

# American Chemical Society – Kalamazoo Local Section Newsletter

January 25, 2013

Vol. 3 - Issue 1



## 2013 KACS Executive Officers

### Chairperson

Dr. Elke Schoffers, WMU – Chemistry  
[elke.schoffers@wmich.edu](mailto:elke.schoffers@wmich.edu)

### Past-Chairperson

vacant

### Chairperson-Elect

Dr. John H. Engelmann, Miller Canfield  
[jengelma@hotmail.com](mailto:jengelma@hotmail.com)

### Secretary

Carolyn Pugh, Perrigo  
[carolyn.pugh@perrigo.com](mailto:carolyn.pugh@perrigo.com)

### Treasurer

Dr. John Miller, WMU – Chemistry  
[john.b.miller@wmich.edu](mailto:john.b.miller@wmich.edu)

### Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry  
[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.  
[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

## Comments from the Chair

Elke Schoffers

Dear Colleagues,

I look forward to continuing my work as KACS Chair in 2013, which entails interacting with many familiar and some new faces. On the left-hand side please find the updated roster of the Executive Committee. I also welcome Maren Zanotti as the CCED (Chemists Celebrate Earth Day) Coordinator for 2013.



Elke Schoffers, Ph.D.  
KACS Chair

What do KACS, Oprah Winfrey and Stephen Colbert have in common? The answer: recent discussions about Performance-Enhancing Drugs (PED) in sports.

Once more, Lance Armstrong dominates the headlines after confessing to drug use in Oprah's interview, and in the face of having to testify under oath about this sensitive issue in the near future. For many years, Armstrong fiercely responded to allegations of cheating. The "master of the two-wheeler" ("*The Colbert Report*," *Comedy Central*, 1/15) was already stripped of his seven Tour de France titles last year. While this latest development may be news and shocking to many it should not have surprised those who attended the presentation by Tom Werner, our ACS Tour Speaker in October 2012, when he discussed "Doping in Sports: How chemists catch the cheaters (sometimes)". There was strong evidence for EPO use, which controls red blood cell production. Note that blood samples are now kept for many years, as far back as 2008. This allows for re-testing, especially when analytical techniques have caught up with the cheating method.

(Continued on page 2)

**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](mailto:ACSkzoo@gmail.com)

# Upcoming Events at a Glance (Jan – Feb 2013)

## KACS

- **Jan. 29**—Social event: “Boost your Career” with wine and cheese reception, 5-7 PM, 1720 Chem. Bldg., WMU
- **Feb. 20**—Science Café: "Basics of Patent Law" by **Dr. John Engelmann**, 6-8 PM, 226 Dow Science Bldg., Kalamazoo College

## LHC Lyceum Lecture Series (WMU)

noon to 1 p.m. Wednesdays

<http://www.wmich.edu/news/2012/12/3798>

- **Jan. 30**—"The Dance of the 3 E's: Energy, Environmental Stewardship (CO<sub>2</sub> Emissions Mitigation) and Economic Imperatives," **Dr. David Barnes**, professor of geosciences
- **Feb. 6**—"Climate Change and Emerging Infectious Diseases," **Dr. Kathryn Docherty**, assistant professor of biological sciences
- **Feb. 13**—"Climate Change and Energy for the Transportation Sector," **Dr. Steve Bertman**, professor of chemistry
- **Feb. 20**—"Economics of Climate Change," **Drs. Bruce Ferrin**, professor of marketing, and **Paul Clements**, professor of political science

# Comments from the Chair

(Continued from page 1)

If you missed Werner's talk or any of the other KACS activities I encourage you to review the event highlights in this issue and review previous newsletters and online reports.

Please note that the Lee Honors College at WMU has launched a weekly lecture series on climate change during the Wednesday lunch hour (see left).

KACS will kick off the year with “Boost your Career” on January 29, on WMU's campus (p. 3). This is also a social event with a wine and cheese reception. Several special guests from industry have been invited. Newcomers and the public are invited. Please check in regularly with us on Facebook and at our web site at <http://www.wmich.edu/acs/>, where you can find many event photos.

Wishing you a healthy and successful New Year!

# Volunteering Opportunities

Doug Williams

The KACS Executive Committee is looking for members who would like more involvement with our local section.

**You have ideas – we have opportunities.**

Let's talk! Please let any of our officers know if you would like to be considered for a service or leadership role in KACS. Some specific opportunities are listed on our [web site](#).

Feel free to contact KACS at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu) if you would like to announce specific events or share links.



Find us on  
**Facebook**

# Special Event



## The KALAMAZOO Section presents

“B   s t your Career!”

Motivate Your Molecules  
Lower Your Activation Energy  
Increase Your Efficiency  
Be A Catalyst

Tuesday, January 29, 2013

5:00-7:00 pm

1720 Chemistry Building & Atrium  
Western Michigan University

### *Mix & Mingle, and Celebrate Kalamazoo Chemistry*

*5:00 pm – Welcome Remarks (Elke Schoffers, WMU)*

*5:15 pm – Achieving leadership in your position (Sherine Obare, WMU)*

*5:30 pm – Career options in the pharmaceutical industry (Chris Nagra, Pfizer)*

*5:45 pm – Wine & Cheese Mixer*

All are welcome to this first KACS social event of the year to connect with local chemists from industry and academia. Especially undergraduate and graduate students are invited to join the discussion about career choices.

This event is open to ACS members, non-members, and the general public. Contact [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu) if you have any questions. Follow events of the **Kalamazoo American Chemical Society (KACS) Local Section** at <https://www.wmich.edu/acs>.

