

RANDOLPH K. LARSEN, III
St. Mary's College of Maryland
Department of Chemistry & Biochemistry

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St. Mary's City, MD 20686
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(fax) 240-895-4996
orcid.org/0000-0003-0892-0074

Education: **Ph.D. Marine-Estuarine and Environmental Science, 2002**
Area of Specialization: Environmental Chemistry
University of Maryland, College Park Maryland
Dissertation: Atmospheric Exchange of PAHs, PCBs and Ammonia with the Chesapeake Bay

M.S., Civil (Environmental) Engineering, 1997
The University of Oklahoma, Norman Oklahoma
Thesis: A Study of Air Pollution in Oklahoma from 1992-1995

B.E., Chemical Engineering, 1991
Vanderbilt University, Nashville Tennessee

Professional Experience:

2016-Present **Professor of Chemistry, St. Mary's College of Maryland (SMCM)**

2017-Present **Environmental Studies Program Coordinator, SMCM**

2021-Present **Marine Science Program Coordinator, SMCM**

2012-2016 **Chair, Department of Chemistry & Biochemistry SMCM**

2009-2016 **Associate Professor of Analytical Chemistry, SMCM**

2003-2009 **Assistant Professor of Analytical Chemistry, SMCM**

2002-2003 **Visiting Assistant Professor of Chemistry, SMCM**

Courses Taught:

CORE 101

General Chemistry I & II w/labs (CHEM 103, 105 & 106),

Introduction to Environmental Science (ENST250)

Quantitative Analysis w/lab (CHEM 305),

Instrumental Analysis w/lab (CHEM 306)

Topics in Environmental Chemistry (CHEM 480),

Contemporary Chemistry w/lab (CHEM 101),

Undergraduate Directed Research (CHEM 399),

Senior Research Projects (CHEM 493/494) (8 credit/two semester project)

Spring 2003 **Adjunct Chemistry Professor, College of Southern Maryland, Leonardtown, MD**

1997-2002 **Graduate Research Assistant, Chesapeake Biological Laboratory, Solomons, MD.**

Fall 1996 **Teaching Assistant, CEES, University of Oklahoma, Norman, OK.**

1996 **Air Quality Compliance Specialist, Tinker Air Force Base, OK.**

Fall 1995 **Graduate Research Assistant, CEES, University of Oklahoma, Norman, OK.**

1994-1995 **HAZMAT Instructor, U.S. Army Environ. Trng. Ctr., Ft. Sill, OK.**

1993-1994 **Shift Technical Engineer, Westinghouse Savannah River Company, Aiken, SC.**

1991-1993 **Environmental Engineer, Westinghouse Savannah River Company, Aiken, SC.**

Peer Reviewed Journal Articles: (Undergraduate Authors are underlined.)

Bowers, G. M., R. K. Larsen and K. Y. Neiles. Scholarship-based undergraduate laboratory courses modeled on a graduate school research rotation. *Journal of Chemical Education*, **DOI:** 10.1021/acs.jchemed.1c00009.

Luek, J. L., K. E. Thompson, R. K. Larsen, A. Heyes and M. Gonsior. Sulfate Reduction in Sediments Produces High Levels of Chromophoric Dissolved Organic Matter. *Scientific Reports* **7**(1): 8829, 2017.

R.K. Larsen, N.R. Coluzzi and A. Consentino, Free XRF spectroscopy database of Pigments Checker, *International Journal of Conservation Science*, **7** (3) July-September 2016: 579-588.

R. B. Coffin, J. P. Smith, R. E. Plummer, B. Yoza, R. K. Larsen, L. C. Millholland and M. T. Montgomery, Spatial variation in shallow sediment methane sources and cycling on the Alaskan Beaufort Sea Shelf/Slope, *Marine and Petroleum Geology*, **45**: 186-187, 2013, **DOI:** 10.1016/j.marpetgeo.2013.05.002

W. R. Boynton, J. D. Hagy, J. C. Cornwell, W. M. Kem, S. M. Green, M. Owens, J. E. Baker, and R. K. Larsen, Nutrient Budgets and Management Actions in the Patuxent River Estuary, Maryland, *Estuaries and Coasts*, **31** (4): 623-651, 2008, **DOI:** 10.1007/s12237-008-9052-9

Larsen, R. K., M. Schantz, and S. Wise, Determination of Levoglucosan in Particulate Matter Reference Materials, *Aerosol Sci. Technol.* **40** (10): 781-787, 2006, **DOI:** 10.1080/02786820600596909

Larsen R. K. and J. E. Baker, Source Apportionment of Polycyclic Aromatic Hydrocarbons in the Urban Atmosphere: A Comparison of Three Methods, *Environ. Sci. & Technol.* **37** (9): 1873-1881, 2003.

