, \$36,856.00

Henry Dreyfus Teacher-Scholar Award, Camille and Henry Dreyfus Foundation, October 1998 - September 2002, \$60,000.00

Thomas F. and Kate Miller Jeffress Foundation, May 1999, \$15,000.00

Petroleum Research Fund, June 2003, \$50,000

Research Corporation, May 2003, \$40,000

Internal Grants

Faculty Research Grant, Fall 2006, \$1860.00

Faculty Research Grant, Fall 2000, \$7,300.00

Faculty Summer Fellowship, Fall 2000, \$5,000.00

Faculty Research Travel Grant, Fall 2000, \$1000.00

Faculty Research Grant, Spring 2000, \$3,825.00

Faculty Research Grant, Spring 1999, \$6,860.00

Faculty Summer Fellowship, Summer 1998, \$5,000.00

Faculty Research Grant, Fall 1997, \$2025.00

Faculty Research Travel Grant, \$768.00, Summer 1997

Faculty Research Grant \$1,855.00, Fall 1995

Faculty Research Grant, \$3,750.00, Fall 1994

Faculty Research Grant, \$3,650.00, Fall 1993

Faculty Research Travel Grant, \$900.00, Summer 1993

Faculty Research Grant, \$3,000.00, Fall 1991

Faculty Research Grant, \$1,955.00, Fall 1990

#### Honors:

Henry Dreyfus Teacher-Scholar, October 1998 - September 2003

Who's Who in America, 53<sup>rd</sup> Edition, Fall 2002

#### Societies:

ACS, APS, CUR, Project Kaleidoscope Faculty for the 21<sup>st</sup> Century

#### Publications:

Paul C. Momoh, Sam Abrash and M. Samy El-Shall, "Polymerization of Ionized Acetylene Clusters into Covalent Bonded Ions. Evidence for the Formation of Benzene Radical Cation." *Journal of the American Chemical Society*, Accepted for Publication

Samuel A. Abrash, "Modern Developments in the Physical Chemistry Laboratory," in Physical Chemistry Curriculum Reform Update: Where Are We Now and Where Are We Going?, Ellison, Mark D.; Schoolcraft, Tracy P., Eds. ACS Books, Washington, DC. Accepted for publication.

R.K. Chaudhuri, K. F. Freed, S. A. Abrash, and D. M. Potts, "A critical comparison of theoretical and experimental electronic spectrum and potential energy curves of HF molecule and its positive and negative ions" *J. Mol. Struct. (Theochem)*, **2001**, *547*, 83-96.

Samuel A. Abrash, "New Voices in Chemistry: Revitalizing Undergraduate Research", *Chemical and Engineering News*, March 26<sup>th</sup>, 2001, p. 118.

Nancy R. Forde, Laurie J. Butler and Samuel A. Abrash, "Electronic Accessibility of Dissociation Channels in an Amide: N,N-Dimethylformamide Photodissociation at 193 nm" , *J. Chem. Phys.*, **1999**, *110*, 8954.

Meredith E. Ebert, Samuel A. Abrash and Lionel M. Raff, "Theoretical Investigations of the Reaction Dynamics of Gas-Phase HBr + Acetylene Collisions." *J. Phys. Chem.* **1995**, *99*, 17691

Paras M. Agrawal, Dan C. Sorescu, Lionel M. Raff and Samuel A. Abrash, "Theoretical Investigations of Vinyl Bromide Dissociation in Xe and Kr Matrices", *J. Phys. Chem.* **1995**, *99*, 14959

Dora M. Paolucci, Katherine Gunkelman, Michael T. McMahon, Jeanine McHugh and Samuel A. Abrash, "Photochemistry and Dynamics of Vinyl Bromide and Vinyl Iodide in Rare Gas Matrices", *J. Phys. Chem.*, **1995**, *99*, 10506.