Special thanks  
go to WMU



# Welcome a New CCED Coordinator

Elke Schoffers

This year marks the **10th anniversary** of ACS's formal involvement with Earth Day (April 22) through **CCED** [**C**hemists **C**elebrate **E**arth **D**ay], a day dedicated to highlighting the role Chemists can play in preserving the natural resources entrusted to us. Under the leadership of our long-time councilor Lydia Hines as coordinator over the last 9 years, one of our visible activities was setting up a display table in conjunction with the Kalamazoo Nature Center's Earth Day celebration. KACS provided hands-on activities and educational resources to the public who walked through KNC's Interpretive Center. It is our pleasure to announce that **Maren Zanotti** has **volunteered to act as CCED Coordinator** for our Section in 2013. Maren is well known to KACS members because as an undergraduate chemistry student at Western Michigan University she has been actively involved with the Chem Club on campus.



Maren Zanotti  
2013 CCED Coordinator

Each year, ACS highlights one of four general topics (water, air, plants/soil or recycling) and chooses a specific "theme name" under the topic to focus the CCED celebration. This year's theme is "**Our Earth: Handle with Care**".

As March and April approach and you start hearing from Maren about participating, please be prepared to say "yes". Also, consider contacting her directly at [maren.c.zanotti@wmich.edu](mailto:maren.c.zanotti@wmich.edu) to suggest Earth Day activities.

If YOU are interested in volunteering please visit our website and click on "Operations Manual" where full descriptions of responsibilities are available.

## Charitable Work with Aluminum

Lydia Hines

The WMU Chem Club (undergraduate chemistry students) participates with the Ronald McDonald Houses Charities in collecting **pop-can and other metal-can tabs**, which they turn in to a central location for financial contributions to the charity (search under "Ronald McDonald House Charities", RMHC, for further information). RMHC sees this as an opportunity to teach about the importance of recycling while raising funds. Collecting only the tabs instead of entire aluminum cans is more hygienic. Moreover, the collection and storage of tabs is easier. The Upper Midwest Chapter of RMHC has raised ca. \$30,000 annually to make a difference.

If you or your family would like to encourage such philanthropic activity **you may bring collected tabs to any KACS event or function and these will be given to the WMU Chem Club.**

# Chem-Able Matching Grant Program

John Miller

Are you...

- *an unemployed or underemployed chemical professional?*
- *trying to enter the chemistry workforce?*

The *Chem-Able* matching grant program sponsored by the Kalamazoo Section of the American Chemical Society might help. The purpose of a *Chem-Able* grant is to assist chemical professionals and students in obtaining training or experience to improve chances of employment or re-employment.

Look for program details at <http://www.wmich.edu/acs/Jobs/Chem-Able.pdf>

**Donate** to support the Chem-Able Matching Grant: [KACSGrants@gmail.com](mailto:KACSGrants@gmail.com)

## Sudoku Challenge (Solution to December 2012 Puzzle)

Congratulations to Dan Walker for solving our last Sudoku puzzle. Dan will receive a \$5 gift certificate to [The Big Burrito](#). Below is the solution. A brand new Sudoku Challenge awaits you on page 7...

Difficulty: **MEDIUM**

9	5	1	3	8	4	6	2	7
2	4	8	7	6	9	5	1	3
3	7	6	1	5	2	8	4	9
6	3	7	5	9	1	2	8	4
4	8	2	6	3	7	9	5	1
5	1	9	4	2	8	3	7	6
7	2	3	8	4	6	1	9	5
1	9	5	2	7	3	4	6	8
8	6	4	9	1	5	7	3	2

# 2012 in Review

Report by Elke Schoffers

- \* Feb 7 - Boost your Career: Meet and Greet & Cheese and Wine Mixer with Panel Discussion (WMU)
- \* Mar 21 – Science Café – Hondatron: An Amateur Electric Car Vehicle Conversion by Prof. Paul Pancella (Martini's Pizza)
- \* Feb 29 – Mass Spectrometry Users Group meeting (Bell's Eccentric Café)
- \* Apr 21 – Earth Day – ACS information table and Local Section K-12 Poem Competition (Kalamazoo Nature Center)
- \* May 1 – Science Symposium for High School Students (WMU)
- \* May 21 – KACS Awards Reception (WMU)
- \* June 8 – Local Section BBQ in collaboration with the WMU Graduate Student Association, CGSA (Oshtemo Township Park)
- \* June 22 – Allegan Meet N'Greet: Mingle, Puzzle and Celebrate Chemistry, co-sponsored by Perrigo Company (Daily's Kitchen)
- \* Aug 9 – Project SEED student presentations (WMU)
- \* Oct 13 – National Chemistry Week / Chemistry Day at Kalamazoo Valley Museum, Nanotechnology
- \* Oct 23 – Mole Day! ACS Tour Speaker Prof. Tom Werner: How chemists catch the cheaters (sometimes) (WMU)
- \* Nov 9 – Chemistry & Culture: Elements of Dance, co-sponsored by the ACS Innovative Project Grant, AAAS, Kalsec Inc., Aldrich Chemistry, VWR, WMU BTR, and KIA (Kalamazoo Institute of Arts)
- \* Nov 15 – Mass Spectrometry Users Group meeting (LECO visit in St. Joseph)
- \* Dec 4 – Sustainable Science-Recycle a Poster with presentation by John Mallett: Scientific Influences on the Ancient Art of Brewing (and Drinking) Beer, co-sponsored by Pfizer Animal Health (Bell's Eccentric Café)

***Thank you to the ACS Local Section members for their strong participation and showings in all of these events!***

***And special thanks to all the event donors!***

# Sudoku Challenge

## Solve the puzzle, win a prize!

Here's how to win a prize:

- 1) Solve this Sudoku puzzle on your own.  
(please, ***do not use*** an online Sudoku solver)
- 2) Email the solved puzzle to [ACSkzoo@gmail.com](mailto:ACSkzoo@gmail.com)
- 3) Submission deadline is **February 15, 2013**.
- 4) Prizes will be awarded to the first 3 correct entries (entries must be from Kalamazoo Local Section ACS members who have not won a prize in the most recent newsletter).
- 5) Winners and solution will be announced in the next newsletter.

