

CURRICULUM VITAE

August 15, 2011

James Michael LoBue
Associate Professor of Chemistry
Department of Chemistry

Georgia Southern University
P. O. 8064
Statesboro, GA 30460

EDUCATION

Wesleyan University, Middletown, CT, Ph.D., 1986
Field: Chemistry
Thesis title: The Structure of HCl-BF₃ by Molecular Beam
Electric Resonance Spectroscopy
Advisor: Stewart E. Novick

The University of Chicago, Chicago, IL
Enrolled as graduate student 1978

Carleton College, Northfield, MN, B.A., cum laude 1978
Major: Chemistry

EMPLOYMENT

Georgia Southern University, Department of Chemistry
Post Office Box 8064
Statesboro, GA (**August 2003-present**)
Position: Associate Professor of Chemistry

Georgia Southern University, Department of Chemistry
Post Office Box 8064
Statesboro, GA (**September 1993-July 2003**)
Position: Assistant Professor of Chemistry

Ursinus College, Department of Chemistry
Collegeville, PA (Sept 1988-June 1993)
Position: Assistant Professor of Chemistry

Yale University, Department of Chemistry, (June 1986-July 1988)
Position: Post-Doctoral Associate

The MacDuffie School for Girls, Springfield, MA (1979-1980)
Position: Teacher of science and mathematics

HONORS AND AWARDS

Allen E. Paulson College of Science and Technology Award for Excellence in Service (2007)

RSEC Visiting Research Fellow, The University of Tennessee, Knoxville, TN. Dr. John Lares, RSEC Host. (summer 2004 and 2005)

Georgia Southern University, Promotion to Associate Professor (2003)

Georgia Southern University, Granted Tenure (1998)

Emerson Center Visiting Fellow 1994-95 Chemistry Department, Emory University (summer 1994).

State of Connecticut High Technology Scholar (1983 – 1986)

GRANTS AWARDED

NSF/MRI – January 2012 – Co-PI “A MALDI Spectrometer at Georgia Southern” A successful proposal that brought a Bruker MALDI instrument to the department.

NSF/Noyce – August 2009 – \$9659 Supplemental Award.

NSF/Noyce – April 2008 – \$749,988

A 5 year grant to fund a scholarship program for perspective science teachers with COST majors. (PI with Co-PIs: Michelle Cawthorn, Joy Darley, Marlynn Griffin, and Brian Koehler)

February, 2007. Submitted to the Faculty Development Committee for **travel** to the American Chemical Society meeting to give a presentation on the use of POGIL in the physical chemistry classroom. \$390.

September, 2006. Submitted to the Faculty Development Committee to support the development of laboratory activities in the physical chemistry curriculum at Georgia Southern. \$4499.65.

Ocean Optics – September 2006 – \$2022.49

“Electronic Spectroscopy For Physical Chemistry Students Using Ocean Optics Spectrometers.” This was a “Cost Share” grant from the company. A partner grant was written internally for the Faculty Development fund that covered the balance of the budget for the project. (PI)

February 2004 “Photochemistry of Substituted Porphyrins” Submitted to the Faculty Research Committee to support my research at Georgia Southern University, \$2125.56.

PRISM – November 2004 – \$4,992

“Catalyzing Excitement for High School Chemistry and Physical Science” a proposal to create a course that will help teachers understand how to accommodate the new Georgia Performance Standards into their lesson plans. Specifically, the proposal will focus on the use of hands-on Computer-Based Laboratory (CBL) equipment. (PI with 4 Co-PIs including Dr. Brian Koehler)

PUBLICATIONS

LoBue, James M. and Aiken, Karelle S. "A Comparison of (*E*)- and (*Z*)-Alknylated Furanylidene Building Blocks using Computational Methods" Manuscript in preparation for submission to the Journal of Physical Organic Chemistry. 2013

Valentin Soloiu, April Covington, Jeffery Lewis, Jim LoBue Performance of JP-8 in a Small Bore Indirect Injection Diesel Engine for APU Applications, **SAE 2012 World Congress & Exhibition**. (Accepted Abstract 2012)

Yoshio Tatamitani, Akinori Sato, Yoshiyuki Kawashima,* Nobukimi Ohashi, James M. LoBue and Eizi Hirota "Rotational spectrum of the Ar–dimethyl sulfide complex" *Journal of Molecular Spectroscopy* 257 (2009) 11-19.