Larsen R. K., Steinbacher, J. C., and J. E. Baker, Ammonia Exchange between the Atmosphere and the Surface Waters at Two Locations in the Chesapeake Bay, *Environ. Sci. & Technol.*, **35** (24): 4731-4738, 2001.

Bamford, H.A., Offenberg, J. H., Larsen, R. K., Ko, F. C. and J. E. Baker, Diffusive Exchange of Polycyclic Aromatic Hydrocarbons and Polychlorinated Biphenyls Across the Northern Chesapeake Bay Adjacent to the City of Baltimore, *Environ. Sci. & Technol.*, **33** (13): 2138-2144, 1999.

Peer Reviewed Electronic Publications: (Undergraduate Authors are underlined.)

A. Boyd and R. Larsen, Burning Down the House: A case study for undergraduate instrumental analysis. *National Center for Case Study Teaching in Science*, http://www.sciencecases.org/burning_house/burning_house.asp, 2005

Peer Reviewed Technical Reports:

T.J. Boyd, R.K. Larsen, K.J. Wahl, Assessing Friction Stress on a Liquid Lubricant by Stable Isotope Analysis, Naval Research Laboratory, Washington DC, NRL/MR/6110--14-9538. 2014

R.V. Lacouture, R.K. Larsen and J. T. Anderson, Susceptibility of Eastern Oyster Early Life Stages to Road Surface Polycyclic Aromatic Hydrocarbons (PAHs), Morgan State University National Center for Transportation Management, Research and Development, 2012.

R.B. Coffin, L.J. Hamden, J.P. Smith, R. Plummer, L. Millholland, R. Larsen, W. Wood, Beaufort Sea Methane Hydrate Exploration: Energy and Climate Change, NRL/MR/6110—11-9330. 2011

J.T. Anderson, R.K. Larsen and R.V. Lacouture, Assessing the Magnitude of Polycyclic Aromatic Hydrocarbon Loading From Road Surface Runoff and Its Effect on Algal Productivity, Morgan State University National Center for Transportation Management, Research and Development, 2010.

Mentored Student Peer Reviewed Publications

K. Siregar, XRF Elemental Analysis of Morgan Jones Ceramics, *J. Middle Atlantic Archaeology*, (30) 2014

Invited Presentations:

(Presenters are Underlined)

R. Larsen, *Health effects of climate change on the Mid-Atlantic region*, Public Health Hero's Breakfast, St. Mary's County, MD 2008.

R. Larsen, *Flame Retardants in Fish: An Emerging Issue of Environmental Concern*. Evenings with the Professors, Solomons, MD 2005.

R. Larsen, *Levoglucosan in Urban Particulate Matter*. NIST, Gaithersburg, MD, 2004.

R. Larsen, *Developing Key Chemical Markers to Identify the Origins of Atmospheric Aerosols*, St. Mary's College, St. Mary's City, MD, 2004.

R. Larsen, *Strategy for Estimating Historical Dry Flux of Ammonia to the Chesapeake Bay*. Modeling Subcommittee Meeting, Chesapeake Bay Program Office, EPA, 2003

R. Larsen, *Atmospheric Ammonium: Problems, Uncertainties, and Technical Solutions*, Naval Research Laboratory, Washington, D.C., 2002.

R. Larsen, et al. *Polycyclic Aromatic Hydrocarbon Exchange Between the Atmosphere and an Urban Estuary*, 2000 Spring AGU Conference, Washington D.C., 2000.

R. Larsen. *Dynamic Flux of Ammonia Between the Atmosphere and the Chesapeake Bay*, Chesapeake Environmental Conference, Maryland Association of Sanitarians, Baltimore, MD, 2000.

R. Larsen, et al. *Atmospheric Ammonia Concentrations and Fluxes to the Chesapeake Bay*, NOAA-ARL Headquarters, Silver Spring, MD, 1999.

R. Larsen, et al. *Atmospheric Ammonia Concentrations and Fluxes to the Chesapeake Bay*, Maryland Department of the Environment Headquarters, Baltimore, MD, 1999.

J. Baker, et al. *Volatilization of PCBs from Eastern North American Estuaries: Implications for Global POPs Cycling*, SETAC World Conference, 1999.