## Have fun!

<u>First Name:</u>	<u>Last Name:</u>
<u>Email address:</u>	

Difficulty: **MEDIUM**

			4					
	1			5		9		8
		7	6	3				4
	3	5					8	2
2			3	7	8			5
8	4					3	9	
4				6	7	5		
6		9		1			7	
					3			

**New to Sudoku?** Click on the [link](#) to learn the few basic rules of the game.

# American Chemical Society – Kalamazoo Local Section Newsletter

April 19, 2013

Vol. 3 - Issue 2



## 2013 KACS Executive Officers

### Chairperson

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[elke.schoffers@wmich.edu](mailto:elke.schoffers@wmich.edu)

### Past-Chairperson

Vacant

### Chairperson-Elect

Dr. John H. Engelmann, Miller Canfield  
[jengelma@hotmail.com](mailto:jengelma@hotmail.com)

### Secretary

Carolyn Pugh, Perrigo  
[carolyn.pugh@perrigo.com](mailto:carolyn.pugh@perrigo.com)

### Treasurer

Dr. John Miller, WMU – Chemistry  
[john.b.miller@wmich.edu](mailto:john.b.miller@wmich.edu)

### Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry  
[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.  
[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

## Comments from the Chair

Elke Schoffers

Dear Colleagues,

Spring has finally arrived and our Section will offer two Chemists Celebrate Earth Day (CCED) activities on April 20. This is also the season for preparing for our Section's Award Reception, which will take place on May 20. Among others, the top high school competitive exam winners and four 50-year members will be recognized.

In this issue you will also learn about our revised process for identifying the annual Outstanding Chemistry High School Teacher awardee, which now includes a simplified online application form. On a somewhat different note, I am happy to report that the Section received two ACS grants to support an upcoming Science Café on horticultural chemistry and a climate change education program, respectively.

(Continued on page 2)



Elke Schoffers, Ph.D.  
Professor, (WMU)  
Chair (KACS)



New [Online Application](#) for  
Outstanding Chemistry Teacher Award

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](mailto:ACSkzoo@gmail.com)

## Comments from the Chair

(Continued from page 1)

As before, the newsletter includes selected KACS activity reports. Our own Chair-Elect John Engelmann gave an enlightening Science Café seminar on patent law and ACS tour speaker Al Hazari from Knoxville, Tennessee, gave an engaging presentation on “Comics in Chemistry”.

Lastly, an article about our Innovative Project Grant (IPG) activity in November 2012, “Chemistry and Culture: Elements of Dance”, was published in a German chemistry journal. It highlights a connection between chemistry and dancing by describing a 19<sup>th</sup> century artifact.

Thank you for checking in with KACS.

## KACS Receives Two Grants

Elke Schoffers

The Kalamazoo Local Section received two ACS grants.

Our application for the "Climate Science Challenge Grant" titled "KACS / WMU Climate Science Collaboration for the Training of Community Leaders" was reviewed favorably and funded! This ACS program was initiated in December 2012 when past ACS president Bassam Z. Shakhshiri announced the availability of the "ACS Climate Science Toolkit" to help its members educate the general public about the fundamental chemical and physical processes that determine Earth's climate. Subsequently, ACS developed this grant opportunity as seed money. Our project will involve a collaboration with WMU's Interdisciplinary Climate Change Study Group with the goal of organizing specific workshops.

The Local Section also received ACS support to organize a fall science Café on horticultural chemistry that will include discussions about plant pigmentation.

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Feel free to contact KACS at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu) if you would like to announce specific events or share links.



Find us on  
**Facebook**

# Announcements

## Earth Day Activities by KACS on Saturday, April 20, 2013

Maren Zanotti

This year the ACS is celebrating its tenth annual Chemists Celebrate Earth Day (CCED), an event aimed at showing Chemists' involvement in preserving the planet we call home. As we have in the past, our local section will be celebrating CCED by participating in the Kalamazoo Nature Center's Earth Day celebration on **April 20, 2013 from 10 AM to 4 PM**, ([www.naturecenter.org](http://www.naturecenter.org)).

We will be hosting an information table that will feature Earth related chemistry demonstrations and other child-friendly activities. In addition, the KACS will also display information at the Kalamazoo Public Library's Earth Day celebration at the Oshtemo Branch Library ([www.kpl.gov/oshtemo/](http://www.kpl.gov/oshtemo/)) on **April 20, 2013 from 2:30 to 5 PM**.

This event will be an outdoor concert featuring Michigan musicians who will share their views on the preservation of our planet. Each of these events offers a great opportunity for families to participate in the celebration of Earth Day.

We hope to see everyone there!