Samuel A. Abrash, Robert W. Zehner, Gilbert J. Mains and Lionel M. Raff, "Theoretical Studies of the Thermal Gas-Phase Decomposition of Vinyl Bromide on the Ground-State Potential-Energy Surface." *J. Phys. Chem.*, **1995**, *99*, 2959.

Gilbert J. Mains, Lionel M. Raff and Samuel A. Abrash. "Theoretical Studies of the Photolytic Decomposition of Vinyl Bromide at 193 nm." *J. Phys. Chem.*, **1995**, *99*, 3532.

Samuel A. Abrash, Celia M. Carr, Michael T. McMahon and Robert W. Zehner, "Photochemistry of Hydrogen Bromide-Acetylene Complexes in Solid Krypton." *J. Phys. Chem.* **1994**, *98*, 11909

J. R. G. Thorne, S. T. Repinec, S. A. Abrash, J. M. Ziegler and R. M. Hochstrasser, "Polysilane Excited States and Excited State Dynamics", *Chem. Phys.*, **1990**, *146*, 315, (1990)

Jonathan R. G. Thorne, Stephen T. Repinec, Samuel A. Abrash, John M. Ziegler and Robin M. Hochstrasser, "Ultrafast Relaxation Dynamics in Polysilanes", *Polymer Preprints*, **1990**, *31*, 240.

Stephen T. Repinec, Samuel A. Abrash, and Robin M. Hochstrasser, "Molecular Alignment in the Cis to Trans Photoisomerization of Stilbene", *Ultrafast Phenomena VII*, eds. C. B. Harris, E. P. Ippen, G. A. Mourou, and A. H Zewail, Springer-Verlag, Berlin, 1990, pp. 495-497.

S. A. Abrash, S. T. Repinec, and R. M. Hochstrasser, "The Viscosity Dependence and Reaction Coordinate for Isomerization of Cis Stilbene", *J. Chem. Phys.*, **1990**, *93*, 1041.

J. R. G. Thorne, Y. Ohsako, S. Repinec, S. A. Abrash, R. M. Hochstrasser and J. M. Ziegler, "The Excited States of Linear Chain Polysilanes", *J. Luminescence*, **1990**, *45*, 295-297.

Samuel A. Abrash and George C. Pimentel, "Wavelength Dependence of the Photochemistry of Hydrogen Iodide - Acetylene Pairs in Krypton Matrices", *J. Phys. Chem.*, **1989**, *93*, 5834.

Samuel A. Abrash and George C. Pimentel, "Photochemistry of Hydrogen Iodide - Acetylene Complexes in Inert Gas Matrices", *J. Phys. Chem.*, **1989**, *93*, 5828.

John R. Miller, Keith W. Hartman, and Sam Abrash, "Long-Distance (25 Angstrom) Electron Transfer by Triplet Excited States in Rigid Media", *J. Am. Chem. Soc.* **1982**, *104*, 4296.

#### Talks, Posters and Presentations:

Samuel A. Abrash. "Photochemistry of Weakly Bound Complexes in Cryogenic Matrices", Invited Lecture, Department of Chemistry, Ruhr-Universität-Bochum, Bochum, Germany, February 17, 2006.

Samuel A. Abrash. "Photochemistry of Weakly Bound Complexes in Cryogenic Matrices", Invited Lecture, Department of Chemistry, Justus-Liebig-Universität, Giessen, Germany, February 16, 2006.

Samuel A. Abrash. "Photochemistry of Weakly Bound Complexes in Cryogenic Matrices", Invited Lecture, Joint SE-SW Regional Meeting of the American Chemical Society, Memphis, TN, November 3, 2005

Samuel A. Abrash. "Photochemistry of Weakly Bound Complexes in Cryogenic Matrices", Invited Lecture, Department of Chemistry, Marshall University, Huntington, WV, September 23, 2005.

