



In Conjunction with the American Chemical Society
Student Affiliates at the University of Pittsburgh



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Welcome Back!



Welcome back to another exciting semester at the University of Pittsburgh!

I hope that everyone had a very enjoyable, relaxing winter break. I know it made me really happy that for once we didn't have to come back to school on a Wednesday right after the New Year. With the extra few days off, we should be extra motivated for the challenges of another academic semester!

If you didn't see the fall newsletters, let me reintroduce myself and the core staff members. My name is Katie Hammer, the editor of Pitt's American Chemical Society newsletter. Co-editor Devin Potts is studying abroad this semester so will be mailing his articles from overseas. Lance Mabis has stepped up to alternate writing feature articles of the month with me and preparing the "fun page" of puzzles and the Molecule of the Month. Be sure to also check out the Green Chemistry articles written by John Walters, the feature on undergraduate research, and the monthly schedule of Pitt ACS events!

We hope that you've already gotten involved in the ACS meetings, but if not, now's a great time to start! We meet every Friday at noon in Chevron room 132. Joining the club is a great way to make new friends, hear from professionals working in chemistry fields, enjoy food together, and have some fun! ACS also provides its members chances to volunteer with fellow chemistry students, make a difference for young students in our area, and network with past Pitt alumni. You may also get to play chemistry hangman with us!

Now I leave you with a few corny chemistry jokes to make you laugh when the semester gets rough and remind you why chemistry is so awesome:

*A neutron walks into a bar; he asks the bartender: "How much for a beer?" The bartender looks at him and says: "For you, it's no charge".

*Why does hamburger have lower energy than steak? - Because it's in the ground state.

*Heisenberg is out for a drive when he's stopped by a traffic cop. The cop says: "Do you know how fast you were going? Heisenberg replies: "No, but I know where I am".

*What do dipoles say in passing?

*Why did the white bear dissolve in water?- Have you got a moment?- Because it was polar.

*A small piece of sodium which lived in a test tube fell in love with a Bunsen burner. "Bunsen! my flame! I melt whenever I see you" said the sodium. The Bunsen burner replied: "It's just a phase you're going through". Good luck in all of your pursuits this semester! If you have any suggestions/comments on the newsletter don't hesitate to e-mail me at klh29@pitt.edu. See you Fridays at noon!

Katie Hammer, Co-Editor, ACS Newsletter

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CHEM MAJOR NEWS

Keep It Secret. Keep It Safe.

by: Lance Mabus

Fair warning to Max: this story is more about business and politics than chemistry.

Since 1986 the Environmental Protection Agency (EPA) has required chemical businesses to file yearly reports on the chemicals they release into the environment. These reports can be filed on one of two forms, either Form R or Form A. The difference between the forms is similar to the difference between tax forms for wealthy people and college students. More money, more problems. More chemicals, longer forms. The reports are compiled by the EPA in a massive database known as the Toxic Release Inventory (TRI).

In November, Pennsylvania and several other states sued the EPA over its decision to change the reporting guidelines for the TRI. Essentially, the change in reporting guidelines amounts to allowing companies to report more chemicals using Form A (the short form) or not at all if the amount released is small enough.

The argument given by the EPA for making the change is simple. The EPA has an interest in reducing unnecessary regulatory burden. Businesses must pay someone to understand the legal code and file these reports. By lowering the bar, the EPA is saving businesses money.

While there's nothing wrong with saving money, Pennsylvania is opposed to saving at the expense of citizen health and safety. The old standards worked well and were generous with the cut-off limits. The change to the new standards was unnecessary and defeats the purpose of the TRI.

The question of which standards will be used is now up to the courts. Out of our hands, but as chemistry students, do we have an interest in the outcome one way or the other?

On the surface, it would seem that anything good for the chemical business would be good for chemists. One might think that the money saved from not filing paperwork would go to hiring more chemists, but really Max, would that be what you did with the extra money? I think not. That extra money would go into the profit bin.

The general public wants information about what chemicals enter our environment and where and how they do so which is only on Form R. Chemists have an additional interest in stricter reporting standards because companies that are worried about the quantity of chemicals they release will also be worried about reducing that amount.

They are worried for one important reason, money. Simply put, it's bad PR to have your firm show up as one of the top polluters in your area.

In order to avoid losing money from lack of sales, many companies will be willing to spend money on new chemists to develop new processes and to incorporate less toxic chemicals into procedures.

We have an interest in seeing strict reporting standards in more ways than one. We also have an interest in improving the standards. Did I mention that the release amounts are quoted in pounds? I think any chemist could think of one way of improving those reports.

The Department of Chemistry of the University of Pittsburgh and Valspar Corporation

are pleased to announce

The Valspar Corporation Award in Chemistry

The Award will be made in Spring 2008 to one or more outstanding chemistry majors completing their sophomore or junior year. The award consists of a three month paid internship for Summer 2008 in the Valspar Laboratories in Pittsburgh, plus a \$2,000 scholarship to be used to attend the University of Pittsburgh during the student's junior or senior year.