Maren Zanotti  
2013 CCED Coordinator

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## KACS Chemistry & Culture Event now published in German Journal

Elke Schoffers

"Tanzelemente" (literally "elements of dance") is the title of a current article in "Nachrichten aus der Chemie" (April 2013, p. 422/23, Wiley), a chemistry journal for ca 80,000 members of the German Chemical Society (Gesellschaft Deutscher Chemiker – GDCh).

In this report I describe the Section's IPG event that took place last November at the Kalamazoo Institute of Arts and attracted 179 participants. I make a historical reference that connects "chemistry" and "dancing". In the public eye, today's chemistry is often associated with negative perceptions such as explosives and environmental pollutants. This is in stark contrast to how chemistry and its practitioners were viewed in the 19<sup>th</sup> century. The invention of gas lighting at the time was seen as a chemical process that seemed like magic and brought about modernity. City lights helped fight crime that was previously rampant at night. The gasification of coal made it possible to also light up big opera houses and eventually private residences. There exists a custom-made window that used to be part of the director's ballroom on the premises of the Nuremberg gas power station. It was rescued and is now displayed in a museum. With symbolism and historical references, the stained glass window illustrates three different stages for the invention and blessing of gas lighting. The final panel shows a bright, colorful ballroom in which elegantly dressed people celebrate this new chemistry as a progressive science.

# Kalamazoo Section Annual Awards Program

Donald Schreiber

The Kalamazoo Section of the ACS will hold its **Forty First Annual Awards Program** on **Monday, May 20, 2013, 6:00 to 8:00 PM** in the Chemistry Building at Western Michigan University. The awards ceremony is held annually to honor outstanding high school senior chemistry students and high school teachers. All are invited to a free reception that begins at 6 PM and is followed by an awards ceremony at 6:45 PM.

The program will include the honoring of Outstanding High School Chemistry seniors from 35 area high schools within the Kalamazoo section area. The section will also present checks and certificates to the winners in the Kalamazoo Section's Competitive Examination contest. Outstanding College Chemistry Seniors from Kalamazoo College and Western Michigan University will also be acknowledged.

*We are currently in the process of identifying the **2013 Outstanding High School Chemistry Teacher** from a Kalamazoo Section area school. If you know of a deserving individual, please forward to him / her the 2-page application form that can be downloaded from the KACS Homepage. **The application can also be filled out and submitted online via a link at [www.wmich.edu/acs](http://www.wmich.edu/acs).** Applications and a letter of support from the principal should be sent to Dr. Donald Schreiber, Department of Chemistry, Western Michigan University, Kalamazoo, MI 49008-5413 by **May 1, 2013**.*

Also to be honored at the banquet will be Kalamazoo Section members who are Fifty-Year ACS members and a special Kalamazoo Section Achievement award will be presented.

There is no cost for the reception, however, we ask that any Kalamazoo Section member or guest who wishes to attend the program to **RSVP by May 13, 2013**, by returning the slip below by mail, by calling Mrs. Robin Lenkart at 387-2846, or email her at [robin.k.lenkart@wmich.edu](mailto:robin.k.lenkart@wmich.edu).

**PLEASE RETURN by May 13, 2013 to:**

Mrs. Robin Lenkart  
Chemistry Department  
Western Michigan University  
Kalamazoo, MI 49008-5413

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## RSVP Slip

<u>Name</u>	<u>Address</u>	<u>Places</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
	Total Attending	_____

# 2013 Outstanding High School Chemistry Teacher

Awarded by the KALAMAZOO LOCAL SECTION of the AMERICAN CHEMICAL SOCIETY

## Instructions:

### Applicant:

The applicant can be nominated by the principal or colleagues. Self-nominations are encouraged. The application requires a letter of support from the principal. All materials are due May 1, 2013. An electronic version (Word) of the application can be found at [www.wmich.edu/acs](http://www.wmich.edu/acs). The application can also be filled out and submitted online, see the special Qualtrics link at our homepage.

### Principal:

Please evaluate the strengths of the applicant and comment on as many of the following: motivation in the classroom, interactions with students, use of innovative techniques, professional development and outreach activities.

### Applications should be mailed to:

Dr. Donald Schreiber  
Department of Chemistry  
Western Michigan University  
Kalamazoo, MI 49008-5413

## Past Events

### Science Café: "Patents - Why Bother?"

Lydia Hines and Elke Schoffers

The Dow Building at Kalamazoo College hosted a Science Café presentation by our own Section's Chair-Elect, Dr. John Englemann, of Miller Canfield Paddock and Stone, on Wednesday, February 27. An audience of about 25 learned the importance of patents not only in terms of protecting one's invention (something New, Useful and Non-obvious) but also the benefit it can bring to the balance sheet of a business and of an *academic institution*; as Dr. Englemann showed us, there is levity even in a field such as this by giving several examples of "silly patents" which have been granted. He used an invention for which he was the attorney who filed and secured a patent - a flat easy-to-carry podium. He also answered questions from the audience, and at least one attendee expressed an interest in pursuing patent law as a career!



Dr. John Englemann behind the foldable podium.  
(Photo by Elke Schoffers)

# Past Events

## Talk on "Chemistry in Comics" well received

By Lydia Hines with Photos by Elke Schoffers

It was a cool Tuesday, March 26, when about 90 curious listeners - High School students and parents, High school teachers, WMU faculty and graduate and undergraduate students, other ACS members - gathered in a large lecture hall in the Chemistry building at WMU to listen to the titled talk by Dr. Al Hazari Director of Undergraduate Laboratories of the Univ. of Tennessee-Knoxville, co-author of a book "Common misconceptions in Chemistry" and recipient of several awards for his Public Outreach activities.