Samuel A. Abrash. "Modern Developments in the Physical Chemistry Laboratory", Invited Lecture, 230<sup>th</sup> National Meeting of the American Chemical Society, August 28<sup>th</sup> – September 1<sup>st</sup>, 2005

Cailin Delaney, Justin Clar, Jodi Cohen and Samuel A. Abrash. "Photochemistry of HI-Allene Complexes in Argon Matrices", Poster Presented, 27<sup>th</sup> International Symposium on Free Radicals, Taipei, Taiwan, July 25<sup>th</sup> – July 30<sup>th</sup>, 2004

Samuel A. Abrash, "So I've Got Tenure, Now What?", Invited Lecture, Gordon Research Conference on Chemical Education: Research and Practice", Ventura, California, January 4-9, 2004

Cailin Delaney, Stephanie Smith, Philip Eskew, Cindy Silvester, Leigh Jason, and Samuel A. Abrash, "Photochemistry of HI-Allene Complexes in Argon Matrices", Poster Presented, Gordon Conference on Physics and Chemistry of Matrix Isolated Species, Bates College, Lewiston, Maine, July 20-25, 2003

Samuel A. Abrash, "Anomalies in the Photochemistry of Weakly Bound Complexes," Invited Lecture, Department of Chemistry, Old Dominion University, Norfolk, VA, October 18, 2002.

Samuel A. Abrash, "Things to Do and Places to Go: Becoming a Professor at a PUI", Invited Lecture, Semiannual Meeting American Chemical Society, Boston, Massachusetts, August 17-22, 2002

Samuel A. Abrash, Amy Burroughs, James E. Copenhafer, Ruth Daniels, Braden Giordano, Jannine Haberman, Charles. S. Vaughan and Kavitha Vedhanayakam, "Photochemistry of H<sub>2</sub>S-Acetylene and H<sub>2</sub>S-ethylene complexes in Argon Matrices.", Poster Presented, Gordon Research Conference on Molecular Electronic Spectroscopy and Dynamics, Salve Regina University, Newport, RI, 7/28/2002 - 8/2/2002

Samuel A. Abrash, "So I've Got Tenure. Now What?", Workshop Organized, Biennial National Conference, Council on Undergraduate Research, New London, Connecticut, June 19-22, 2002.

Samuel A. Abrash, "How to Get Involved in CUR" Lecture Presented, Biennial National Conference, Council on Undergraduate Research, New London, Connecticut, June 19-22, 2002.

Samuel A. Abrash, Keynote Address for Opening Luncheon, First Annual Undergraduate Research Symposium, Virginia Military Institute, April 19, 2002.

Samuel A. Abrash, "Anomalies in the Photochemistry of Weakly Bound Complexes", Invited Lecture, Virginia Military Institute, Lexington, Virginia, April 18, 2002.

Samuel A. Abrash, "Realistic Ideas to Conduct and Develop Undergraduate Research in Your Department", Invited Talk, Virginia Military Institute, Lexington, Virginia, April 18, 2002.

Samuel A. Abrash "Anomalies in the Photochemistry of Weakly Bound Complexes", Invited Lecture, Department of Chemistry, Virginia Commonwealth University, April 11, 2002.

Samuel A. Abrash, Charles, S. Vaughn, Barrett Woodhall and Michael Lestino, "The Photochemistry of HBr-Allene Complexes in Argon Matrices", Poster Presented, Euroconference Matrix 2001: The Chemistry and Physics of Matrix Isolated Species, Szklarska Poręba, Poland, July 7-13, 2001

Samuel A. Abrash, "Design of a Physical Chemistry Lab Balancing Pedagogical Goals", Poster Presented, Gordon Conference on Innovations in College Chemistry Teaching, Ventura, CA, January 8, 2001.

Samuel A. Abrash, "The Observation of Cooperative Chemistry in the Photolysis of Matrix Isolated Hydrogen Bonded Complexes", Lecture Presented, Project Kaliedoscope Faculty for the 21<sup>st</sup> Century, Tucson, AZ, December 1<sup>st</sup>, 2000.