LoBue, James M.; Koehler, Brian P. "Let's Teach Kinetics First." A chapter in Physical Chemistry Curriculum Reform: Where Are We Now and Where Are We Going?; Ellison, M., Schoolcraft, T., Eds.; ACS Symposium Series 973; American Chemical Society: Washington, DC, 2007, p280-297.

James M. LoBue, et. al., "The Advanced High School Chemistry Exam, 2004," This exam is published under the aegis of the American Chemical Society Exam Institute.

James M. LoBue, "An Introduction to Huckel Theory," *Journal of Chemical Education*, 2002 79(11) 1378. A "Live" Mathcad document that constitutes my manuscript is currently published on the Mathcad in Physical Chemistry website.

James M. LoBue, et. al., "The Advanced High School Chemistry Exam, 2002," This exam is published under the aegis of the American Chemical Society Exam Institute.

S. Todd Deal, Brenda Wojciechowski, James LoBue, Jessica N. Orvis, Norman Schmidt, and Jeffery A. Orvis, "Structure, Reactivity, and Applications: General Chemistry Reform at a Mid-Sized Public University", *The Chemist* May/June, 1996, 3.

Ranck, J. R., Schoolcraft, T., LoBue, J. M. "HyperChem for Windows" *Council on Undergraduate Research Newsletter* 1993 13, 65.

Grant, K. J.; Hight, A. R.; Novick, S. E.; Bohn, R. K.; Qi, L.; Wheeler, T.; LoBue, J. M. "Microwave Determination of the Structure of the Cs Conformation of Dipropyl Ether" *Journal of Physical Chemistry* 1993 97, 6979.

Savett, S. C.; Lee, S. M.; Bradley, A. Z.; Kneizys, S. P.; LoBue, J. M.; and Middleton, W. J., "Microscale Electrolytic Fluorinations of 4-Nitrotoluene: Cell Construction, Computer Monitor and Control, and Chemistry" *Microchemical Journal* 1993 48, 192.

Boyle, J.; Pfefferle, L.; LoBue, J.; Colson, S., "Microreactor Coupled with Laser-Generated VUV Photoionization for Pyrolysis and Combustion Studies: Pyrolysis of Ethyl Acetylene" *Combustion Science and Technology* 1990 70, 187.

Li, L.; Lipert, R.; LoBue, J.; Chupka, W.; and Colson, S., "Adiabatic Dissociation of Photo Excited Chlorine Molecules" *Chemical Physics Letters* **1988** 151, 4, 325.

LoBue, J. M.; Rice, J. K.; Blake, T. A.; and Novick, S. E.; "Determination of the Structure of HCIBF₃" *Journal of Chemical Physics* **1986** 85, 4261.

Blake, T. A.; Smilgys, R. V.; LoBue, J. M.; Schiffman, A. P.; Novick, S. E. "Fluorescence of Dissociating Fragments from Supersonic Jet--Electron Collisions" *Chemical Physics* **1985** 95, 283.

LoBue, J. M.; Rice, J. K.; Novick, S. E. "Qualitative Structure of (CO₂)₂ and (OCS)₂" *Chemical Physics Letters* **1985** 112, 376.

PRESENTATIONS

Michelle Cawthorn, Joy Darley, Marlynn Griffin, Brian Koehler, James M. LoBue "**Lessons from Losses: Case studies of scholars who left the program,**" A poster presented at the AAAS/Noyce Annual Summer Conference in Washington, DC May 2013.

William Coggins², Adegboye Adeyemo¹, and James M. LoBue², "**Photolysis Study of Vanillin Tetraphenylporphyrin**" ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. A poster presentation made at the 245th Spring National ACS meeting in New Orleans in April 2013.

Michelle Cawthorn, Joy Darley, Marlynn Griffin, Brian Koehler, and James LoBue "Bridging the Gap With Integers and Fractions" A poster presented at the AAAS/Noyce Annual Summer Conference in Washington, DC May 2012.

Adegboye Adeyemo¹, James M. LoBue², and Matthew Campbell² "Photochemical Properties of Di-Substituted Porphyrins" ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. A poster presentation made at the SERMACS meeting in Richmond, VA in November 2011.