In addition to the unusual title, there were pizza and snacks available to attract listeners - these were enjoyed by a major portion of the audience, too. By way of slides, books, and "toys" Hazari kept our interest in the thought that chemical concepts, from the elements to their properties and reactions, can be found described in comics and in appropriate lighthearted comments in the popular press; these, then, can be used not only to pique but also to engage students' interest and more permanent understanding of chemical/scientific concepts. Dr. Hazari is not given to slow, deliberate presentations, so we were kept actively entertained as he presented his slides. He ended this talk with the demonstration of electrical conductivity by way of his little "travel companion doll" singing.

In the morning of the same day Dr. Hazari offered to speak to a 5th grade class at Haverhill Elementary School in Portage; it was a pleasure to see the children respond with great interest as they participated in his enthusiastic explanation and demonstration of the scientific method and some "unexpected" observations - Dr. Hazari acts on the belief that children are "born scientists" who need to be encouraged to **ask questions** and **learn how to look for answers**.



Dr. Al Hazari's license plate.



Dr. Al Hazari, sharing his passion for chemistry.



The audience, waiting for Dr. Al Hazari's talk.



Dr. Al Hazari (right) carrying out a conduction experiment with WMU chemistry student Brad Thayer.



Dr. Al Hazari (right) carrying out another conduction experiment with WMU chemistry student Tara Maser.

# Announcements

## Save the Date: ACS Great Lakes Regional Meeting GLRM2013

**JUNE 5 – 8, 2013**  
(Wednesday - Saturday)

**Plan now to join us in La Crosse, Wisconsin for the  
2013 ACS Great Lakes Regional Meeting (40th) -- GLRM 2013**

*Registration*

*Abstract Submittal deadline: Midnight, April 22<sup>nd</sup>, 2013*

<http://glrm-lax.sites.acs.org/>

Jessica Brozek, General Chair -- [Jessica.Brozek@Hydrite.com](mailto:Jessica.Brozek@Hydrite.com)

Stacey Glidden, Program Chair -- [Stacy.Glidden@mtservices.com](mailto:Stacy.Glidden@mtservices.com)

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## Call for Section Volunteer Award Nominee

Lydia Hines

Each year at our Section's Award Ceremony - where we recognize our 50-year and our 50+ year members, our outstanding High School chemistry students, our Competitive Exam awardees, a High School chemistry teacher and two outstanding College students in chemistry - we also recognize at least one member or friend of our Local Section who has **served** selflessly **over an extended period of time**. We have awarded this recognition to 32 volunteers over 23 years.

If you would like to recommend one or more individual(s) for recognition, please send a note giving the **name(s) and the rationale for the nomination(s)** to the chair of the Awards Committee, Lydia Hines, at [lemhwgh@gmail.com](mailto:lemhwgh@gmail.com) by **May 10**. Thank you.

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## Councilor Report – 245<sup>th</sup> ACS National Meeting

Lydia Hines

The Councilor report from the 245<sup>th</sup> ACS National Meeting, New Orleans, LA, April 7-11, 2013, can be found on our [website](#).

# American Chemical Society – Kalamazoo Local Section Newsletter

May 17, 2013

Vol. 3 - Issue 3



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[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

## Comments from the Chair

Elke Schoffers

Dear Readers,

I look forward to welcoming the many guests for the annual Awards Ceremony on Monday, May 20 at WMU. A special thank you goes to all KACS Education Committee members, Executive Officers and the many volunteers who helped out in planning this event.



Maren Zanotti (CCED Coordinator, left) with Elke Schoffers, Ph.D. Professor, (WMU) Chair (KACS)

In this newsletter please find several Earth-related reports, including a summary of events held through the Chemists Celebrate Earth Day (CCED) initiative that the American Chemical Society (ACS) began 10 years ago. Readers will also find information about the ACS Climate Science Toolkit that contains explanations of the basic science behind climate change. At this point I would like to personally thank Drs. Steve Bertman, David Karowe, John Miller and Terrell Hodge who are members of the WMU interdisciplinary study group dedicated to research, education and community outreach. They are new KACS collaborators as part of a recent ACS grant and will spearhead various climate education activities.

Lastly, please note that KACS is looking for various volunteers. This already includes a call for help for our National Chemistry Day at the Kalamazoo Valley Museum. Please consider helping out.

Thank you!

**CONSIDER BECOMING A VOLUNTEER**  
- SEE PAGE 3 -

**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](mailto:ACSkzoo@gmail.com)

# Selected ACS Links and Contacts

By Lydia E. M. Hines (KACS Councilor)

Below please find some useful URL and email addresses (selected information can be found in the April Councilor Report).