Criteria for the award are as follows:

- a) The student must be a non pre-professional chemistry major at the University of Pittsburgh.
- b) The student must have a 3.0 or higher grade point average at the time of selection.
- c) Where applicable, financial need will be considered.

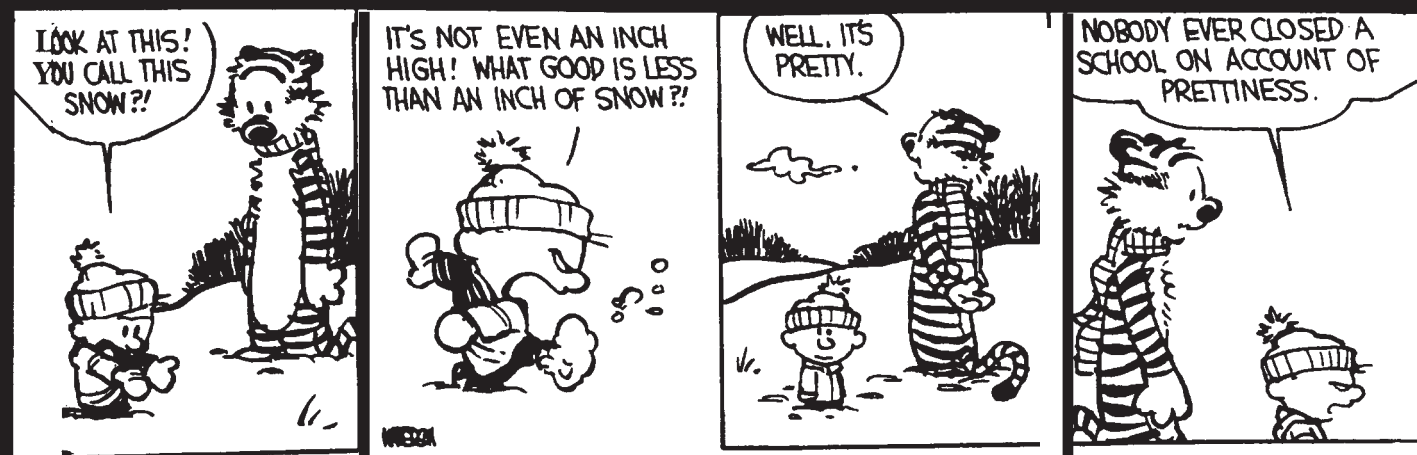
To apply for the award:

- 1) Complete and submit an application form (available in 107 Chevron Science Center)
- 2) Submit an unofficial transcript of all undergraduate work.
- 3) Arrange for a letter of reference (from a member of the University of Pittsburgh faculty) to be submitted.

Materials are to be submitted to:

Dr. George C. Bandik
107 Chevron Science Center
Department of Chemistry
University of Pittsburgh

Deadline for all application materials is February 4, 2008



2008 January ACS Schedule

January



11 Welcome Back Meeting for All Old Friends and Interested New Members.

18 Green Chemistry: An Introduction with Dr. Larry Friedman

25 Meet Our New Faculty:
Dr. Geoff Hutchison and Materials Chemistry

February

01 Help Us Prepare for Saturday Science to Be Held Saturday, February 02, 2008

Hoagies and Sample Exams yet Again!

Our most visible activities are the ACS hoagie and Chemistry Exam sales. Just about everyone having a Chemistry class in Chevron's lecture halls has at one time or another eaten an ACS hoagie from Uncle Sam's while studying. The funds raised by these sales help to defray the weekly meeting expenses for refreshments and other incidentals as well as the cost of the food and supplies at our social functions.

Hoagies are sold on Tuesdays throughout the semester.



I Need a Job!

It's that time of year! Time to begin the search for a summer position. There are several opportunities for summer work available to Chemistry majors.

The first place to look is the Chem Major News area of the Fishbowl. Here you will find the current Research Experiences for Undergraduate (REU) listings. They are from all over the country.

You may also want to visit Career Services (2nd floor WPU). Ms. Erin Bridgen can help you with opportunities available through their Office.

Finally, don't forget the Arts and Sciences Office of Experiential Learning (B-4, Thaw Hall). Dr. Peggy Healy can assist you there.

With all of these opportunities available, it should be an exciting and productive summer for everyone. Good Luck!

Industrial Internships in Chemistry

Erin Walsh

“Tell me and I’ll forget; show me and I may remember; involve me and I’ll understand.”

