

American Chemical Society – Kalamazoo Local Section Newsletter

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Comments from the Chair

Elke Schoffers

Dear Colleagues,

We began our fall events series with an entertaining and instructional **Science Café** on horticultural chemistry at Wedel's Nursery. For the third year in a row, KACS held a **Sci-Mix Poster Session** at Bell's Eccentric Café, made possible through the generous support by Zoetis. The annual **Chemistry Day at the Museum** occurred much earlier than usual this year. Thanks to our councilor Dr. Lydia Hines and event coordinator Annette Hoppenworth, we hosted 700 visitors with the help of 87 volunteers.

On November 1, KACS will offer its final event of the year by inviting chemists, the general public, dancers and spectators to a **Gala Chemistry Dance** at the Kalamazoo Institute of Arts. As part of the "Chemistry & Culture" series, "Elements of Dance" will offer a brief program, refreshments, showcase and open dances, puzzles, prizes and lots of fun from 7-10 PM. There will be an exhibit titled "Molecular Foundation of Movement" that connects atoms and molecules to exercise science. A special display will celebrate the life-long contributions of chemist, entrepreneur and art collector Dr. Alfred Bader, founder of Aldrich Chemicals. In closing, my sincere gratitude goes to all the donors who are helping us make this free outreach activity possible: AAAS, Aldrich Chemistry, VWR, WMU, WMU-BTR, and last but not least Alfred Bader Fine Arts. Feel free to invite your friends and neighbors. I hope you can join us.

Thank you!



Elke Schoffers, Ph.D.
(KACS Chair) presented
the ChemLuminary poster
at the ACS Indy meeting

KACS website: <http://kalamazooacs.org/>

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

Sci-Mix Poster Session at Bell's Eccentric Café

By Elke Schoffers with Photos by DB Family Photography

For the third year in a row, KACS hosted a poster session titled "Sustainable Science - Recycle a Poster" at Bell's brewery downtown Kalamazoo. Posters were either newly prepared or "recycled" from a previous event. Local chemists from industry and academia, including graduate and undergraduate students were invited to view 47 registered poster entries, 28 of them presented by students. There were 95 attendees who had a chance to enjoy hot appetizers and beer while listening to a presentation by Mayuri Bhakta, a Product Development Scientist at Kellogg's. Bhakta received her B.S. in Chemistry at Florida A&M University before completing a M.S. degree, Florida A&M, in the "Synthesis and Spectroscopic Characterization of Differic Model Compounds". Recently she also completed a Master of Business Administration at the University of Florida. In her current position she focuses on developing cereal products in the Kids Group. Before and after the keynote speaker, attendees were able to mingle, catch up with local scientists and review poster contributions based on the work at Bell's Brewery, Excell IMS Corp., Kalamazoo College, Kalsec, Perrigo, Northwestern University, University of Illinois, WMU and Zoetis. Chemist Denis Billen of DB Family Photography & DJ Services took the photos shown below; additional pictures can be found on our Facebook page at <https://www.facebook.com/ACSKalamazoo>. This event was made possible through a generous grant by Zoetis.



Rebecca Monterusso and
Doug Williams



Scientists gathering



Keynote speaker Mayuri Bhakta



K-College participants (left to right): Kendrith Rowland, Elke Schoffers, Laura Furge, Amanda Bolles, Geneci Marroquin, Tom Smith



Left to right: Scott Timmins, Paul Johnson, Susan Sheehan, John Wendt, Richard Goodwin, Denis Billen, Scott Knauer

Announcements

Participate in planning the JGLCRM 2015 A Professional Meeting close to home!

By Lydia Hines

The acronym, **JGLCRM**, stands for **Joint Great Lakes-Central Regional Meeting**! Our Local Section (in the Great Lakes Region) will be co-hosting, along with the Western Michigan Section (in the Central Region), that Regional Meeting in Grand Rapids; the dates are May 3-6, 2015. The program is what makes a meeting, so even though 2015 may sound like a long time from now, for good planning time is of the essence. I want to thank those who have already volunteered for the positions of Program co-chair (James Kiddle), Exhibits/Fundraising co-chair (John B. Miller) and Publicity co-chair (Elke Schoffers). This leaves as an immediate need from our Section that of Awards co-chair (responsible for our Region's High School Teacher Award, the Nalley Regional Volunteer Award, and the Region's Encouraging-Diversity Award). As planning will likely begin in October, we need to have a full complement of co-chairs from our Section very soon. To learn more about the responsibilities of the **Awards Chair** and to volunteer, please contact the 2015 JGLCRM General co-chair Lydia E. M. Hines either by e-mail at lemhwgh@gmail.com or by telephone at 269-375-7349. I look forward to hearing from you.