## General ACS Resources

[m.wu@acs.org](mailto:m.wu@acs.org) – contact information for ACS President Marinda Wu  
[www.acs.org/leadscopeqa](http://www.acs.org/leadscopeqa) - ACS vs. Leadscope questions and answers  
[www.acs.org/newmember](http://www.acs.org/newmember) - information on “Why should I join the ACS?”  
[nomelect@acs.org](mailto:nomelect@acs.org) – email address for the Committee on Nominations and Elections  
[www.acs.org](http://www.acs.org) – then click on “About Us” and scroll down to ACS Financial Information for information on the Society’s finances  
[safety@acs.org](mailto:safety@acs.org) – email address for comments and suggestions about chemical safety to the Committee on Chemical Safety  
[www.acs.org/bulletin5](http://www.acs.org/bulletin5) - ACS governing documents including information on petitions and certified bylaws for all units  
[bylaws@acs.org](mailto:bylaws@acs.org) – email to send petitions (May 22 deadline)  
[www.acs.org/ei](http://www.acs.org/ei) - information on the ACS Entrepreneurial Initiative  
[www.acs.org/supportfedscience](http://www.acs.org/supportfedscience) - information on ACS materials related to federal S&T funding  
[www.acs.org/ethics](http://www.acs.org/ethics) - information on the ACS Committee on Ethics  
<http://nationalethicscenter.org> – “Ethics CORE” web address and the chemistry landing page which links to chemistry related ethics content (click ‘resources by discipline’ then click ‘chemistry’)  
[www.acs.org/climatescience](http://www.acs.org/climatescience) - “ACS Climate Science Toolkit”, the fundamental science to help you understand and communicate climate science; launched by 2012 ACS President Bassam Shakhshiri.



Marinda Li Wu, Ph.D.  
ACS President



Thomas J. Barton  
ACS President-Elect



Bassam Z. Shakhshiri, Ph.D.  
Past ACS President

## Local Section Resources

[www.acs.org/getinvolved](http://www.acs.org/getinvolved) - grant information, important deadlines and officer resources  
[www.acs.org/forms](http://www.acs.org/forms) - submit annual reports, record meetings, activities and events year round  
[speakers@acs.org](mailto:speakers@acs.org) – nominate speakers for Online Speaker Directory  
[outreach@acs.org](mailto:outreach@acs.org) – information on “Celebrating Chemistry” for 4<sup>th</sup> – 6<sup>th</sup> graders

Feel free to contact KACS at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu) if you would like to announce specific events or share links.



Find us on  
**Facebook**

# KACS Volunteers WANTED



## Photography Volunteers WANTED

Do you like to take photos? KACS is looking for volunteers (plural) who can help cover upcoming events. Photos will be included in online postings on our website and on Facebook. Please consider becoming a volunteer for KACS (membership not required). Please contact the Chair at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu).

## Webmaster Volunteer WANTED

KACS is looking for someone to post updates for our website at [www.wmich.edu/acs](http://www.wmich.edu/acs). If you know how to manage a website using Dreamweaver or related software, or know of someone who may be interested in helping us out please contact [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu). KACS membership is not required.

## National Chemistry Week/Chemistry Day at the Museum Volunteers WANTED

This is an **appeal to you to volunteer** to set up and share an activity on **Saturday, October 12, from noon to 4 PM** during our **Chemistry Day at the Kalamazoo Valley Museum (KVM)** in conjunction with the ACS **National Chemistry Week (NCW)** celebration. For publicity purposes the KVM is aiming to have **plans for Fall programs in place by July** and we need to comply if we want to continue our synergistic relationship with them; we get amazing set-up and material support from the KVM, so **PLEASE indicate your willingness to be a volunteer** for that outreach by **sending your name and e-mail address by June 20** to our NCW coordinator, **Lydia E. M. Hines**, at [lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)!

This year NCW is October 20-26, and the **theme** is "**Energy! Now and Forever!**". We will have an opportunity to share, in simple terms, with the 800-1000 visitors (ages 4 -104) who come through the Museum doors that day how chemistry is central to our lives and how chemists may contribute to our energy needs and conservation. Children love the fun at the KVM, learn the importance of chemistry, and they and their parents (and teachers) get reading/activity materials to take home and to school.

# ACS Earth Day – 10<sup>th</sup> Anniversary

Elke Schoffers and Lydia Hines (Photos by Elke Schoffers)

This year the ACS celebrated its tenth annual Chemists Celebrate Earth Day (CCED), an event aimed at showing Chemists' involvement in preserving the planet we call home. Our Local Section offered two events that day:

## Information Table and Hands-on Experiments at the Kalamazoo Nature Center

As we have for the past six years, our Local Section celebrated CCED by participating in the Kalamazoo Nature Center's Earth Day program on April 20, 2013 from 10 AM to 4 PM.

Thanks to Maren Zanotti (CCED coordinator and WMU chemistry major), Kevin Heinze (WMU), Ashleigh Holden (K-College chemistry major) and Emily Wright (K-College chemistry major) KACS was represented for six hours on a Saturday. An information table at the Kalamazoo Nature Center (KNC) also offered CCED booklets and hands-on experiments to make "flowers" through color diffusion on filter paper. Children were invited to draw on a piece of filter paper before it was developed in a beaker for this chromatography experiment. The resulting paper became part of a flower.



Chromatography "flowers".



Ethan Morgan (left) visited KACS volunteers (left to right): Kevin Heinze, Maren Zanotti, Ashleigh Holden and Emily Wright.



Children enjoyed playing with markers and observing the diffused color on their "flower".



## ACS Earth Day (cont'd)



Kevin Heinze and Maren Zanotti set up and manned the KNC table beginning at 10 AM.



Ashleigh Holden and Emily Wright helped out in the afternoon.

### Information Table at the Oshtemo Library

In addition to our 7<sup>th</sup> year of collaboration with the Kalamazoo Nature Center, Lydia Hines volunteered for our first-time participation at a second venue - an afternoon of music, a program sponsored by the Oshtemo Branch of the Kalamazoo Public Library. Because of the very chilly outdoor weather, visitors were ushered into the Library's Auditorium (more limited in space than the outdoors venue) where they listened to several Bands play and sing Earth-theme-related music. In doing so visitors were "forced" to pass by our table of information materials; many young people grades K-6 were present with their parents. Our CCED educational literature was happily received, and adults (teachers, parents, grandparents) asked questions about our activities. Children as well as interested adults were treated to experiments with "magic sand" and superabsorbent polymer; there was constant traffic. Informational sheets concerning our programs and other on-call activities were handed out to teachers and one enthusiastic Middle School Principal (Portage Central Middle) and to a Kalamazoo City Environmental Chemist.



