



chemistry

notes

New GC/MS for Department

The PSU Chemistry Department has purchased a new gas chromatograph/mass spectrometer from Shimadzu. The \$50,000 instrument (model QP-2010S) replaces the GC/MS purchased in 1995 and has the added features of an automatic sampler and an extensive library. The instrument is now operational and available for use in undergraduate laboratory courses and in departmental research. The purchase, during a time of budget cutbacks, was managed using student equipment fee monies and our Heckert fund. About 25% of the purchase price was provided by the Kansas Polymer Research Center with whom we regularly share equipment. Our old GC/MS is being refurbished for use at KPRC.

New Faces

There have been several changes to the faculty and staff since our last newsletter. After several years, **Dr. Charles Blatchley** stepped down as Chemistry chair. **Dr. Bobby Winters**, assistant dean for the College of Arts and Sciences, is standing in as interim chair. **Dr. Khamis Siam** is acting as program coordinator for the department. **Dr. Bipin Shah** is an assistant professor with a specialty of organic chemistry. He comes to us from Bowling Green State University. **Dr. Irene Zegar**, who has taught as an instructor, was recently promoted to assistant professor and, among other things, has been placed in charge of the education-directed students.

Dr. Kris Mijares was a temporary lab instructor last year and was appointed to a full-time position this year with the primary responsibility of Introduction to Chemistry classes. We also have a new, part-time lab instructor, **Ms. Patricia Beck**. She has been teaching General Chemistry I and Organic I labs.

Other faculty are: **Dr. James McAfee**, Biochemistry; **Dr. Dilip Paul**, Analytical Chemistry; and **Dr. William Shirley**, Inorganic and Physical Chemistry. **Eileen Begando** is in charge of the stockroom and **Linda Hoesli** is the administrative assistant for the department.

Congratulations to our student K-INBRE awardees:

Josh Kristalyn
Meagan Miller
Josh Mayfield
Sara Wolfe

Course additions and changes in the Chemistry program

After great deliberation, the faculty decided to replace the Option I and Option II degree fields with a single degree and various emphasis areas. The Bachelor of Science in Education degree will remain.

The emphasis areas in the program are: ACS Approved, Biochemistry, Environmental, Pharmaceutical, Polymer, and Pre-Medicine/Pre-Medical Profession.

Several new courses have also been approved:

CHEM 611 Senior Review and Assessment is a one-hour capstone course required for undergraduate students along with an exiting assessment.

CHEM 705 Laboratory Safety and Compliance is a one-hour survey of recommended practices for safe lab operation, hazardous materials and waste compliance, first aid and the latest regulations to prevent accidents or exposures.

CHEM 369/ 469/ 569 Laboratory Assistant Practicum I, II & III are designed to provide an escalating responsibility for those intending to teach secondary school chemistry. Beginning with assisting a lab instructor, students will eventually be in charge of the day-to-day instruction in a single undergraduate lab, providing needed experience in a contained environment for the teacher-to-be.

The **Chemistry Club** has had another great year here at PSU! This is an organization dedicated to spurring interest in science among youth, students and adults. With charity, volunteer work and outreach programs to local schools, there's never a dull moment for the members.

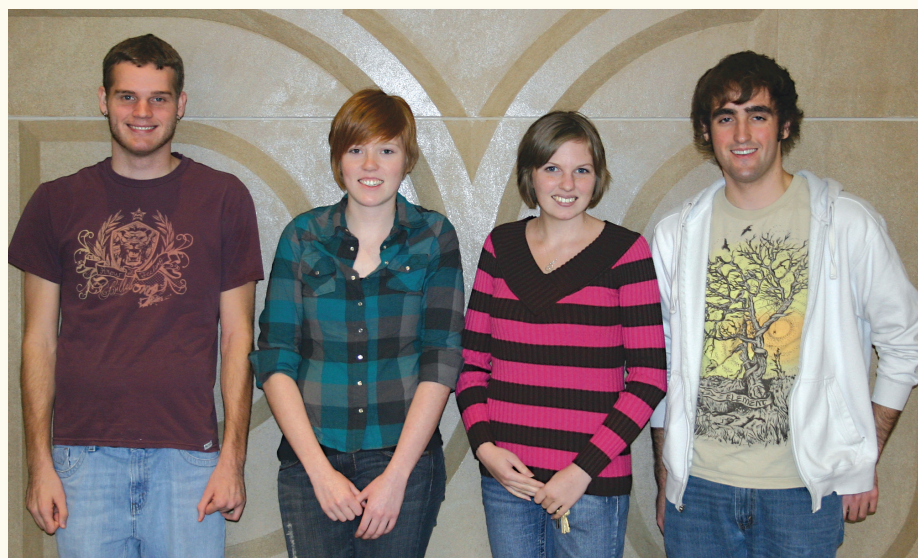
Ever wonder what an elephant's toothpaste would look like? How to make ice cream without ice? Or what molten potassium chlorate might do to a sucrose-laden gummy bear? The PSU Chemistry Club has been demonstrating the answers to questions like these over the past year. Their Chemistry Magic Shows are more than meets the eye – under the flashy exterior there's some real science brewing. The shows serve as both an intriguing way to promote interest in an often avoided subject and as educational opportunities for local schools. With the "Adopt-a-Family" program, the club members helped provide holiday foodstuffs for a family in need.