Samuel A. Abrash, Amy Burroughs, James E. Copenhafer, Ruth Daniels, Braden Giordano, Jannine Haberman, Charles S. Vaughan and Kavitha Vedhanayakam, "Photochemistry of H<sub>2</sub>S-Acetylene and H<sub>2</sub>S-ethylene complexes in Argon Matrices.", Poster Presented, Gordon Research Conference on Molecular Electronic Spectroscopy and Dynamics, New London, New Hampshire, 7/30/2000 - 8/4/2000

Samuel A. Abrash, Amy Burroughs, James E. Copenhafer, Ruth Daniels, Braden Giordano, Jannine Haberman, Charles S. Vaughan, and Kavitha Vedhanayakam, "Photochemistry of H<sub>2</sub>S-Acetylene and H<sub>2</sub>S-ethylene complexes in Argon Matrices.", Poster Presented, Gordon Research Conference on the Physics and Chemistry of Matrix Isolated Species, Plymouth, New Hampshire, July 11-16, 1999.

Samuel A. Abrash, Amy Burroughs, Ruth Daniels, Braden Giordano, Jannine Haberman, and Kavitha Vedhanayakam, "The Use of Inert Gas Matrices in the Observation of Cooperative Photochemical Processes", Poster Presented, Gordon Research Conference on Vibrational Spectroscopy and Molecular Dynamics, Plymouth, New Hampshire, July 26-31, 1998

Samuel A. Abrash, "The Observation of Cooperative Chemistry in the Photochemistry of Matrix Isolated Hydrogen-Bonded Complexes", Lecture Presented, Department of Chemistry, Emory University, Atlanta, GA, January 23, 1998

Samuel A. Abrash, "The Observation of Cooperative Chemistry in the Photochemistry of Matrix Isolated Hydrogen-Bonded Complexes", Lecture Presented, James Franck Institute, The University of Chicago, Chicago, IL, November 25, 1997.

Braden Giordano, Amy Burroughs, Ruth Daniels, Jannine Haberman, Kavitha Vedhanayakam, and Samuel A. Abrash, "Demonstration of Cooperative Chemistry in the Photochemistry of H<sub>2</sub>S-Acetylene Complexes in Argon Matrices", Poster Presented, Conference on Chemistry and Physics in Matrices, Spital am Pyrh, Austria, August 2 - 7, 1997

Samuel A. Abrash, Amy Burroughs, Ruth Daniels, Braden Giordano, Jannine Haberman, and Kavitha Vedhanayakam, "The Use of Inert Gas Matrices in the Study of Cooperative Chemical Processes", Poster Presented, Annual Meeting of the Council on Undergraduate Research, Lafayette College, Easton, PA, June 19-21, 1997.

Samuel A. Abrash, Amy Burroughs, Ruth Daniels, Braden Giordano, Jannine Haberman, and Kavitha Vedhanayakam, "The Use of Inert Gas Matrices in the Study of Cooperative Chemical Processes", Lecture Presented, International Conference on Molecular Spectroscopy, Ohio State University, Columbus, OH, June 15-18, 1997.

Samuel A. Abrash, "The Use of Inert Gas Matrices to Study Cooperative Chemical Processes", Lecture Presented, Gordon Conference on the Physics and Chemistry of Matrix Isolated Species, Plymouth, New Hampshire, July 29 - August 4, 1995.