Dr. Lydia Hines (left) with two guests at the Oshtemo library.

Other memorable contacts: 1) A young woman and her mother who regularly attend our National Chemistry Week **Outreach at the Kalamazoo Valley Museum** came asking for "everything we had to offer"; 2) An invitation was given to a [non-member] chemist seeking re-entry into the work-force to check out our **Chem-Able Grant**; and 3) our Section received thanks from a set of parents for our **Awards Program** which helped their son initiate his college studies several years ago; they commended us for continuing the program. Overall it was a favorable 3-hour experience, which I hope our Section can repeat.

"The American Chemical Society is among the major scientific organizations that have issued position statements acknowledging the reality of climate change and recommending action on this great global challenge. The ACS policy statement ([www.acs.org/policy](http://www.acs.org/policy)) says that people need a basic understanding of climate science to make informed personal decisions, and it describes climate-change education for the public as 'essential.'" [C&EN, December 3, 2012, page 38] Please continue reading about more Earth-related activities and details that involve the new ACS Climate Science Toolkit.



# ACS Press Release: Climate Science Grant

## Press Release

American Chemical Society  
Office of Public Affairs



Contact: Joan Coyle  
202-872-6229  
[j\\_coyle@acs.org](mailto:j_coyle@acs.org)

### FOR IMMEDIATE RELEASE

#### Kalamazoo chemists win grant to explain climate change to the public

WASHINGTON - Members of the Kalamazoo Local Section of the American Chemical Society (ACS) are winners of a \$3,000 grant to help public audiences better understand the science behind climate change. The announcement was made at the Society's recent national meeting in New Orleans.

According to Elke Schoffers, Ph.D., chair of the Kalamazoo ACS Section Local Section, the local section will collaborate with the Western Michigan University Climate Change Study Group to reach out to diverse audiences. They will use concepts from the ACS's "Climate Science Toolkit" to provide outreach and training to community leaders such as middle school, high school, and faith-based educators and scout group leaders. The project goal is to facilitate discussions of climate change by providing support and resources to leaders in these communities.

The ACS Climate Science Toolkit ([www.acs.org/climatescience](http://www.acs.org/climatescience)) is a web-based resource that explains the chemistry and physics of climate change. Launched last December, it was one of the major initiatives of 2012 ACS President Bassam Z. Shakhashiri.

Kalamazoo is one of 12 of the Society's local sections that will receive the first ACS Presidential Climate Science Challenge Grants.

Shakhashiri explained that the mechanisms of climate change are based on fundamental concepts that may not be familiar to scientists working in disciplines unrelated to climate change. They need a robust understanding themselves in order to help others who are not scientists understand the issues relevant to maintaining a livable climate.

"These inaugural grants will encourage ACS members to take up the mantle as scientist-citizens and reach out with climate science information to their colleagues and others," said Shakhashiri. "These include teachers, college and university faculty, industrial scientists and business leaders, civic and religious groups, professional science and educational organizations, and elected public officials at all levels and in all branches of government."

The grants, \$3,000 each, were awarded to the following ACS local sections: Central New Mexico; Dallas-Fort Worth; Illinois Heartland; Iowa; Kalamazoo, Mich.; Maine; New York; Northern W.V.; Portland, Ore.; Puerto Rico; Puget Sound; and Wakarusa Valley in Kansas.

The American Chemical Society is a nonprofit organization chartered by the U.S. Congress. With more than 163,000 members, ACS is the world's largest scientific society and a global leader in providing access to chemistry-related research through its multiple databases, peer-reviewed journals and scientific conferences. Its main offices are in Washington, D.C., and Columbus, Ohio.

To automatically receive news releases from the American Chemical Society, contact [newsroom@acs.org](mailto:newsroom@acs.org).

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American Chemical Society

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#13-126

Released: 4/25/2013

# Climate Science Toolkit

.... for the benefit of Earth and its people

## ACS Climate Science Toolkit

The fundamental science to help you understand and communicate climate science

Tell Us What You Think 

Global climate change, whether a result of natural variability or of human activity, is a vital issue for life on Earth and involves many processes and concepts related to chemistry. Engaging with this issue in deliberative discourse with colleagues and others requires understanding the fundamental science that determines Earth's climate. This fundamental science is the core content of the ACS Climate Science Toolkit.



### Getting Started

Navigate quickly to the Toolkit topics or issues of most interest to you.



### Energy Balance & Planetary Temperature

The balance between incoming solar and outgoing thermal infrared energies sets planetary temperatures. Planetary atmospheres can strongly influence this balance.



### Atmospheric Warming

Examine how thermal infrared emission from the top of the atmosphere sets Earth's thermostat and how changes in atmospheric composition reset the thermostat.



### Greenhouse Gases

Human activities and natural sources add infrared-absorbing gases to the atmosphere. The effect of each on the temperature depends on its spectroscopic and chemical properties.



### Oceans, Ice & Rocks

Oceans move great quantities of energy and carbon around the Earth. Almost all the energy added to a warming Earth ends up in warmer water and melting ice.



### References & Resources

Probe more deeply and broadly into climate science topics and issues that particularly interest you.