Presentations with Undergraduate Co-Authors

(Undergraduate Authors are in underlined, presenters are **Bold**)

Siskey, A., Robinson, M., Meiller, J., & Larsen, R. (2019, April) Micro-plastic identification in the Anacostia River using micro-Raman spectroscopy. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 257). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Medor, S., Gerwitz, C., Larsen, R. & Townsend, T. (2019, April) Graphene oxide-polyethylenimine lightweight solution processed rust barrier for aluminum copper alloys. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 257). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Conner, P. & Larsen, R. (2019, April). Elemental, phenolic, and stable isotopic fingerprinting of wines from the Chesapeake Bay growing region. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 257). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Mellinger, M., Bowers, G., & Larsen, R. (2018, March). Thermal decomposition kinetics of select iodate salts. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 255). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Huerta, K., Bowers, G., Cunniff, S., & Larsen, R. (2018, March). Applications of TGA/DSC in energy science and energy geochemistry. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 255). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Cook, M., Eldridge, G., & Larsen, R. (2018, March). Testing IR spectroscopy as an alternative method for water content determination in aviation fluids. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 255). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

J. Grossman, T. Jones, R. Larsen and K. Heckman, *Physics Projects with vCalc: a Wiki with Computational Capabilities*, 2017 Winter Meeting of the American Association of Physics Teachers, Atlanta, GA, February 18-21, 2017.

Coluzzi, N., & Larsen, R. (2016, August). Multiple uses of analytical chemistry for art and archeological research. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 252). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Thompson, K., Gonsior, M., Luek, J., & Larsen, R. (2016, August). Sulfate-reducing bacteria produce high levels of chromophoric dissolved organic matter. In ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY (Vol. 252). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

M. Brindza, Y. Han, T. Townsend, R. Larsen, C. Knell, D. Durastanti, *Identifying corrosion protection and breakdown mechanisms of corrosion preventative compounds (CPCs), and investigating new corrosion protection technologies* 44th Middle Atlantic Regional Meeting of the American Chemical Society, Riverdale, NY, United States, June 9-12, 2016.

M. Von der Lippe, R. K. Larsen L. Lapham, *Impact of methanotrophy on methane gas hydrate dissolution rates*, 249th ACS National Meeting & Exposition, Denver, CO, United States, March 22-26, 2015.

A. Moore, M. Peretich, G. Eldridge, R. Larsen, *Characterization of aromatic compounds in naval aviation jet fuels*, 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013.

V. Newman, H. Azumaya, J. Mass, R. Larsen, *Pigment analysis of Turkestan Salor Ensi fibers using HPLC-DAD*, 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013.

K. Siregar, E. McCaugue, L. Gijanto, R. Larsen, *XRF analysis of pottery sherds from two archeological sites in Africa*, 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013.

B. Szychowski, R. Larsen, *Comparison of α -solanine in organically and non-organically grown russet potatoes* 43rd Middle Atlantic Regional Meeting of the American Chemical Society, Baltimore, MD, United States, May 31-June 2, 2012.

C. O'Neil, R. Coffin, R. Larsen, *Analysis of humic substances in Beaufort Sea sediments using diffuse reflectance IR spectroscopy*, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011.

E. Campbell, J. King, R. Larsen, *XRF analysis of pottery sherds found at Chesapeake Bay archaeological sites*, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011.

K. Reese, R. Larsen, *Lip gloss identification using non-destructive spectroscopic techniques for forensic applications*, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011.

S. Gladu, J. King, M. DeLeon, R. Larsen, *XRF testing of Native American and colonial "flints" from circa 1600 AD*, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011.

J. Anderson, **M. Kuschner**, **E. Egorova**, A. Drohan, A. Heyes, R. Larsen, *Assessing the Magnitude of Polycyclic Aromatic Hydrocarbon Loading from Road Surfaces and its effect on Algal Productivity*, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010

M. Fenske, R. Larsen, *Metabolomic Study of Polychlorinated Biphenyls in Snapping Turtle Livers*, CUR/ACS Posters on the Hill Conference, Washington D.C., 2007.

Z. Ernst, R. Larsen, *Quantification of Hopanes and Steranes in Natural, Blended and Synthetic Motor Oils*, Washington Chromatography Discussion Group, Gaithersburg, MD, 2006.

R. Reif, R. Larsen, *Building a Better Arsenic Detector*, CUR/ACS Posters on the Hill Conference, Washington D.C., 2006.

R. Larsen, **A. Crapster**, **Z. Ernst**, **E. Hogan**, M. Schantz, *Measurements of Hopanes and Steranes in Dust and Sediment Standard Reference Materials*, PITTCON, Orlando, FL, 2006.

