



# Chemistry Connections

Winter 2008

A newsletter from the Chemistry Department  
at Bloomsburg University of Pennsylvania

## Miscellaneous

☞ BU Open House for interested high school students: Sat, March 29. Visit the chemistry department from 1- 3:00 pm. For more information, go to: [http://www.bloomu.edu/prospective/open\\_house.php](http://www.bloomu.edu/prospective/open_house.php)

☞ If you can't attend an open house program, please visit anytime. You can meet an admissions counselor, the Chemistry Dept, and get a tour of campus. Call (570) 389-4316 to make arrangements.

☞ You can contact the chemistry department at Bloomsburg University several ways:

<http://departments.bloomu.edu/chem/Default.htm>  
570-389-4895 (main number)

Dr. Michael Pugh, Dept. Chair:  
570-389-4144;  
[mpugh@bloomu.edu](mailto:mpugh@bloomu.edu)

Sharlene Pollock, secretary:  
570-389-5159;  
[spollock@bloomu.edu](mailto:spollock@bloomu.edu)

Bloomsburg University is committed to equal educational and employment opportunities for all persons without regard to race, religion, gender, age, national origin, sexual orientation, disability or veteran status.



## Learn CSI Techniques at BU this Summer

Students currently in 9th, 10th and 11th grade are invited to attend the 2nd annual CSI Summer Experience at Bloomsburg University. This fun summer camp uses forensics to help develop science & math ability and interest. Attendees will have the opportunity to explore science and math through classroom presentations, hands-on activities, and science and math demonstrations. The agenda is as follows:

July 14: Forensic Chemistry. The Case of the Jilted Lover.

July 15: Global Positioning. Learn to use GPS devices, and then find things!

July 16: Who-Dunnit. Computer Forensics using encryption and decryption.

July 17: How Long Ago Did They Die? An introduction to carbon dating.

The cost is \$150 ea, which includes lunch and snacks each day. Scholarships are available. Log onto: <http://orgs.bloomu.edu/msc/sumexpcoverpage.html> for registration and scholarship information. Early application deadline is April 27.



## What Do You Do With a Chemistry Degree?

Many high school students find that they enjoy their chemistry class, but they have no idea what they would do with a degree in chemistry. Well, guess what? Chemistry is everywhere and affects our lives in countless ways! Chemists are the people who make that impact. Most chemists work in laboratories, helping to discover the cure for cancer, or ways to use everyday materials for new purposes. There are many new areas of research that you can be involved with:

- Nanotechnology, advancing the techniques and theory of building devices on an exceptionally small scale.
- Biotechnology, solving complex problems such as developing new medicines, by applying biological processes in innovative ways.
- Materials science, developing new

materials to satisfy unique performance requirements, such as creating materials needed for artificial body parts.

- Forensics, helping to catch the next serial killer!

But you don't have to work in a lab if you have a chemistry degree. You could be a teacher, helping to develop the future nanotechnologists and forensic scientists. You can work for the government, in areas such as the Department of Agriculture, the Food & Drug Administration, and the Environmental Protection Agency. Many jobs are available in sales and marketing for the chemical industry. There are many chemists who also work in nontraditional fields, such as patent lawyers, science writers, art conservators, technical librarians and consultants. The possibilities are really only limited by your imagination!

## Faculty Profile

Dr. Joseph Larkin joined the BU chemistry department in August of 2006. He earned a BS in Chemistry from Philadelphia University and a PhD in Chemistry from the University of Georgia. While studying for his doctorate, Dr. Larkin was also a Pre-IRTA fellow at the National Institutes of Health in Bethesda, Maryland. As a Physical Chemist, he teaches Physical Chemistry 1 & 2, as well as general courses for allied health and science majors at BU. His research interests involve using computational quantum chemistry to study enzyme reaction mechanisms for MRSA bacteria as well as other medically relevant compounds.

When he's not teaching or working on his research, Dr. Larkin is an avid sportsman who enjoys hunting, fishing, playing basketball, ultimate fighting (just kidding!) and hiking with his dogs. He and his wife, Taylor, are expecting their first child (it's a girl!) in April.



Dr. Joseph Larkin

## Science Scholarships Available

Do you want to go to college, but have no idea how you would pay for it? Bloomsburg University wants to help! Students interested in majoring in mathematics, computer science, chemistry, geosciences, electronic engineering technology or physics and who are eligible for need-based Federal financial aid can apply to obtain a scholarship to Bloomsburg University in the amount of up to \$10,000 per year for four years! To qualify, you must:

- Be a US citizen, or have citizenship status
- Qualify as a first-generation college student and demonstrate financial need
- Demonstrate academic ability and willingness to succeed

More information about the scholarships and a copy of the application can be found at: <http://orgs.bloomu.edu/msc/index.htm>

## Check Out Our New Web Site Design

The BU chemistry web site has recently undergone a redesign. The streamlined look and consistent page layout makes it easier for users to navigate and find information.

<http://departments.bloomu.edu/chem/Default.htm>

You'll find information such as: what courses are required to earn a chemistry degree, what instrumentation we have, background information on the faculty, and much more. Check it out!

## ALUMNI NEWS

Robert "Marty" Martynowych graduated from BU in 1990 with a BS in Chemistry. While still a student, he completed a summer internship at PPL Montour Steam Electric station, setting up and running a pilot project to remove heavy metals from aqueous outfalls of a coal fired power plant. This hands-on practical experience helped Marty obtain employment as an Environmental Engineer at TRW in Danville. The knowledge base and critical thinking skills gained at BU have been invaluable to him. His chemistry background and the groundwater geology education he received at TRW allowed him to get the system operating more efficiently, while reducing the budget!

After TRW, Marty worked for the PA Department of Environmental Protection, Bureau of Air Quality, where knowledge of chemistry gave him an edge in understanding air pollutants and control systems. He also ran the EPA-funded lead training center in Danville, and has always been involved in worker safety issues.

In his current position as a forester for the PA Department of Conservation & Natural Resources, Marty has been appointed safety officer in his district. Herbicide and pesticide questions are often directed to him due to his chemistry education. He sees that there is important research in forestry that requires a strong understanding of chemical sampling and analysis to study, such as the effects of acid rain, elements present in the soil, and sugar maple decline. For Marty, a scientific education has provided him with more opportunities for employment, rewarding in both pay and satisfaction.