Adegboye Adeyemo¹, Jonathan Bookout^{*2}, James LoBue² PHOTODYNAMIC PROPERTIES OF 5,10,15,20-TETRAKIS-(3,4-DIFLUOROPHENYL) PORPHYRIN, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. An oral presentation made as a part of the annual Honors Symposium at Georgia Southern University, April 2011.

Adegboye Adeyemo¹, Audrey K. Hobbs^{*2}, James LoBue² STABILITY AND PHOTOLYZING CAPABILITY OF TETRAPHENYL PORPHYRINS, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. An oral presentation made at the Southeast Undergraduate Research Conference (SURC) at Georgia Southern University, April 2011.

Adegboye Adeyemo¹, Matthew Campbell*², James LoBue² ANALYSIS OF PHOTOLYTIC BEHAVIOR OF TETRAPHENYL PORPHYRINS, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. An oral presentation made at the Southeast Undergraduate Research Conference (SURC) at Georgia Southern University, April 2011.

Adegboye Adeyemo, Matthew Campbell, and James LoBue, PHOTODYNAMIC PRPERTIES OF FLUORINATED TETRAPHENYL PORPHYRIN a poster given at the SE/SW Regional ACS meeting in New Orleans, November 2010.

James M. LoBue, "Investigations of Potential Photodynamic Therapy Agents" Oral presentation given to the Statistics Seminar series at Georgia Southern University, August 2010.

Michelle Cawthorn, Joy Darley, Marlynn Griffin, Brian Koehler, James M. LoBue "Partner-Scholar- Intern-Ship: a SMART Idea!" a poster given at the annual national NSF/AAAS Noyce Conference in Washington, D. C. July 2010.

Adegboye Adeyemo¹, Jonathan Bookout*², Benjamin Callahan², Donovan Tucker², James LoBue², PHOTODYNAMIC PROPERTIES OF 3,4-DIFLUOROTETRAPHENYL PORPHYRIN**, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. Oral presentation at the 2010 meeting of the Georgia Academy of Sciences.

Kyle Mascaritolo and James LoBue, RAMAN SPECTROSCOPIC STUDY OF VARIOUS BIOFUEL SAMPLES, Department of Chemistry Georgia Southern University, Statesboro, GA 30460. Oral presentation at the 2010 meeting of the Georgia Academy of Sciences.

Adegboye Adeyemo¹, Jonathan Bookout², Benjamin Callahan², Donovan Tucker*², James LoBue², CONTROL STUDIES OF PHOTODYNAMIC ACTIVITY OF 2,3,4-TRIFLUOROTETRAPHENYL PORPHYRIN**, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. Oral presentation at the 2010 meeting of the Georgia Academy of Sciences.

Adegboye Adeyemo¹, Jonathan Bookout², Benjamin Callahan*², Donovan Tucker², James LoBue², PHOTODYNAMIC PROPERTIES OF 2,4-DIFLUOROTETRAPHENYL PORPHYRIN**, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. Oral presentation at the 2010 meeting of the Georgia Academy of Sciences.

Adegboye Adeyemo¹, Nneamaka Enweani², Zachary Gardner*², Donovan Tucker², James LoBue², PHOTOCHEMICAL ANALYSIS OF SUBSTITUTED TETRAPHENYL PORPHYRIN DYES: TETRA AND PENTAPHENYL SUBSTITUTION**, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. Oral presentation at the 2009 meeting of the Georgia Academy of Sciences.

Adegboye Adeyemo¹, Nneamaka Enweani*², Zachary Gardner*², Donovan Tucker², James LoBue², PHOTOCHEMICAL ANALYSIS OF SUBSTITUTED TETRAPHENYL PORPHYRIN DYES: DIFLUOROPHENYL SUBSTITUTION**, ¹Savannah State University Department of Natural Science and Mathematics, Savannah, GA 31404 and ²Department of Chemistry Georgia Southern University, Statesboro, GA 30460. Oral presentation at the 2009 meeting of the Georgia Academy of Sciences.

Adegboye O. Adeyemo, Natasha M. Farmer, Donovan G. Tucker, **James M. LoBue** “Analysis of Fluorinated Tetraphenyl Porphyrins for Photodynamic Activity.” A poster presented at the 60th Southeast Regional Meeting (SERMACS), Nashville, TN, Nov 12, 2008.