Pittsburg State participates in helping the surrounding

community and club members were active in this year's Big Event, helping people with yard work and outside chores. The club also represents the American Chemical Society as a student affiliate chapter. Over the past year the club has participated in several chemistry-related events such as National Chemistry Week, Mole Day (celebrating Abogadro's number) and Earth Day. Chemistry Club also hosted Chemparady, a student competition of chemistry trivia with such categories as "Know Your Professors," "LEO says GER," and "Elemental Wordplay." Cash prizes went to the winning teams and pizza was enjoyed by all.

Chemistry Club officers for 2009-2010 are: president – **Carrie Nelson** (Bio-Chemistry, senior); vice president – Lindsay Nance (Chemistry, junior); treasurer – **Anthony Truong** (Pre-Med, Senior); and secretary – **Courtney Snyder** (Pre-Med., Freshman).

Contact the Club by stopping by the office or at canelson@hotmail.com.



Chemparady contest winners

Second place: **The Einstein Squad** - left to right: Jonathon Cullison, Sarah Wolfe, Meagan Miller, Josh Mayfield.

First place: **Team Bryon** - Becca Byron, Brandon Mendez, Brandon Iloilo.

Third place: **KGK Team** - Zach Krumsick, Breahe Giefer.

Special help



Christian Bedore and Jonathon Cullison study in the tutor room/library.

This fall the Chemistry Department had 13 student workers helping out in various areas. Providing work for students is definitely a win-win situation. These students tutor, grade papers for large lecture classes, act as lab assistants, and help out in the office and stockroom. The department needs their help for things to run smoothly (and safely) and the students need the money. Many of these workers help out in more than one area. If you call the department, it might be a student worker who answers the phone. If you have a son or daughter attending PSU, a student worker might tutor them. (We have tutors available 15-18 hours per week.) Or perhaps they assist by making sure safe lab practices are being followed or by helping set up for materials needed for each lab. They help make everyone's day here a little better.



The Chemistry Club demonstrates how to make liquid nitrogen ice cream (their specialty) during Rumble in the Jungle.

Left to right: Meagan Miller, Courtney Snyder, Rachel Jerome, and Jeanette Stengel, Dept. of Curriculum & Instruction.

ACS MoKanOk Chapter

The MoKanOk local section of the ACS was founded over fifty years ago. MoKanOk works cooperatively with the PSU Chemistry Department and the PSU Chemistry Club to involve the public with activities and informative demonstrations to educate people about chemistry and its practical uses in everyday life. They strive to make chemistry more interesting and fun for all ages and have hosted some truly thought-provoking speakers.

The meetings are usually preceded by a dinner at Napoli's Italian Restaurant in Pittsburg. At 8 p.m. the group gathers on the PSU campus to attend a lecture by the guest speaker. The MoKanOk section hosted several ACS speakers this past year including Dr. William F. Carroll, a past ACS President.

Current officers are: Irene Zegar, chair; Ken Osborne, chair elect; Alex Bednekoff, secretary/treasurer; Khamis Siam, councilor; and Howard Kivett, alternate councilor. For information on upcoming events, meetings, and speakers, contact Dr. Khamis Siam at kssiam@pittstate.edu.

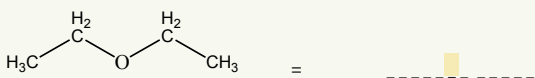
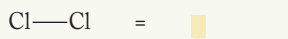
Out and About

Several students and instructors attended the ACS Midwest Regional Meeting last fall held in Iowa City. Attending were undergraduate students **Emily Derfelt, Kana Innami, Hisanori Kajawara, Anthony Truong, Keisuke Tsukuda,** and Evelyn Yambay along with graduate students **Elsie** and **Lovemore Tambaoga** and **Jeremy Van Auker**. The students were led by **Dr. McAfee, Dr. Siam** and **Dr. Zegar**. Emily, Kana, Hisanori, Anthony, Keisuke, Evelyn, Elsie and Lovemore presented at the meeting with the faculty members.

Students **Meagan Miller, Josh Mayfield** and **Sarah Wolfe** were cited as research assistants for the presentation given by **Dr. Siam** at an Alternative Energy Sources seminar held this summer at Wichita State University. His presentation was entitled "Photoemission Characteristics of Rhenium Complexes."

Brain Teaser

Translate the formulas/structures into words. Circled letters will spell something we all use.



Words spell out CHEMISTRY of course!

ANSWERS:
chlorine
tert-butylphenyl
methyl ethyl ketone
magnesium sulfate
copper (I) iodide
dimethyl sulfide
1,7-octadiene
dichloromethane
diethyl ether

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