R. Larsen, E. Davis, A. Peck, D. Liebert & K. Richardson, *Enantiomeric Concentrations of Hexabromocyclododecane in Fish*, Society of Environmental Toxicologist and Chemists (SETAC) National Convention, Baltimore, MD, 2005.

R. Larsen, E. Davis, A. Peck, D. Liebert & K. Richardson, *Hexabromocyclododecane in Chesapeake Bay Fish*, 2005 U.S. EPA's National Forum on Contaminants in Fish, Baltimore, MD, 2005.

A. Boyd and **R. Larsen**, *Burning Down the House: A case study for undergraduate instrumental analysis*. 2005 ACS National Conference. Washington D.C. 2005

R. Larsen, **E. Davis**, A. Peck, D. Liebert & K. Richardson. *Hexabromocyclododecane in Chesapeake Bay Fish*, Seventh Annual Workshop on Brominated Flame Retardants in the Environment. Gaithersburg, MD. June 13-16, 2005.

S. Ziemann and R. Larsen. Poster presentation of *Isomer Specific Thermodynamic Data for Hexabromocyclododecane*, Seventh Annual Workshop on Brominated Flame Retardants in the Environment, Gaithersburg, MD, 2005.

R. Larsen, A. Boyd, Z. Ernst, A. Greer, J. Johns, R. Reif, A. Sarigianis, S. Ziemann. *Quantifying Cocaine on International Currency Using GC-MS*, Washington Chromatography Discussion Group, Gaithersburg, MD, 2005.

R. Larsen, S. Berry, M. Buschman, S. Cullison, N. Eid, K. Gasser, Haddad, T., S. Herrero, B. Newkirk, J. Ryan. *Nature of sedimentary organic phosphorus revealed by 31P NMR: A pilot study for undergraduate teaching and research*, Atlantic Estuarine Research Conference, St. Mary's City, MD, 2002.

Other Professional Presentations: (Presenters are in bold)

G. Eldridge, R. Larsen, M. Peretich, R. Shah, A. Metz, *Simultaneous measurement of twenty-five trace elements in aviation turbine engine and diesel fuels by inductively coupled plasma tandem mass spectrometry*, ACS National Conference, San Francisco, CA, 2017.

A. Metz, R. Larsen, M. Peretich, G. Eldridge, *Measurement of copper in aviation turbine engine fuel by inductively coupled plasma tandem mass spectrometry and comparison to graphite furnace atomic absorption spectrometry*, ACS National Conference, San Francisco, CA, 2017.

R. Larsen, *Museum Studies at St. Mary's College of Maryland*, Society for Applied Archeology Conference, Santa Fe, NM, 2017.

R. Larsen, **J. Liss**, **D. Scudera**, **D. Walser-Kuntz**, *Using Innovative Curricular and Co-Curricular Programs to Prepare Students to Tackle Real World Challenges*, (Panel Discussion) AAC&U Conference, San Francisco, CA, 2011.

R. Larsen, *Arson, drugs & death: Case-based experiments in Analytical Chemistry Lab*, Biannual Conference on Chemical Education, Bloomington, IN, 2008.

R. Larsen and M. Schantz, *Levoglucosan in Urban Particulate Matter Standard Reference Materials 1649a, 1648, and PM 2.5 Interim Reference Materials* E.P.A. Supersite Conference, Atlanta, GA 2005.

J. Abdella, R. Paul, C. Tanner, and R. Larsen, *Linking Non-tidal Stream Health to Nutrients and Harmful Algal Blooms in the Tidal St. Mary's River, Maryland*. Estuarine Research Federation, Seattle, WA 2003.

B. Crimmins, R. Larsen, J. Baker, R. Hoff, *Source Apportionment of PAHs and Trace Metals Along the Canadian Great Lakes Using Integrated Atmospheric Deposition Network Data: Regional and Local Results*, American Academy of Aerosol Research National Convention, Anaheim, CA, 2003

W. Luke, J. Meisinger, C. Schomburg, J. Scudlark, R. L. Siefert, R. K. Larsen, and I. K. Heard, *A Field Intercomparison of Eight Ammonia Measurement Techniques*, National Atmospheric Deposition Program Conference, Washington, D.C., 2003.

R. Larsen, Bamford, H.A., Ko, F. C., and J. E. Baker. *Fluxes of PAHs and PCBs between the Atmosphere and the Northern Chesapeake Bay*, AWMA Convention, Baltimore, MD 2002.

