

American Chemical Society – Kalamazoo Local Section Newsletter

March 29, 2012

Vol. 2 - Issue 2



Comments from the Chair

Elke Schoffers

I have enjoyed my role as KACS Chair so far. It is a great opportunity to look at the broader issues of chemistry and to collaborate with scientists from different backgrounds. It is very rewarding when events attract a broad audience, which was the case for the social event "Boost your Career", the MS User Group meeting and the Science Café titled "Hondatron".



Elke Schoffers, Ph.D.
KACS Chair

2012 KACS Executive Officers

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Dr. Elke Schoffers, WMU – Chemistry
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Vacant
Consider getting involved

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Mr. Michael Kiella
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I urge all readers to regularly check our website and newsletter for upcoming events. Please note that we are currently looking for new KACS officers. The Chair-Elect position is vacant and the Treasurer position will soon need a new volunteer. Self-nominations are strongly encouraged. Lastly, I wish to thank WMU Professor of Chemistry James Kiddle for taking charge of the Competitive Exam Subcommittee that is responsible for identifying talented high school students through their performance in a preliminary and a final exam. Top competitors will be recognized during a Spring Awards Ceremony (date TBA).

Best regards,

Elke Schoffers, Ph.D.
Professor (WMU)
Chair - Kalamazoo Section (ACS)

KACS website:

<http://www.wmich.edu/acs/>

Do you have questions, comments, or would like to contribute to this newsletter? Send an email to:
ACSkzoo@gmail.com

Upcoming events at a glance (Apr 2012)

KACS

Apr 4 – Committee Meeting of KACS Executive Officers, contact Elke.Schoffers@wmich.edu to submit agenda items

Apr 21 – Chemists Celebrate Earth Day (CCED), “Rethinking Recycling – It’s Easy to Be Green”, Free admission at the Kalamazoo Nature Center and CCED display table. 9 AM – 4 PM.

Miscellaneous

Apr 2 – Deadline for abstract submission for the University of Michigan Chemical Engineering Graduate Symposium on May 1, 2012. Details at: <http://che.engin.umich.edu/graduateprogram/gradsymposium2012>

Apr 18 – Frontiers in Chemistry Lecture Series: "Need to Make Bond? Try it in Water @ RT". Dr. Bruce Lipshutz, who won the Presidential Green Chemistry Challenge Award in June 2011, will present a lecture in 1720 Chemistry Bldg, WMU, 5 PM.

Apr 20 – 3rd Annual Chemistry Research Symposium
Chemistry Bldg Atrium, WMU,

Feel free to contact KACS at Elke.Schoffers@wmich.edu if you would like to announce specific events or share links.

Announcements

Science Olympiad

Elke Schoffers

On Saturday, March 17, 2012, Western Michigan University held its annual Science Olympiad event that involved more than 150 WMU students and faculty members to host hundreds of middle and high school students. Thanks to several volunteers (James Guzinsky, Gellert Mezei, Guda Ramakrishna, Blair Szymczyna, Brianna Hyder) about 26 students had the opportunity to carry out different types of chemistry experiments.



WMU volunteers Gellert Mezei and Guda Ramakrishna (orange shirts). (Photo taken by WMU undergraduate student Alejandro Carrasco Pena)

Harmon Lecture Series with Dr. Gunda Georg (University of Minnesota)

Three dates to remember:

- **April 9, 2012 (Monday, 4-5:15 PM)**
Research Presentation: “Natural Products as Leads for Anticancer Drug Discovery”, 1260 Chemistry Bldg, WMU
- **April 10, 2012 (Tuesday, 7:30 AM-9:30 AM)**
Breakfast Meeting: “Women In Sciences: Meeting Challenges - Overcoming Barriers”, 2401 Chemistry Bldg, WMU. While the event is free to all participants please RSVP to Elke.Schoffers@wmich.edu by Thursday, April 5, to reserve a seat.
- **April 10, 2012 (Tuesday, 11 AM-12:15 PM)**
Chemistry Colloquium: “The Evolving Landscape for Drug Discovery Innovation”, 1260 Chemistry Bldg, WMU

Summary the 87th Annual Dow Open at Kalamazoo College

Margarite Matossian

The 87th Annual Dow Open, a putt-putt golf tournament hosted by the Kalamazoo College chemistry and biology departments, occurred on Friday, April 22. This social event is a Kalamazoo College tradition in which both students and professors enjoy a friendly putt-putt competition and an afternoon of relaxation.

There were a total of 18 teams; each team had to have a chemistry major, a biology major, a freshman and a 'wildcard' student who could be in any major and/or year. These teams are made to help freshmen meet with upperclassmen and become familiar with the professors, and students from different majors also mingled. Professors from different science departments across campus, and other campus-associated organizations (such as the admissions office and alumni relations) created a total of 18 themed tees that were scattered around all three floors of the Dow science building. Each tee was creatively hand-made and constructed with many different obstacles that the students and/or professors would have to putt through in order to get to the target hole. In the end of the tournament, after each team has gotten through at least nine of the eighteen tees, the teams are brought together in a classroom and in no specific order, teams are called up to choose a prize.