Samuel A. Abrash, Dora M. Paolucci, Michael T. McMahon, Robert W. Zehner, Jennifer J. Brown, and Katherine W. Gunkelman, "Photochemistry and Dynamics of Weakly Bound Complexes in Inert Gas Matrices", European Science Foundation Conference on the Physics and Chemistry of Matrix Isolated Species, Helsinki, Finland, July 17-22, 1993

Samuel A. Abrash, Jennifer J. Brown, Michael McMahon, Dora M. Paolucci, and Robert Zehner, "Photochemistry and Dynamics of H-Bonded Complexes in Inert Gas Matrices", Biennial conference, Council for Undergraduate Research, Hope College, Holland, MI, June 11-13, 1992

Samuel A. Abrash, Jennifer J. Brown, Michael McMahon, Dora M. Paolucci, and Robert Zehner, "Photochemistry of Complexes: Do Proximity and Geometry Matter?", Virginia Academy of Sciences, University of Richmond, May 22, 1992

Session Chair, Chemistry Section, Virginia Academy of Sciences, University of Richmond, May 22, 1992

Session Chair, Symposium on Undergraduate Physical Chemistry Laboratory Development, Southeast Regional Meeting of the American Chemical Society, November 14, 1991

"Photochemistry of H-Bonded Complexes in Inert Gas Matrices", Poster Presented, Gordon Conference on Physics and Chemistry of Matrix Isolated Species, Plymouth, New Hampshire, July 6 - 13, 1991.

"Photochemistry and Dynamics of Hydrogen Bonded Complexes in Inert Gas Matrices", Lecture Presented, University of Virginia, Charlottesville, VA, January 18, 1991.

"Photochemistry and Dynamics of HX - Acetylene Complexes in Cryogenic Matrices." Lecture Presented, Sigma Xi, University of Richmond, October 9, 1990.

#### Conferences Organized:

Project Kaleidoscope Regional Assembly: Linking Insights about How People Learn to Curricular Reform, University of Richmond, Virginia, October 30 - November 1, 2003

#### Research Students:

Karen Busenlener, WC '91, M.S. in Physical Chemistry, University of Colorado

Lisa Lindstrom, WC '91, M.S. in Physical Chemistry, University of Colorado

Kelly Anne Franks, WC '91

Celia Henry, WC '92, M.S., Analytical Chemistry, University of Pittsburgh

Katherine Gunkelman, WC '95

Dora Paolucci, WC '93, Ph.D. in Physical Chemistry, MIT, 1998, Awarded NSF Predoctoral Fellowship

Michael McMahon, RC '93, Ph. D. in Physical Chemistry, University of Illinois

Jennifer Brown, WC '93

Robert Zehner, RC '94, Ph.D. in Physical Chemistry, University of Chicago

Jeanine McHugh, WC '94

Bevin Doletski, WC '94

Amy Norris, WC '95, Ph. D. in Physical Chemistry, Emory University

Ruth Daniels, WC '95

Jennifer Jackiw, WC '96, Ph. D. in Physical Chemistry, Pennsylvania State University

Meredith Ebert, WC '96

Christian Parrish, RC 96

Ben Chadwick, RC '97

Jannine Haberman, WC '97, Graduate Student in Organic Chemistry, University of Illinois

Steven Messner, RC '97

Elva van Devender, WC '97, Graduate Student in Organic Chemistry, University of Virginia

Kavitha Vedhanayakam, WC '97, Graduate Student in Organic Chemistry, University of Florida

Aaron Baxter, RC '98

Lauren Durante, WC '98

Braden Giordano, RC '98, Graduate Student in Chemistry, University of Virginia

Sarah Zagurksi, WC '98, Graduate Student in Physical Chemistry, University of Colorado

Amy Barkley, WC '99

Maria Robinson, WC '99

Emily Plenge, WC '99

John Williams, RC '99

Laura Cacho, Thomas Jefferson Governor's School, Richmond, VA

Frank Foss, RC '99

Kieth Zientek, RC '99, Graduate Student in Analytical Chemistry, University of Florida

Karen Baswell, WC '00



Tim Caraher, RC '00

Jim Copenhafer, RC '00, Graduate Student in Physical Chemistry at the University of Pittsburgh

Chad Vaughan, RC '00

Amy Rowe, WC '00 (Joint with E. Casillas)