James M. LoBue, “POGIL in Physical Chemistry: Getting Started,” An oral presentation made at the 233rd meeting of the American Chemical Society in Chicago, March 25, 2007.

Karen Chassereau, Twila Durden, Mary-Ann Stanley, Brian Koehler, and James M. LoBue, “CBL in the Classroom,” a workshop presented during the spring semester 3007 to middle and high school teachers, funded by PRISM.

James M. LoBue, “The average of a continuous variable and the expectation value,” Georgia Southern University, Department of Chemistry, Statesboro, Georgia 30460. A paper given at the 58th Southeast Regional Meeting of the American Chemical Society (SERMACS) November 3, 2006.

Adegboye Adeyemo*, Drew Hayes, Herb Wood, James M. LoBue, “Photochemical Properties of Several Tetra-substituted Porphyrins,” Georgia Southern University, Department of Chemistry, Statesboro, Georgia 30460; *Savannah State University, Department of Natural Science and Mathematics, Savannah, Georgia 31404. A poster presentation made at the 231st National ACS meeting in Atlanta, GA, March 2006.

Karen Chassereau, Twila Durden, and Mary-Ann Stanley (Metter High School) and Brian Koehler and J. M. LoBue (Georgia Southern) “Catalyzing Excitement in the Science Classroom with CBL Technology,” An oral presentation made at the INET Conference in Augusta, GA, April 23-26, 2006.

David Robinson and J. M. LoBue “The Knowledge Surveyor Project” A presentation to the PRISM Institute for the East-Central Region, Savannah, Georgia, January 2006.

J. M. LoBue “Learning Communities” A presentation given to the “RISE-RIG” group at Georgia Southern, November, 2005.

Twila Durden, Karen Chassereau, and Mary-Ann Stanley (Metter High School) and J. M. LoBue and Brian Koehler (Georgia Southern) “The Laboratory Science Learning Community” A presentation to the PRISM Institute for the East-Central Region, Savannah, Georgia, September 2005.

J. M. LoBue “Let’s Do Kinetics First” Georgia Southern University, Statesboro, GA 30460. An oral presentation made at the 230th National Meeting of the American Chemical Society, Washington, D. C., (talk #67, Div. of Physical Chemistry) August 29, 2005.

S. T. Deal and J. M. LoBue “Reading, Writing About, and Discussing Chemical Research: A Capstone Seminar” Georgia Southern University, Statesboro, GA 30460. An oral presentation made at the 230th National Meeting of the American Chemical Society, Washington, D. C., (talk #4, Div. of Chemical Education) August 28, 2005.

Mark Wehunt, Amber Everette, Adegboye Adeyemo*, and James LoBue “Photochemical Properties of Non-Benzenoid Tetrasubstituted Porphyrins” Georgia Southern University Department of Chemistry, Statesboro, Georgia 30460 and *Savannah State University, Department of Natural Science and Mathematics, Savannah, Georgia 31404. An oral presentation made by Wehunt at the Annual Meeting of the Georgia Academy of Science, Gordon College, Barnesville GA, April 1, 2005.

Amber Everette, Mark Wehunt, Adegboye Adeyemo*, and James LoBue “Photochemical Properties of Substituted Tetraphenyl Porphyrins” Georgia Southern University Department of Chemistry, Statesboro, Georgia 30460 and *Savannah State University, Department of Natural Science and Mathematics, Savannah, Georgia 31404. An oral presentation made by Everette at the Annual Meeting of the Georgia Academy of Science, Gordon College, Barnesville GA, April 1, 2005.

Adegboye Adeyemo *, Amber Everett, Mark P. Wehunt, James M. LoBue “Photochemical Properties of Several Tetra-Substituted Porphyrins” Georgia Southern University, Department of Chemistry, Statesboro, Georgia 30460 and *Savannah State University, Department of Natural Science and Mathematics, Savannah, Georgia 31404. A poster presentation given at the 56th annual meeting of the American Chemical Society, Southeast Region, SERMACS 2004.

Nelson, B., English, J., Lowder, C., LoBue, J., and Edwards M. “Index of Refraction Profile of a Road Mirage,” An oral presentation (by Nelson) given at the Southeast Regional Meeting of the American Physical Society (SESAPS), The University of North Carolina, Wilmington, November 7, 2003.