A. Schneider, R. Larsen, and J. Baker. *Factorization of Priority Pollutants in Baltimore Harbor*, American Geophysical Union Spring Convention, Washington D.C. 2002.

R. Larsen and J. Baker. *Comparison of Polycyclic Aromatic Hydrocarbons Source Apportionment Methodologies*, 2001 American Association of Aerosol Research Convention, Portland, OR, 2001.

R. Larsen, R. Siefert, **J. Baker**, K. Graves, and A. Zander. *Development and Application of a Rapid and Robust Sensor to Measure Nitrogen Species in the Coastal Atmosphere*, American Association of Aerosol Research Convention, Portland, OR, 2001.

R. Larsen and J. Baker. *Atmospheric Ammonia Concentrations and Fluxes To and From the Chesapeake Bay*, American Geophysical Union Spring Convention, Washington, D. C., 2000.

R. Larsen, **R. Siefert**, and J. Baker, *Air/Water Exchange Of Ammonia With The Chesapeake Bay*, A Shared Resources Workshop (CBP, GWP & MARAMA): Airsheds and Watersheds: The Significance of Ammonia to Coastal and Estuarine Areas, Dewey Beach, DE, 2000.

R. Larsen, R. Siefert and J. Baker, *Air/water exchange of ammonia with the Chesapeake Bay*, Nutrient Over-Enrichment of Coastal Waters: Global Patterns of Cause and Effect Symposium. Washington DC, 2000.

R. Larsen and J. Baker. *Spatial and Temporal Distribution of PAHs in Urban and Rural Atmospheres*, American Association of Aerosol Research Convention, St. Louis, MO, 2000.

R. Larsen, R. Siefert, and J. Baker, *Atmospheric Ammonia Concentrations and Fluxes To and From The Chesapeake Bay*, American Association of Aerosol Research Convention, St. Louis, MO, 2000.

R. Larsen, et al. *Atmospheric Ammonia Concentrations and Fluxes to the Chesapeake Bay*, SETAC National Convention, Philadelphia, PA, 1999.

J. Baker, et al. *Transport of Semivolatile Organic Chemicals Between the Atmosphere and Surface Waters of an Urbanized Subestuary of the Chesapeake Bay*, SETAC National Convention, Philadelphia, PA, 1999.

R. Larsen, et al. *Spatial and Temporal Distribution of PAHs and PCBs in an Urban Plume*,
AWMA/EPA Measurement of Toxic and Related Air Pollutants Symposium, Cary, NC, 1998.

Grants, Contracts & Fellowships Pending:

\$1,528,813 SERDP: Chemistry of Munitions Disposal: Solid-State Transformations 2021
During Thermal Decomposition of Perfluorinated Organic Molecules in Pyrotechnic
and Explosive Formulations

Grants, Contracts & Fellowships Received:

\$5,700 Contract for Research Services to St. Mary's County Health Department 2020
\$368,278 NSF-REU Site: Archaeological Investigations of Colonial Maryland 2020
\$392,000 Sep Phase XV Equipment Grant from the Sherman Fairchild Foundation. 2020
\$121,819 NSF-MRI: Acquisition of a Circular Dichroism Spectrometer for Research and
Training at St. Mary's College of Maryland 2019
~\$8,000 Integrating and Scaffolding Research into Undergraduate STEM Curricula: Probing
Faculty, Student, Disciplinary, and Institutional Pathways to Transform Change, NSF
Council on Undergraduate Research Transformation Project, NSF-DUE Award
#1625354 2017
\$97,361 vCalc development for College STEM community, MD Industrial Partnership. 2016
\$60,000 of \$850,000 Collaborator on Office of Naval Research Grant, ONR-FOA-15-0002,
The Patuxent Partnership Project, A STEM Workforce Development and Recruitment
System Naval Air Warfare Center-Aircraft Division 2015
\$17,000 Navy contract to develop GCxGC-FID method for Jet Fuel Additives 2015
\$14,000 Office of Naval Research Summer Fellow. 2014
\$10,000 Pittsburgh Conference Memorial National College Grant for the purchase of a 2013
Raman Spectrometer to enhance undergraduate chemistry education.
\$4,000 John J. Leidy Foundation Award to fund students' presentations at National ACS
Conference. 2012
\$1,000 out of \$190,000 Collaborator on National Endowment for the Humanities, Colonial
Encounters: The Lower Potomac River at Contact 1500-1720 A.D. 2012
\$138,000 National Transportation Center, Susceptibility of Eastern Oyster early life stages to
road surface polycyclic aromatic hydrocarbons (PAHs). 2010
\$98,186 National Transportation Center, Assessing the magnitude of PAH loading from
road surfaces and its effect on algal productivity. 2009
\$27,794 ACS Petroleum Research Fund, Abundance and stable carbon analysis of
phospholipid fatty acids in association with methane hydrates in the Arctic Ocean. 2008
\$15,000 Office of Naval Research Summer Fellow. 2008
\$5,000 Donation, Dr. Norton Dodge and the Cremonia Foundation to investigate air
pollution at Cremona. 2008
\$14,000 Office of Naval Research Summer Fellow 2007
\$5,000 Grant, Potomac Riv Assoc., Investigating causes of air pollution at Piney Point, MD 2006
\$24,078 Contract, NIST, Development and critical evaluation of measurement methods for the
determination of hopanes and steranes in air particulate matter. 2004
\$8,900 Contract, NIST, Development and critical evaluation of measurement methods for the
determination of levoglucosan in air particulate samples 2004
\$3,644 Type B Educational Grant, Ocean Optics, Promoting Exploratory Learning using Portable
Spectrometers 2004
\$2,700 Faculty Development Grant, Building a portable arsenic fluorometer, SMCM 2005
\$2,000 Natural Science & Math Division research enhancement grant, Enhancement of
Computational Chemistry Capabilities 2005
\$2,800 SMCM Faculty Development Grant, Measuring Hexabromocyclododecane in Chesapeake
Bay Fish 2004

\$1,500 SMCM Faculty Development Grant, Testing SPME-GC-MS techniques for forensic applications 2003

Expert Witness:

Declared an Expert Witness in chemistry by the Circuit Court of Virginia 2011

Military Experience: Signal Corp Officer, United States Army Reserves 1991-1999

Professional Affiliations: American Chemical Society

Community Service:

Internal

- Environmental Studies Steering Committee 2007-2010, 2016, Chair 2017-Present
- Marine Science Program co-creator and chief implementor 2019-Present
- Museum Studies Steering Committee 2013-Present
- Health Science Advisory Committee 2006-Present
- Marine Science Faculty Search Chair 2021
- Task Force 2 Program Prioritization Committee 2019-2020
- Core Design Workgroup 2018
- Faculty Senate 2016-2017
- Environmental Studies Faculty Search Committee 2016, 2017
- Advisory Board, Center for the Study of Democracy 2012-2016
- Program Director, Project Pericles 2013-2016
- Advisor DeSousa-Brent Scholar 2015
- Physical Chemistry Faculty Search Chair 2015
- Organic Chemistry Faculty Search Chair 2014
- Chemistry Lab Coordinator Search Committee Chair 2013
- Environmental Health & Safety Coordinator Search Committee 2012
- Physics Faculty Search Committee, 2012, 2013
- Visiting Chemistry Faculty Search Committee, 2012, 2014
- Chemical Education Faculty Search Committee Chair 2012
- Co-Chair Campus Sustainability Committee 2006-2010
- Faculty Development Committee 2008-2010
- Biochemistry Faculty Search Committee, 2006, 2007, 2010
- Academic Policy Committee Spring 2006
- Natural Science & Math Colloquium Committee 2005-2008, 2011-2012
- SMCM Admissions and Scholarship Committee 2004-2005
- NSM IT Specialist Search Committee, 2004

External

- Proposal Reviewer for EPA Chesapeake Bay Program
- University of Mary Washington, Department of Chemistry External Reviewer 2014
- Tenure & Promotion External Reviewer University of Washington-Takoma
- Promotion External Reviewer Ithaca College
- Proposal Reviewer for NSF - Division of Earth Science
- Reviewer for the journals *Analytical*, *Bioanalytical Chemistry*, *Biofuels*, *The Science of the Total Environment Journal*, *Atmospheric Environment*, *Journal of Chromatography A*, *Environmental Toxicology and Chemistry*, *Environmental Earth Sciences*, *Estuaries and Coasts*
- Calvert County Science Fair Judge 2006, 2007

- Moderator, NIST Summer Undergraduate Research Symposium 2007
- Geochemist search committee, Chesapeake Biological Laboratory 2005

Awards:

Co-recipient of the Sponsored Research Riverhawk Award 2020
Periclean Faculty Leader Fellowship 2010
SMCM SGA Faculty Student Life Award 2007