Food and drinks were also graciously provided by the chemistry and biology departments. Both students and professors look forward to this event each year, and it is an opportunity for students and professors to interact with each other outside of the classroom as well as relax after a long week of intense science courses.

(Pictures by Mary-Jane Holcomb)



A team of freshmen and Dr. Diano Kiino (professor of health sciences) playing on a 'tee' composed of sheep brains previously used in neuroanatomy.



All the students (both upperclassmen and underclassmen) and professors who participated in this putt-putt event gathered to receive prizes at the end of the event.



(Left to Right) Zach Janes, senior biology major; Simone Arora, freshman; Dr. Vivien Pybus, biology (microbiology, genetics) professor; Grant Carey, freshman. These students and professor flaunt their prizes of colorful boas.

Kalamazoo MS User Group

Andre Venter

On February 29, 2012 about 35 scientists from local industries such as Kalsec, MPI, Pfizer, Perrigo, Proteos, SMIC, Forensic Fluids and others, together with faculty and graduate students from Western Michigan University, Grand Valley State and Kalamazoo College gathered at Bell's Eccentric café. On the menu were two intriguing presentations on mass spectrometry as well as beer and southern style BBQ sponsored by Waters Corporation. Dr. Dan Jones, Professor at Michigan State University delivered a presentation entitled 'Metabolome analysis: When Mass Alone Is not Enough'. Delano Turner, Mass spectrometry Specialist from Waters Corporation, presented on the use of sophisticated workflows and MSE for wildlife protection through the identification of pesticides used in poisoning of the endangered red kite.

The event was the first in the Kalamazoo Area Mass Spectrometry Discussion Group's Industry Sponsored Lecture Series. For information about upcoming events contact andre.venter@wmich.edu or visit the KazooMS website at <http://goo.gl/bqj0j>

(Pictures by Andre Venter)



Miscellaneous Announcements

WMU Chem Club Report

Brianna Hyder

Meetings: The Chem Club meets every Wednesdays at 5 pm, 2871 Chemistry Building, WMU

Ongoing:

Ronald McDonalds pop tab collection
Study groups - Genetics

Past Events:

Valentine's Day Bake Sale – Weds, Feb. 15 at 11 am – 4 pm in Chem Bldg lobby
Red, pink, white baked goods themed into periodic table
Demo Practice Night – Weds, Feb. 15 in place of regular meeting in Chem Club room
Tour at Kalsec – Sat., Feb 25 at noon
Second Demo Practice Night – Weds, Feb. 29 in place of regular meeting
Demo at Prairie Ridge Elementary – Mon., March 12 at 1:45 pm
Assembly of 3 fourth grade classes
Science Olympiad – Sat., March 17 at 8 am – 4 pm in Chem Bldg
Some members volunteered to help run events and monitor hallways. More members also participated in an assembly demo at 3 pm.

Upcoming:

Habitat for Humanity volunteer – Sat., March 24 at 8:15 am
Nominations for new officers – April 4th

Request for Volunteers

Lydia Hines

Please come to the Kalamazoo Nature Center to help with our display of materials and activities/interaction for Chemists Celebrate Earth Day (CCED) to be shared with the many parents and children and young people who attend the Earth Day celebrations there. The event will be on Saturday, April 21, at between 9 a.m. and 4 p.m. Admission fee to the Nature Center is waived on that day. The theme for CCED this (9th) year is **Rethinking the 3 Rs: It's Easy to be Green.**

Any assistance (for any length of time) at our display table would be appreciated; come and help spread the news that chemistry is integral to our well-being and that chemists are involved and concerned about being good caretakers of our environment and not wasteful in the consumption of resources.

I will be waiting for all the phone calls at 375-7349.....

Science Café: “Hondatron”

An Amateur Electric Car Vehicle Conversion

Elke Schoffers

Martini’s was the location of the recent Science Café presentation by Dr. Paul Pancella (Physics, WMU) who discussed why and how he converted a 1992 Honda Civic compact car to an electric vehicle. He was very motivated to make a personal contribution to reducing the amount of CO₂ emissions by pursuing this unusual project. Carbon dioxide is a greenhouse gas and contributes to global climate change. Moreover, internal combustion engines are far less efficient than electrical ones. The presentation outlined many details about how to replace a gasoline-powered engine into one that uses electrical power from batteries. Conventional cars contain many components that need to be regularly replaced, e.g. the engine oil and oil filter. The majority of work entailed connecting and disconnecting wires and mechanical auto components. However, one part in particular requires the use of better chemistry. Efficient batteries need lighter elements. For example, the traditional lead acetate battery not only contains a toxic heavy metal (Pb) but it is also very heavy and uses corrosive acid. Alternatively, batteries that use the very light lithium component (Li) show increased efficiency. The initial project was carried out within 6 months, followed by additional modifications and upgrades.

The event drew 40 attendees who enjoyed the informative presentation, a vigorous discussion afterwards, and the delicious food; pizza and antipasto salad appetizers. The Science Café concluded with a close-up look at the modified car. It proudly displayed stickers that read “No gas in... No gasses out”.



(Pictures by Elke Schoffers)



This is a close-up view of the converted car, which now has lithium batteries in place of a combustion engine.



Paul Pancella addressed many questions in an engaging discussion with an audience of approximately 40 people who were eager to learn more about this unusual science project.