Gaither, F. and LoBue, J. “Photochemical Properties of a Series of Porphyrin Derivatives” An oral presentation (by Gaither) given at the Annual Meeting of the Georgia Academy of Science, Reinhardt College, March 2003.

LoBue, J. “ Why is Calculus Necessary to Propagate Error?” A poster presentation given at the 223rd ACS National Meeting, Orlando, FL, April 2002.

LoBue, J. “ Why is Calculus Necessary to Propagate Error?” An oral presentation given at the Annual Meeting of the Georgia Academy of Science, Georgia College and State University, Milledgeville, GA, March 2002.

Hughes, M., LoBue, J., and Dobson, A. “The Structure and Analysis of a-Naphthoxy Acetic Acid” A poster presentation given at SERMACS 2001, Savannah, Georgia, September 2001 by Allison Dobson.

Orvis, J. A. and LoBue, J.M., “A Course Devoted to the Computer Skills Every Chemistry Major Needs,” An oral presentation given at the 16th Biennial Conference on Chemical Education (by Jeff Orvis), University of Michigan, Ann Arbor, Michigan, Aug. 1, 2000.

LoBue, J. M., "Molecular Visualization in High School Science," An oral presentation given at the 16th Biennial Conference on Chemical Education, University of Michigan, Ann Arbor, Michigan, Aug. 1, 2000.

LoBue, J. M. and Howard, J., "Web Tools for Teaching Science Without a Web Connection," An oral presentation given at the Annual Georgia Science Teachers Convention, February 24, 2000.

Rice, J. K., LoBue, J.M. "Laser Fluorescence in the Undergraduate Curriculum: Solvent Polarity and Spectroscopy", Invited Seminar, 1999 Fall National Meeting of the American Chemical Society, New Orleans, LA, August 24, 1999. Presented by Jeanette K. Rice.

LoBue, J. M., GSU and Chen, W., Munrow, M. R., and Novick, S. E., Wesleyan University, "The Microwave Structure of Argon-Dimethyl Sulfide." A talk given at the first meeting of the New England Microwave Consortium, (The University of Connecticut) April 1999.

LoBue, J. M. and Orvis, J. A., Georgia Southern, "Research Methods in Chemistry." A talk given at the 217th National Meeting of the American Chemical Society, March 1999.

LoBue, J. M., Georgia Southern, "Teaching With Technology." A talk given to the Georgia Southern section of Sigma Xi, October 1998.

LoBue, J. M., GSU and Chen, W., Munrow, M. R., and Novick, S. E., Wesleyan University, "The Microwave Structure of Argon-Dimethyl Sulfide." A talk given at the annual meeting of the Georgia Academy of Science, (Armstrong Atlantic State University) April 25, 1998.

LoBue, J. M., Georgia Southern, "Microwave Spectroscopy." A talk given to the SAACS club at Armstrong Atlantic State University, March 1998.

LoBue, J. M., Georgia Southern, "Molecular Visualization." A workshop given at West Laurens High School as a professional institute for science teachers, March 25, 1998.

LoBue, J. M., Georgia Southern, "Molecular Visualization in High School Science." A talk given at the Georgia Science Teachers' Association meeting in Atlanta, January 1998.

Dimetry, B. G., Pittman C., and LoBue, J. M., GSU and Chen, W., Munrow, M. R., and Novick, S. E., Wesleyan University, "The Microwave Structure of Argon-Dimethyl Sulfide." A poster presented at SERMACS, Roanoke, VA, October 1997.

LoBue, J. M., "Structure and Reactivity, a Thematic Approach for General Chemistry at a Mid-Sized Public University," A paper presented at the 14th Biennial Conference on Chemical Education, Clemson University, August 1996.

LoBue, J. M., Bell, R. W., and Maxwell, M. R., "A Classic Physical Chemistry Laboratory Experiment: The Semi-Empirical Determination of Delta-pKa and Substituent Effects," A Poster Presented at the 13th Biennial Conference on Chemical Education, Bucknell University, August 1994; paper 58A-14.

LoBue, J. M. and Nelson, R. N. "Analysis of the Ethylacetate Hydrolysis System: A Glimpse at Least Squares in a Non-Linear Context" A Poster Presented at the 13th Biennial Conference on Chemical Education, Bucknell University, August 1994; paper 58A-15.

LoBue, J. M. "A Macintosh-Based Emission Spectrophotometer" Presented at the 204th National Meeting of the American Chemical Society, Washington D. C., Aug. 1992; paper CHED 80.

