

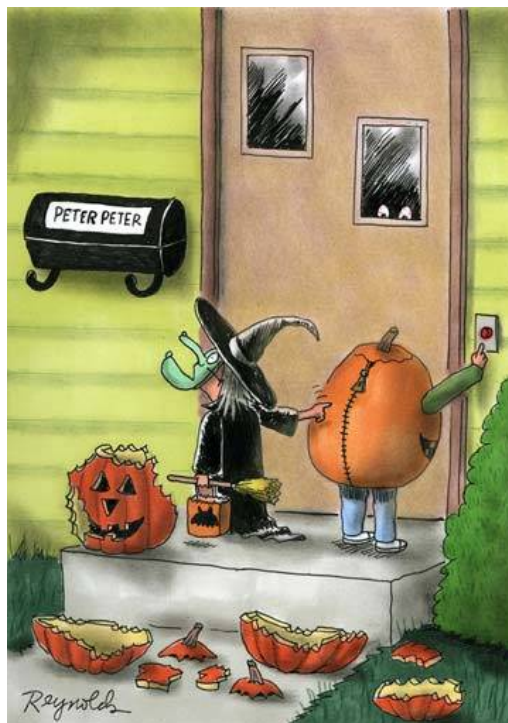
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CHEMISTRY 380

Do you want to learn how chemical and spectroscopic methods can be used to determine the structure of an unknown compound? Do you want to learn more about the theoretical basis of infrared spectroscopy, mass spectrometry, and particularly nuclear magnetic resonance spectroscopy? Do you want to be able to design and execute your own strategy for the determination of an unknown's structure? Do you want to gain experience in the separation of mixtures and in the identification of components in a mixture? Do you want to have a legitimate reason to escape the bone-chilling January campus winds by spending time in the beautiful, new laboratories or the spectacular fourth floor atrium area of Regents Hall? If these are your interests then you should strongly consider making Chemistry 380 your registration choice for January 2009.



I'm Wes Pearson and I approve this message.

Scholarship Opportunity for Chemistry Majors

As you may have heard, St. Olaf recently received a National Science Foundation Grant entitled "Providing Support Structures for Chemistry Majors (PSSCM)." This program is open to St. Olaf students who intend to graduate with a major in chemistry and are interested in pursuing careers in science. Our goal is to increase the number of and provide academic support for chemistry majors at St. Olaf and prepare them for work in a 21st century, scientifically- and technologically-intensive world. A special emphasis will be placed on scholarship support for students who intend to major in chemistry and demonstrate financial need.

If you are interested in applying for a PSSCM scholarship, please see the website:

<http://www.stolaf.edu/depts/chemistry/psscm/>

From this page you can click on the "Scholarship Application Process" link to find out how to apply. **The deadline for applications is November 24, 2008** - the Monday before Thanksgiving. Online applications are available at the site, and paper applications are also available in the chemistry office, the SSS office, or from your chemistry instructor. Submitting either form (online or paper) is acceptable.

Please feel free to ask Mary Walczak or Doug Beussman questions about the program!

CHEM 384: Bioanalytical Chemistry

This course will introduce the fundamentals of bio-analytical chemistry, the application of modern analysis techniques to biological samples. Current clinical applications and examples of biological problems will be used to supplement lecture material. Topics will include biological mass spectrometry, radiochemical and immunological assays, various forms of chromatography, gel and capillary electrophoresis, electrochemical analysis and proteomics. Daily lectures will be closely integrated with laboratory experiences. Hands-on laboratory experiments will involve using different types of chromatography to separate biological mixtures in various ways, 1-dimensional and 2-dimensional gel electrophoresis, and ELISA assays. Several experiments will allow students to use the Chemistry Department's electrospray ion-trap and MALDI-TOF mass spectrometers to identify proteins and determine the amino acid sequence of peptides.