Barrett Woodhall, , RC '01

Jennifer H. Miller, WC '01, Graduate Student in Physical Chemistry, University of Chicago

Jamie Bigelow, WC '01

Michael Overstreet, RC '01

Michael Lestino, RC '03

Stephanie Smith, WC '04, Nursing Student, Duke University

Cailin Delaney, WC '04

Ericka Mauro, WC '04

Leigh Jason, WC '05

Justin Clar, RC '06

Kyle Alexander, RC '06

Anthony Hargrave, RC '06

Ruthie Byrne, WC '06

Kat Miner, WC '07

Christie Yankowski, WC '07

Jodi Cohen, WC '07

Sarah Remmert, WC '07

Beatrice Grasu, WC '07

Chris Sica, RC '07

#### Presentations by Research Students:

Braden Giordano, "The Photochemistry of H<sub>2</sub>S-Acetylene Complexes in Argon Matrices: Evidence for Cooperative Chemistry", NCUR, April 1998

John Williams, "A Proposed Synthesis for 2,2 Dideutero Vinyl Bromide", NCUR, April 1998

Braden Giordano, "The Photochemistry of H<sub>2</sub>S-Acetylene Complexes in Argon Matrices: Evidence for Cooperative Chemistry", University of Richmond Undergraduate Research Symposium, April 1998

"Photochemistry of Weakly Bound Hydrogen Sulfide-Acetylene Complexes in an Argon Matrix", Kavitha Vedhanayakam and Braden Giordano, U.R. Research Symposium, Spring 1997

"Computer Simulations of Gas Phase Reactions of HBr with Acetylene", Meredith Ebert and Samuel A. Abrash, ACS Virginia Section Undergraduate Poster Session, Spring 1995

"Photochemistry of H<sub>2</sub>S-Acetylene Complexes in Argon Matrices", Janine Haberman, Ruth Daniels and Samuel A. Abrash, U. R. Research Symposium, Spring 1995

"Computer Simulations of Gas Phase Reactions of HBr with Acetylene", Meredith Ebert and Samuel A. Abrash, U. R. Research Symposium, Spring 1995

"A Proposed Synthesis for Perdeuteropropyne", Jennifer J. Jackiw and Samuel A. Abrash, U.R. Research Symposium, Spring 1994

"Photochemistry of HI-O<sub>2</sub> Complexes in Argon Matrices", Amy L. Norris and Samuel A. Abrash, U.R. Research Symposium, Spring 1994

"Computer Simulation of the Thermal Dissociation of Vinyl Bromide", Robert W. Zehner and Samuel A. Abrash, U.R. Research Symposium, Spring 1994

"Photochemistry of HI and Dimethylacetylene in Inert Gas Matrices", Bevin Doletski and Samuel A. Abrash, U.R. Research Symposium, Spring 1994

"Photochemistry of H<sub>2</sub>S-acetylene complexes in Argon Matrices", Ruth Daniels and Samuel A. Abrash, U.R. Research Symposium, Spring 1994

"Photochemistry and Dynamics of HI-ethylene Complexes in Argon Matrices.", Jeanine McHugh, and Samuel A. Abrash, U.R. Research Symposium, Spring 1994

"Photochemistry of HI-C<sub>2</sub>H<sub>4</sub> Complexes in Argon Matrices", Jennifer J. Brown, Dora M. Paolucci and Samuel A. Abrash, UR Research Symposium, Spring 1992

"Photochemistry of HBr-C<sub>2</sub>H<sub>4</sub> Complexes in Inert Gas Matrices", Michael T. McMahan, Robert W. Zehner and Samuel A. Abrash, UR Research Symposium, Spring 1992

"Photochemistry and Kinetics of HBr-Acetylene Complexes in Krypton Matrices", S. A. Abrash, M. T. McMahan, and R. W. Zehner, Student Poster Session, University of Virginia, Spring 1992.