This summer I had the privilege of working as a Research and Development Intern Chemist for the Valspar Corporation. Located on Pittsburgh’s Northside, Valspar is globally recognized as a highly innovative manufacturer of high-quality paints, coatings, and coating intermediates. Over the course of the 14-week internship program, a program designed to challenge an individual’s competencies in a variety of applied chemical disciplines, I was responsible for the performance and formal presentation of both individual and collaborative work. Specifically, I was assigned to the Emerging Technology Division where I worked alongside upper-level industrial chemists to complete a focused project investigating the environmental sustainability of polymer oxygen scavenging resins. The ultimate goal of my research endeavor was to improve the environmental compatibility of oxygen scavenging resins for incorporation into polyethylene terephthalate (PET), the predominant plastic packaging material in the food/beverage industry. With the help of the Valspar team, I was able to significantly improve the environmental sustainability of polymer resins, while maintaining essential chemical properties necessary for its incorporation into PET and responsible for its predominance in the chemical industry.

For industrial corporations like Valspar, the creation of sustainable products from environmentally indigenous resources not only contributes to the overall enhancement of environmental health and safety but also significantly increases the marketability of product designs. Because such ecological awareness is gaining widespread popularity, Valspar provided me with an opportunity to work on a project of great significance, allowing me to make a definitive and worthwhile contribution in a short time frame. Unlike other internship experiences, my time with Valspar afforded me the opportunity to be an active member of an R & D team and draw from my educational background to confidently collaborate with open-minded research professionals.

In addition to working on an individually designed project, Valspar encourages student interns to investigate their own curiosities in scope with the company’s overall mission. Subsequently, Valspar advocates teamwork and collaboration by encouraging student interns in different divisions of the company to work together on a student-motivated project. This collaborative project is highly beneficial as it exposes students to the dynamic nature of group work and simulates the type of environment typical of professional work in the field.

Employees at Valspar share a collective interest in promoting student development and growth during the internship program. The intern mentors, in particular, welcome the opportunity to share the depth of knowledge they have honed over the years, providing exceptional guidance and instruction throughout the internship experience. More than giving specific research-centered guidance, however, individuals at Valspar eagerly and kindly offer their professional insights to allow students to learn about education and work in the chemical field.

Valspar’s willingness to provide exposure to professional work in the chemical industry gives students a phenomenal chance to take advantage of realistic experiential learning. Not only did my time at Valspar provide me with hands-on experience as an R & D chemist, it also allowed me to investigate potential career opportunities in the field. Following the completion of the internship program, I was able to more clearly ascertain my future academic and occupational goals.

The Valspar Corporation is a highly competitive company in the coatings industry, which sets and maintains impressive standards of safety, ethics, responsibility, and workplace respect. Valspar’s interest in young talent is encouraging and refreshing, and the company provides every opportunity for personal growth and professional development. Valspar not only provided me with the opportunity to experience the industrial application of chemistry but also allowed me to see firsthand the spectrum of possibilities that a chemical education can afford.

I strongly encourage everyone to participate in an internship experience that makes use of your educational talents and explores your future prospects. I was fortunate to have the opportunity to work for the Valspar Corporation this summer, and I would highly recommend the internship experience to interested students.

CYPRUS -What's That All About?

by: Devin E. Potts, Contributing Editor

This is the first in a series of articles by Devin that will detail his term abroad in Cyprus. If you would like to know more about his studying abroad, stop by the Study Abroad Office in 2600 Sennott Square.

I spent most of my semester planning my escape and most of my winter break explaining my choice to various relatives and friends. I don't know which task felt longer, the preparations or the explanations. It is natural that an odd study abroad location such as Cyprus raises many questions, even in me. Unfortunately, I had few answers, especially when asked about random minutia like its climate during February or its governmental system.

I have heard many fantastical things about this island of Cyprus, the birthplace of Aphrodite, goddess of love and beauty. Many people have told me various tidbits, like Cyprus is in the Mediterranean Sea (true), that the language is Italian (not true, it is Greek), or, similar in style to Ron Burgundy, I was told it was the 'Pearl of the Indian Ocean' (hilariously untrue, that would be Sri Lanka). All these things I have been told, but I do not know them. To be honest, I don't want to know, at least not yet.

Studying abroad should be an amazing, revealing experience to learn new things firsthand, not be-

forehand. All these things I have heard are intriguing, but what is the point of exploring a wholly exotic place if I know everything about it? I want to go to Cyprus without any preconceptions about its culture, and honestly learn based on my personal journeys throughout a foreign land. I want every moment to be free and every emotion I feel to be sincere without being guarded by the doubts of what someone else has told me.

While abroad in Nicosia, Cyprus, I plan on living as different as possible than I would have at Pitt. As a truly unique time in my life, I owe it to myself to try something unusual and challenging. Furthermore, my underlying goal for studying abroad is not only to view an entirely different part of the world, but to search an entirely different part of myself.

After all, this is my escape, my moment to explore Cyprus. When I come back to Pitt, there will be many stories to be told and many memories to share. I hope you don't believe them; I hope you to go see for yourself.