SOCS EVENTS AT DEDICATION WEEK AND THE CELEBRATION OF ACS NATIONAL CHEMISTRY WEEK

At the Dedication Ceremony, SOCS joined in the fun with the "Chemistry Cafe," serving as a substituted for the soon-to-be cafe on the second floor. Visitors enjoyed shots of supersaturated lemonade, super-cooled water, and SOCS specialty, liquid nitrogen ice cream. In addition, chemistry demonstrations were held in on the third floor; hydrogen cars cruised on the floor and brave visitors put on gloves, goggles, and ran an oscillating reaction themselves. SOCS is happy to report that no one was killed during the awesomeness, and only one (minor) burn was suffered.

SOCS warns you to clear your schedule October 31st out for an afternoon Halloween party, put on by all science organizations. Stay tuned for more details!



Who is this crazy cartoon character?



Students and Faculty compete in the Titration Contest. This is an annual event that SOCS sponsors during ACS National Chemistry Week. This years winners were Dr. Greg Muth and Sarah Naumann, each won a \$10.00 gift card to the St. Olaf Book Store



Michelle Howard is a fierce competitor!



Onlookers cheer with delight!

THE ALUMNI CONNECTION

Mark Brommer, Chem major, class of 1994

Lincoln HS Science Teacher

1. Please describe your current occupation.

I am a high school science teacher. I teach chemistry, 9th grade practical chemistry, 8th grade conceptual physics and high school physics.

2. Do you use chemistry in the everyday tasks of your job? If so, how?

I mix chemicals everyday in my small prep room. I am the Stockroom Manager, teacher and clean up person.

3. How do you feel your liberal arts education prepared you for your job?

I had a great learning environment at St. Olaf and felt that St. Olaf prepared me 'for the real world' very well.

4. How much has your chemistry degree from St. Olaf played into your current career? Were there any particularly beneficial experiences?

I learned from Doc Walters that a hands on science is best to learn and teach. The students are allowed to explore, in a controlled environment, how science works. I don't like 'cookie cutter labs' that come out perfect all the time. I like to have engaged-, explore-type labs. I also like learning the best method of how to use spreadsheets in Analytical chemistry.

5. Is there anything that you wish the St. Olaf chemistry department had prepared you for more as an undergraduate?

I would have liked to know more about how to dispose of chemicals after they are used and do a proper disposal method. I know this is probably specific to my job as a chemistry teacher, but I like to be environmentally friendly.

6. How is your current field changing? What new challenges exist?

Science education is moving towards a more simulation based education. I have tried several simulation type labs online, but feel they are too perfect for students to get a

good feel of how science works. I also feel that many companies are pushing to integrate probe-ware into the high school. The challenge with both of these is that a government run high-school has a limited budget, so I am able to purchase the rights to some simulations and purchase some Lab Pro interface kits with probes.

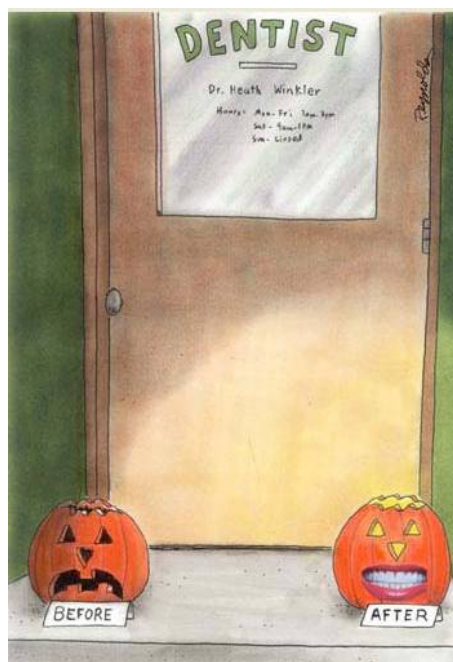
7. If you could provide one piece of advice for a graduating St. Olaf student, what would it be?

Make sure you don't take a job that you don't have any interest in. I wanted to be a research chemist. I worked in a lab one summer and realized that research was rather boring and I had to find something with my chemistry degree that I would like to do. I more or less fell into the teacher role and had to hurry to take education classes to complete my degree. I love teaching and can't imagine doing any other job. The pay is low and teachers are treated as second rate citizens, but it really is a very good job with great rewards.

Thanks for your questions and good luck with your quest in life.

Mark Brommer

Lincoln HS Science Teacher



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