Another Successful Chemistry Day at the Museum

What a whirl of activity this year, whose chosen theme was "Energy – Now and Forever"

By Lydia Hines

- Students in grades K-12 were invited to submit illustrated poems on the theme. Response was received from 2 schools with entries in Grades 3-5 and 9-12. These will be submitted to the National competition and we await to hear how our entries may fare – maybe we can get another national winner, as we did last year.
- Celebrating Chemistry, a publication prepared by the ACS for youngsters in grades 4-6, was distributed to the Kalamazoo and Portage Libraries, the Museum publicized Chemistry Day at the Kalamazoo Valley Museum in their quarterly magazine *Museon* and in the *Kalamazoo Gazette* and flyers were distributed to all K-12 teachers for whom we have e-addresses. *ChemMatters*, a publication prepared by ACS for High School students, was distributed to those who came to the Museum event.
- With the expert, tireless and valuable assistance of Annette Hoppenworth 87 volunteers (KACS members and friends) participated in our largest outreach effort of the week; we presented 29 hands-on activities to about 700 patrons on a beautiful Fall Saturday in our southwest corner of Michigan. It was heartening to welcome 35 first-time volunteers! Teachers, parents, scout leaders and children left with smiles on their faces, bags full of materials to encourage their continued learning at home and/or in the classroom, and with a good taste of the excitement of chemistry and science in general, as a result of having been encouraged to observe and participate in our activities. A very warm thank you goes to all who made this event another successful one for our Section.

Upcoming Special Event



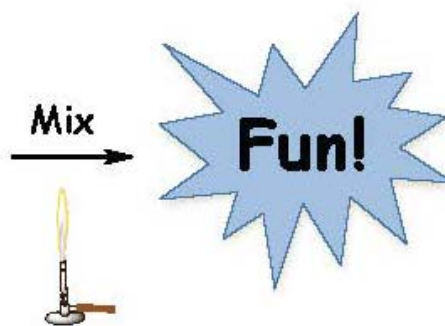
Chemistry & Culture: Elements of Dance



Chemist



Dancer



A social event with exhibit on "Molecular Foundation of Movement"

Friday, November 1, 2013, 7-10 PM
Kalamazoo Institute of Arts, 314 S. Park St.

Free Admission.

Free Snacks.

Free Dance Lesson.

Dance Showcases.

Puzzles – Win Prizes!

Music: Ballroom, Latin, Swing & Country

Partner not necessary – No dress code.

Open to the general public.



This event is organized by the Kalamazoo Local Section of the American Chemical Society (KACS). Event updates will be posted online at www.KalamazooACS.org and on Facebook at www.facebook.com/ACSKalamazoo. Contact Elke.Schoffers@wmich.edu for questions.

Upcoming Special Event

Why Chemistry & Culture?

Chemists are not just experts in their field but are also interested in art, history, cooking, baking, brewing, gardening and exercise, among others. The overall goal is to organize events that incorporate "Chemistry and Culture" themes such as "Art Conservation", "Forgery", "Cooking", "Gardening", "Dancing", etc.

The goals of the "Chemistry and Culture" series are...

- To offer a social networking opportunity for members of the Kalamazoo Local Section of the American Chemical Society (KACS) and the public
- To educate the general public about the goals and activities of KACS
- To highlight the connections between "chemistry" and "culture"
- To explain basic chemistry concepts in everyday life
- To encourage student participation
- To instill an appreciation for how chemistry contributes to the world in many ways
- To forge ties with the local community

Chemists who have looked beyond their field:

Alfred Bader (Austrian-born Canadian chemist) founded the *Aldrich Chemical Company*, which later became *Sigma-Aldrich Corporation* as one of the world's leading supplier of research chemicals. He founded the company's journal *Aldrichimica Acta* in 1968. He is a philanthropist and a life-long fine arts collector. His artwork is displayed on the front cover of the company's chemical catalogs and its journal. He authored two autobiographies titled *Adventures of a Chemist Collector* and *Chemistry & Art*.



Robert G. Bergman (University of California - Berkeley) has made seminal contributions in inorganic and organometallic chemistry. He enjoys ballroom dancing in his free time.

Carl Djerassi (Emeritus Austrian-American Chemist at Stanford University) is the co-inventor of the hormonal birth control pill and has published several "science-in-fiction" novels. Together with Roald Hoffmann he authored the play "Oxygen" in 1999.

Roald Hoffmann (Polish-American Chemist at Cornell University) is the 1981 *Nobel Laureate in Chemistry* and a co-host of the TV series *The World of Chemistry*. He writes poetry and presents the monthly series *Entertaining Science* at a New York City café, which explores the connections between science and the arts.

Welcome Ice Cream Social

By Sarut Jianrattanasawat with photos by Roxana Manta-Bielanski

On September 4, 2013, WMU Chemistry Graduate Student Association (CGSA) and the WMU Chem Club hosted an ice cream social for graduate and undergraduate students as well as faculty and staff members of the Department of Chemistry. It took place in the *Commons Area* on the 3rd floor of the Chemistry Building on WMU's campus. The goal was to introduce new students to the existing student body. A concurrent poster session by 25 presenters provided opportunities to become familiar with current research projects. With more than 50 people attending, students were able to make new connections as well as to catch up with old friends. This was a successful event, which was made possible with financial support from KACS.



