CHEMISTRY GRADUATE RESEARCH & EDUCATION

Advancing Knowledge

Communicating Science

Serving Society

Department of Chemistry
University of Wisconsin-Madison

Wisconsin Initiative for Science Literacy

Thesis List

"Investigation of Proton Exchange Reactions between Acidic Gases and Protic Solvents

"Measurements and Modeling of Glyoxal: Insights into Rural Photochemistry and Secondary Organic Aerosol Production" by Dr. Andrew J. Huisman

"Hydrophobic Modification of Peptides to Enhance Electrospray Ionization Mass Spectrometry Analysis" by Dr. Suzanne Elizabeth Kulevich

"Molecular Monolayers for Attaching Electroactive Molecules to Vertically Aligned Carbon Nanofibers" by Dr. Elizabeth C. Landis

"Interrupting Bacterial Conversations: Designing Chemicals to Control Quorum Sensing in *Pseudomonas Aeruginosa*" by Dr. Margrith Mattmann

"Computational and Matrix-Isolation Spectroscopy Studies of Cyanocyclobutadienes" by Dr. Jessica Lynn Menke

"Information-Rich Investigations into Catalytic Olefin Polymerization: Technique Development and Mechanistic Studies" by Dr. Beth M. Moscato-Goodpaster

"Synthetic and Mechanistic Studies of Rhodium-Catalyzed Asymmetric Hydroformylation with Diazaphospholane Ligands" by Dr. Avery Watkins

Communicating Research to the General Public

At the March 5, 2010 UW-Madison Chemistry Department Colloquium, the director of the Wisconsin Initiative for Science Literacy (WISL) encouraged all Ph.D. chemistry candidates to include a chapter in their Ph.D. thesis communicating their research to non-specialists. The goal is to explain the candidate's scholarly research and its significance to a wider audience that includes family members, friends, civic groups, newspaper reporters, state legislators, and members of the U.S. Congress.

So far, eight Ph.D. degree recipients have successfully completed their theses and included such a chapter; each was awarded $500.

WISL will continue to encourage Ph.D. chemistry students to share the joy of their discoveries with non-specialists and also will assist in the public dissemination of these scholarly contributions.

Wisconsin Initiative for Science Literacy

The dual mission of the Wisconsin Initiative for Science Literacy is to promote literacy in science, mathematics and technology among the general public and to attract future generations to careers in research, teaching and public service.

www.scifun.org

Chemistry and Society

November 12, 2010

We live in the most advanced scientific and technological society in history. New discoveries have led to improvements and benefits in our daily lives, but also to new societal problems. It is through chemistry that we can make major contributions to improve the quality of life in America and to advance the human condition around the globe. Chemistry is the key to eradicating disease and reducing poverty. Chemical research and technology can provide clean water and nutritious food, meet energy demands, and help lead to sustainable development everywhere.

Chemistry brings a wide range of goods and functions to everyone and thus is vital to our democracy. Science literacy is necessary for the democratic process to work. By science literacy I mean an appreciation of science, an understanding of the benefits of technology and the potential rewards and risks associated with advances in both, as well as a recognition of what science is capable of achieving and what it cannot accomplish. Science literacy enlightens and enables people to make informed choices; to be skeptical; to reject shams, quackery, and unproven conjecture; and to avoid being bamboozled into making foolish decisions where matters of science and technology are concerned. Science literacy is for everyone--chemists, artists, humanists, all professionals, the general public, youth and adults alike. The level of science literacy in any society is a measure of what it values and its resolve to put these values into practice.

Science and technology are the engines that drive our economy. A top priority for Wisconsin is to support research and development in modern science, encourage creativity and innovation, and foster collaboration in order to ensure a healthy economy. Explorations for alternative, renewable, and sustainable sources of energy to meet the demands of modern society should be supported by business and government. Let us sharpen our focus by supporting incubators for technology transfer and open innovation at research parks in strategic locations across the state.

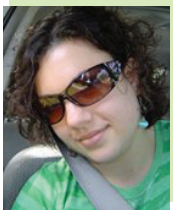
The University of Wisconsin Chemistry Department is a leader in education and in research. Our undergraduate students receive the best education offered both for chemistry majors and for the general student. Our graduate programs offer students from Wisconsin and around the world the best research opportunities, training and education for highly skilled careers in science and technology. Our public service through outreach is recognized and emulated around the world. Many of our faculty and alumni have served in high positions in federal agencies (e.g.,NSF, NIH, DoE), in professional organizations, in industry and other parts of the private sector, and at the state and local levels. It is through scholarly work in basic and applied research and in education that we continue to serve Wisconsin, the Nation, and the world.

Bassam Z. Shakhashiri
Professor of Chemistry
William T. Evjue Distinguished Chair for the Wisconsin Idea
Director, Wisconsin Initiative for Science Literacy
University of Wisconsin-Madison

WISL Ph.D. Thesis Awardees

Susan M. Brastad, Ph.D. 2010
Under the Supervision of Prof. Gilbert Nathanson
NSF Grant CHE-0809681
Current Position: Presidential Management Fellow in the Office of Science Policy at the Environmental Protection Agency

Suzanne Elizabeth Kulevich, Ph.D. 2010
Under the Supervision of Prof. Lloyd M. Smith
NHGRI Training Grant, Genomic Sciences Training Program T32HG002760
Current Position: Visiting Instructor, College of the Holy Cross in Worcester, Mass

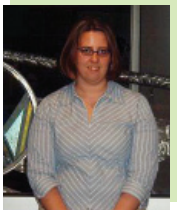


Margrith Mattmann, Ph.D. 2010
Under the Supervision of Prof. Helen E. Blackwell
NIH Grant AI063326
Current Position: Postdoctoral fellow in chemical biology in the laboratory of Professor Craig Lindsley at Vanderbilt University (Starting Jan. 2011)

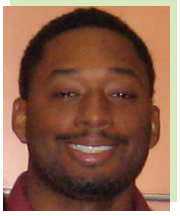
Beth M. Moscato-Goodpaster, Ph.D. 2010
Under the Supervision of Prof. Clark R. Landis
With support from Dow Chemical Company
Current Position: Postdoctoral studies with Bill Tolman & Marc Hillmeyer, University of Minnesota

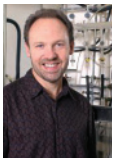
Andrew J. Huisman, Ph.D. 2010
Under the Supervision of Prof. Frank N. Keutsch
National Defense Science & Engineering Fellowship, NSF Grants ATM 0724912 & ATM 0852406
Current Position: Will soon be starting a NSF post-doctoral fellowship working with Tom Peter at ETH-Zurich

Elizabeth C. Landis, Ph.D. 2010
Under the Supervision of Prof. Robert J. Hamers
NSF Grant DMR 0706559
Current Position: Harvard Environmental Fellowship for postdoctoral studies with Prof. Cynthia Friend



Jessica Lynn Menke, Ph.D. 2010
Under the Supervision of Prof. Robert J. McMahon
NSF Grant CHE-0715305,
Wisconsin Distinguished Graduate Fellowship
Current Position: Chemistry Lecturer, UW-Whitewater





Avery Watkins, Ph.D. 2010
Under the Supervision of Prof. Clark R. Landis
NSF Grant, AOF Fellowship
Current Position: Research Scientist at Dow Chemical Company