LoBue, J. M. "Electric Discharge Studies in Upper-Level Laboratories" Presented at the 1992 Meeting of the Pennsylvania Association of College Chemistry Teachers (PACCT), Drexel University, Philadelphia, PA, March 1992; paper 6, session A.

WORKSHOPS ATTENDED

NCSI: Computational Chemistry for Chemistry Educators workshop, Washington and Lee University, July 24 – July 30, 2011.

NCSI: Computational Chemistry for Chemistry Educators workshop, Bethune-Cookman College, Daytona Beach, FL July 29 – August 4, 2007.

The POGIL three-day workshop at College of Charleston, May 2006.

The POGIL one-day workshop at Agnes Scott College, February 8, 2006.

Computational Chemistry Workshop, Georgia Institute of Technology, June 2003, Sponsored by the National Science Foundation (1 week long) Introduction to computational chemistry and to its use in the undergraduate curriculum.

ChemCases Workshop. Kennesaw State University, Kennesaw, Ga, August 1999. Sponsored by the National Science Foundation. (2 days long) Introduction to a general chemistry reform initiative that will be reviewed at Georgia Southern in the spring 2000 semester.

Laser Workshop. James Madison University, Harrisonburg, Va, June 1998. Sponsored by the National Science Foundation. (1 week long) A survey of laser experiments that can be carried out in undergraduate laboratories associated with both upper and lower division courses.

Mathcad Workshop. University of South Alabama, Mobile, Al, August 1997. Sponsored by the National Science Foundation. (1 week long) Intensive overview of the use of this program in the physical chemistry curriculum.

Workstation Workshop. University of North Carolina-Asheville, Asheville, North Carolina, July 1993. Sponsored by the National Science Foundation. (2 weeks long) Hands-on instruction in the use of workstations, their use in higher education and science, and the UNIX operating system.

INTERNAL GRANT WRITING AT GEORGIA SOUTHERN

February, 2007. Submitted to the Faculty Development Committee for **travel** to the American Chemical Society meeting to give a presentation on the use of POGIL in the physical chemistry classroom. \$390.

September, 2006. Submitted to the Faculty Development Committee to support the development of laboratory activities in the physical chemistry curriculum at Georgia Southern. \$4499.65.

“Photochemistry of Substituted Porphyrins” A **successful** proposal submitted to the Faculty Research Committee to support my research at Georgia Southern University, \$2125.56. February 2004.

“What is a Molecule?” A **successful** proposal submitted to the Faculty Service Committee to support the development of a permanent computer-based exhibit in the Natural History Room of the Georgia Southern Museum, February 2000.

“The Structure of Argon-Dimethyl Sulfide,” A **successful** proposal to the Faculty Research Committee that will support a trip to Wesleyan University to conduct experiments on the titled molecule, fall of 1997. \$965.

“*Mathcad* in Undergraduate Chemistry and Mathematics,” A **successful** proposal to the Faculty Development and Welfare Committee co-written with Lila Roberts (Mathematics) that will result in the purchase of 65 copies of the mathematics program *Mathcad*, fall of 1997. \$3500.

“*Mathcad* in the Advanced Undergraduate Curriculum,” A **successful** travel grant written to the Faculty Development and Welfare Committee, spring of 1997. \$312.

“Computational Chemistry in the Physical Chemistry Laboratory,” A **successful** proposal to the Faculty Development and Welfare Committee resulting in the purchase of an updated version of the computational package, “Gaussian,” and an upgraded computer, fall of 1995.

‘The Incorporation of the Maple Symbolic Processing Program into the Physical Chemistry Curriculum,’ A **successful** proposal to the Faculty Development and Welfare Committee resulting in a summer sabbatical, summer of 1994.

“A Computational Study of van der Waals Molecules,” A **successful** proposal to the Faculty Research Committee resulting in \$1000 worth of computer hardware that has upgraded the Physical Chemistry Laboratory computer for research purposes (spring 1994).

“A Modern Data Acquisition Capability in the Physical Chemistry Laboratory,” A **successful** proposal (cowritten with Dr. Robert N. Nelson) to the Faculty Development and Welfare Committee resulting in nearly \$1700 to purchase the titled equipment, fall of 1993.