"Photochemistry and Kinetics of HI-Ethylene Complexes and their Deuterated Analogs in Argon Matrices", D. M. Paolucci, J. J. Brown and S. A. Abrash, Student Poster Session, University of Virginia, Spring 1992.

Committees and Service:

Chair, TFUGE Curriculum Sub-Committee, Spring 2004 – Spring 2005`

Academic Computing Committee, Fall 1998 – Spring 2001; Chair, Fall 1999 – Spring 2001

Chair, Ad-Hoc Committee on the Jewish Studies Minor, Fall 1999 - 2001.

General Education Committee, Fall 1995-Spring 1997, Fall 2000 – Fall 2003

Freshman-Sophomore Advisor, Richmond College. Fall 1991 - present. Dean Stephen Bisese, Chair

University Scholars Advisor Fall 1996 –Spring 1997

Hot Line Advisor, Summer 1996

Faculty Research Committee, Spring 1994 - Spring 1995. Professor Julie Hayes, Chair, Spring 1995, Professor Craig Kinsley, Chair, Fall 1994- Spring 1995.

Undergraduate Research Committee. Fall 1992 - Spring 1995. Associate Dean Joan Gurney, Chair, Fall 1992 - Fall 1994. Associate Dean David Evans, Chair, Spring 1995

Interdisciplinary Studies Committee. Fall 1992 - Spring 1995. Professor Steven Barza, Chair

Curriculum Committee Subcommittee on the Science Requirement. Fall 1991 to Spring 1992. Emma Goldman, Chair.

Non-committee reader, University Scholars Program. Spring 1991, Spring 1992, Spring 1993. Professor Fred Kozub, Chair

Department Honors Coordinator - Fall 1992 - present.

Advisor: Gamma Sigma Epsilon Chemistry Honor Society Fall 1990 to 1997

Executive Vice President - Gamma Sigma Epsilon Chemistry Honor Society, 1993-1995

Executive President - Gamma Sigma Epsilon Chemistry Honor Society, 1995 - 1997

#### Outside Leadership and Service Roles:

Panelist for NSF CRIF, MRI, URC, CCLI and ROLE programs

Reviewer, ACS Books

Reviewer, Journal of Physical Chemistry

Reviewer, Journal of Chemical Physics

Reviewer, Journal of Atmospheric Chemistry

Reviewer, The Chemical Educator

Outside Reviewer for Research Grants, Petroleum Research Fund, Research Corporation

Councilor, Chemistry Council, Council on Undergraduate Research, 1997- ; Co-chair, Membership committee, 1999-2003 ; Chair, Posters on the Hill, 2000 -; Secretary/Chair-Elect Chemistry Division, 2001 -3, Chair, Chemistry Division, 2003-2005 .

New Faculty Mentor, Chemistry Council, Council for Undergraduate Research

CUR Consultant; Three Consultancies, One at Truman State University

Organizer, Symposium on New Faculty Issues, CUR National Meeting, Summer 1994; Organizer, Workshop: "So I've Got Tenure. Now What?", CUR National Meeting, Summer 2000, Summer 2002, Summer 2004.

Member, Project Kaleidoscope Faculty for the 21<sup>st</sup> Century, 1997-

Steering Committee, Conference on Physics and Chemistry of Matrix Isolated Species, 2003-

Member, University Services Advisory Committee, Richmond, Jewish Community Center, 1994-1996; Chair 1996-2000.

Member, Board of Directors, Richmond Jewish Community Center, 1996 -2002, 2003-

Member, Board of Directors, Huguenot Little League, 2005-; VP for Coach Pitch Baseball 2005 –

Secretary-Treasurer, University of Richmond Club of Sigma Xi National Honor Society, 1991-1993

President Elect, University of Richmond Club of Sigma Xi National Honor Society, 1993-4

President, University of Richmond Club of Sigma Xi National Honor Society, 1994-1998

Judge, Classic Competition, Henrico Public Schools