CGSA President Sarut Jianrattanasawat (left) and graduate students Kevin Douglass (middle) and Gregg Hasman (right) presented their research posters.



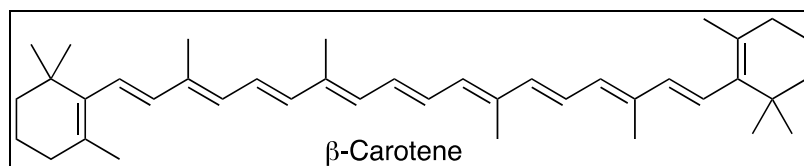
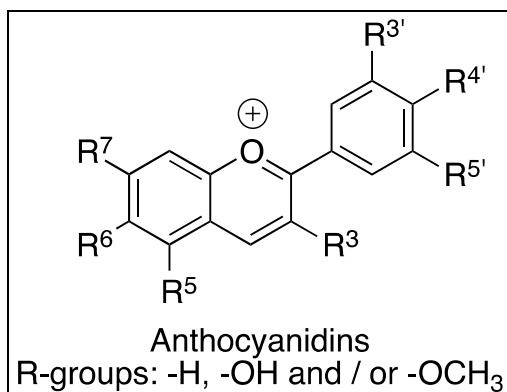
Graduate and undergraduate students participated as well as faculty and staff members to welcome new students to WMU's campus.

Science Café on Horticultural Chemistry

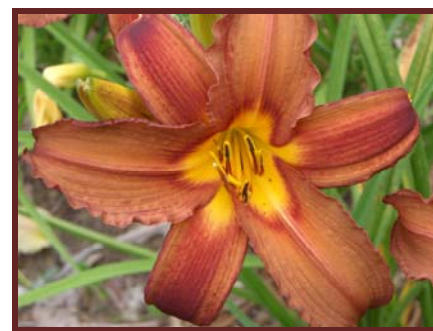
Natural Colors: The Chemistry of Pretty Flowers

By Elke Schoffers and James Guzinski with photos by Roxana Manta-Bielanski

On September 17, 2013, there were about 35 visitors in the audience of the Science Café, many of them first time participants from the general public. Dr. James A. (Gus) Guzinski (WMU instructor, retired from Kalsec) described the pigments that have been identified in the flowers of daylilies. The most common of these are carotenoid pigments and anthocyanins. Carotenoid pigments are fat soluble and found throughout the tissues of flowers. On the other hand, anthocyanins are found only in the epidermis, the top layer of tissue.



The science of flower coloration is complex because light can be absorbed and reflected off different layers of tissue. For example, purple anthocyanins with yellow carotenoids will give brown colors as light passes through the epidermis and is reflected from within the flower. Guzinski also described the complex chemistry needed to produce a blue flower. Blue pigments require multiple genes working together to produce relevant structures from anthocyanidins, sugars, fatty acids and, often, metal ions in very specific 3D arrangements. This complexity is the reason that genetic engineering attempts to produce blue roses and blue carnations has failed thus far. Too few genes could be manipulated at the same time.



The event took place in the flower shop of Wedel's Nursery, Florist & Garden Center. Attendees enjoyed appetizers and snacks provided by Off-the Cuff Catering. Door prizes included perennial flowers, gold elemental pins and nano moles. Guzinski spent twenty years researching natural colors and flavors at a local company, the **Kalamazoo Spice Extraction Company**. He is author of several patents on hop products that are employed as flavors in the brewing industry. Since his retirement from his position as Senior Chemist, he has been teaching part-time at Western Michigan University. He also hybridizes daylilies with the goal of producing new colors in flowers and a particular interest in extending the bloom season.

(Continued on Page 8)

Science Café on Horticultural Chemistry

(Continued from Page 7)



The Science Café attracted a diverse audience (left) while Guzinski explained pigment in flowers (right).



Schoffers and Guzinski handed out several door prizes



Dr. Ramki Guda won a blue-green hosta plant



Guzinski wore a lily shirt that his wife made



The Science Café took place at Wedel's Nursery, Florist & Garden Center where many plants were on display.

VOTE

KACS Election

Please follow the prompt when you will be contacted by KACS to exercise your right to vote in selecting the next Chair-Elect and the next Secretary. Vote when you get your KACS Ballot - to learn about the candidates read their bios which will reach you with the ballot

ACS Election Polls Are Open

Dear ACS Member:

Election packets have been mailed. When you receive your ballot, you have the option of voting via the Internet, available 24 hours a day, or you may choose to use the mail ballot option.

Be an informed voter and learn more about the candidates and their qualifications by reading the candidates' statements and biographical information (included in the ballot package) as printed in the September 16th issue of *Chemical & Engineering News*. If voting by Internet, you may click on the candidate's name to read their information.

Voting ends on Friday, November 15th, 2013 at 5:00 p.m. CT (USA), so act now to influence the future of ACS.

The 2013 ACS National Election is conducted for ACS by VR Election Services. If you need assistance, please use this link ["Customer Service"](#) to request an E-Ballot.

Exercise your right to vote!



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