EXTERNAL GRANT WRITING AND DEVELOPMENT

NSF/MRI – January 2009, Acquisition of Instrumentation for Multidisciplinary Research for Biofuels Combustion, As “Key Personnel” with Dr. Valentin Soloiu (PI) and three other Co-PIs. (Not funded summer 2009)

State of Georgia Teacher Quality Grant competition, January 2009, “Laboratory Technology in the 21st Century Science Classroom,” Co-PI with Ms. Karen Chassereau (PI) (Rejected March 2009).

DOE – Sept 2008 – \$17,000,000 as Co-PI with Dr. Valentin Soloiu (PI) and four other Co-PIs. A Center for the Study of Biofuels at Georgia Southern University. (Rejected April 2009)

NSF/CCLI – June 2008 – \$83,000 as Co-PI with Dr. Allison Long (PI), and Dr. Brian Koehler (Co-PI) “----“ (Rejected Nov 2009)

NSF/Noyce – April 2008 – \$749,988

A 5 year grant to fund a scholarship program for perspective science teachers with COST majors. (PI with Co-PIs: Michelle Cawthorn, Joy Darley, Marlynn Griffin, and Brian Koehler), Successful.

State of Georgia Teacher Quality Grant competition, January 2008, “Laboratory Technology in the 21st Century Science Classroom,” Co-PI with Ms. Karen Chassereau (PI) (Rejected March 2008).

Ocean Optics – September 2006 – \$2022.49

“Electronic Spectroscopy For Physical Chemistry Students Using Ocean Optics Spectrometers.” This was a “Cost Share” grant from the company. A partner grant was written internally for the Faculty Development fund that covered the balance of the budget for the project. (PI)

PRISM- November 2004- Successful: \$4,992

“Catalyzing Excitement for High School Chemistry and Physical Science” a proposal to create a course that will help teachers understand how to accommodate the new Georgia Performance Standards into their lesson plans. Specifically, the proposal will focus on the use of hands-on Computer-Based Laboratory (CBL) equipment.

Eisenhower- January 1999- Successful: \$10,000

“Molecular Visualization in High School Science” a renewal of an earlier successful proposal that will show teachers how to demonstrate molecular structures on the web.

OIIT- May 1998- Successful: \$12,000

“Research Methods in Chemistry” a model course for undergraduate Chemistry Programs. (with Dr. Jeff Orvis)

OIIT- May 1997- Successful: \$14,000

“Molecular Visualization and Presentations” a course enhancement project for high school science teachers.

Eisenhower- January 1997- Successful: \$13,650

NSF/ILI- November 1996- Successful: \$136,559.80

A proposal to bring a laser-based spectrometer to the Chemistry Department (Co-PI)

AXIL Computers- April 1996- Successful: donation of a \$6,967 computer workstation, matched by the Board of Regents.

HONORS AND AWARDS

Allen E. Paulson College of Science and Technology Award for Excellence in Service
(2007)

RSEC Visiting Research Fellow, The University of Tennessee, Knoxville, TN. Dr. John Larese,
RSEC Host. (summer 2004 and 2005)

Emerson Center Visiting Fellow 1994-95 Chemistry Department, Emory University (summer
1994).

State of Connecticut High Technology Scholar (1983 – 1986)

MEMBERSHIPS

American Chemical Society 1977 – present

Editor of “The Noble Gas,” Local ACS Section (Coastal Georgia) 2009-present

Coeditor of “The Noble Gas,” Local ACS Section (Coastal Georgia) 2006-2009

Member-at-Large 2006-present

The 53rd Southeast Regional Meeting of the American

Chemical Society (September 2001):

Exhibits Chair

Physical Chemistry Program Chair

Co-Organizer- “The Interaction of Ab Initio
Theory with Experiment”

Chair (Coastal Empire Section) 2000

Chair Elect (Coastal Empire Section) 1999

American Physical Society 1981 -- present

Sigma Xi 1986 – present

Vice President (local section) 1998-99

President (local section) 1999-2000

Georgia Academy of Sciences 1995 -- present

Secretary (Chemistry Section) 1995-1996

Chair (Chemistry Section) 1996-1997

Secretary (Chemistry Section) 1997-1998

Councillor-At-Large 1998-2001

Secretary (Chemistry Section) 2009-2011

GSTA (Georgia Science Teachers' Association) 1997- present