### Narratives & Presentations

Suppose you have the opportunity to speak to a civic, business, or educational group about climate science. Consider adapting one of these narratives or presentations as a starting point.

[www.acs.org/climatescience](http://www.acs.org/climatescience)

# A Special Earth Day Report

Elke Schoffers

## Environmentalism

1970 was the first year when Earth Day (April 22) was celebrated to support environmental protection in the U.S. 1970 was also the year when President Richard Nixon signed an executive order that eventually established the U.S. Environmental Protection Agency (EPA) on December 2 to enforce congressional laws that protect human health and the environment.

## The Big Picture

The North American Monarch Butterfly is well known for its long migration south to spend the winter months in Mexico. This year's census found a significant decline, in fact an all time low, of less than 3 acres occupied by the overwintering population compared to 50 acres of butterflies in 1996. Among other factors, erratic weather has been implicated; cold wet winters in Mexico during some years while the drought and record-breaking heat in the spring last year hastened the most recent decline. This population trend is also due to current agricultural practices. The use of pesticide-resistant crops, mostly corn and soybean along the migratory route, has significantly eliminated milkweed, which is the butterflies' and its larvae's vital food source (Monarch Migration Plunges to Lowest Level in Decades, New York Times, 3/13/13).



Monarch butterfly and its caterpillar on a leaf of swamp milkweed. (Photos by Elke Schoffers)

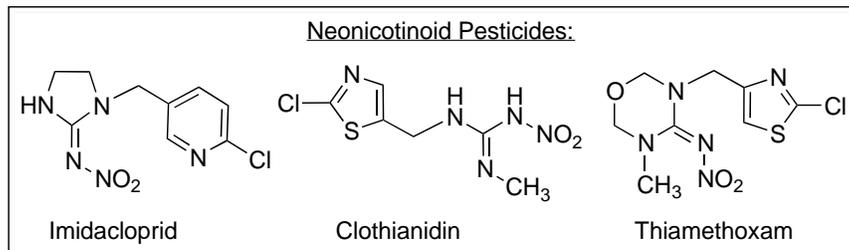
Other than the loss of a beautiful American butterfly and loss of biodiversity the extinction of the Monarch would have little to no impact on most people. However, its extinction could also be compared to a canary-in-the-coal-mine moment. The loss of insects has a big economic impact because of the important ecosystem services they perform. It is estimated that approximately 75% of all crop species require pollination by mostly bees but also flies, butterflies, birds and bats. Declining bee populations are big cause for concern.



Hobby gardeners can support native pollinators such as Mason bees, which are solitary, friendly bees that will reproduce in bee houses. . (Photos by Elke Schoffers)

This troubling trend has led to a two-year ban of three neonicotinoid pesticides by the European Commission (EC). Americans will continue to use them. Long-term effects of chemical applications have decimated pollinators in some areas of China where apple and pear farmers are forced to hand pollinate trees to ensure good crop yields.

(continued on page 9)



Cause and effects are not always immediately obvious, especially when it involves complex systems such as the weather. The concept of global climate change is more widely accepted in Europe compared to the U.S., where many leading opinion makers and politicians still question this phenomenon. Earth just passed a 400 ppm CO<sub>2</sub> milestone. Bill McKibben commented that this is a “historic and ominous marker of the effect that human beings are having on the planet.” He is an environmentalist and author. His most recent book is titled “eearth – Making a life on a tough new planet”. [He intentionally spells the planet differently because it has drastically changed.] He is leading the organization [www.350.org](http://www.350.org), which has the goal to advocate for 350 ppm CO<sub>2</sub> as an upper limit to avoid a climate tipping point. **Bill McKibben will visit WMU on October 10, 2013.**

## Local Views

Recent environmental disasters included the BP Horizon oil spill (2010), and the earthquake and tsunami that led to the Fukushima Daiichi nuclear threat (2011). While powerful pictures can convey disastrous effects of these events, the daily lives of Michiganders were not directly affected. (Note that at some Japanese farmers markets it is now common to find a Geiger counter to check produce for radiation.) However, there are several local concerns that highlight the threats to our immediate environment. Just this week over a hundred people, including members of the Kalamazoo River Cleanup Coalition (KRCC), protested the EPA’s proposal to seal the Allied Paper Inc. Superfund site near downtown Kalamazoo instead of cleaning up hazardous chemicals such as PCB’s (polychlorinated biphenyls). 90 acres along Portage Creek are polluted with 1.5 million cubic yards of toxic waste, threatening the water supply of 48,000 people. Another recent threat to Michigan waters was the worst inland oil spill in U.S. history when the Enbridge Energy pipeline broke and toxic heavy Canadian tar sands, over 800,000 gallons, polluted the Kalamazoo River (2010). This week, Michiganders also learned that the Palisades nuclear facility near South Haven continues to have problems. It has been shut down several times in 2012 and 2013, most recently because it daily leaks about 79 gallons of radioactive water into Lake Michigan from a 300,000 gallons storage tank. After a repair last June, a leak of 38 gallons per day was agreed upon by the National Regulatory Commission (NRC) and Entergy, the operator of the plant. Currently, the NRC has scheduled an extra 1,000 hours of inspection at Palisades during 2013 (Kalamazoo Gazette, May 11)



Source: Wikispaces

*“Patch and restart” is not an effective solution to leaks at Palisades Nuclear Power Plant, said David Lochbaum, director of the nuclear safety project at the Union of Concerned Scientists.... “Applying Band-Aid fixes every few months is not complying with this federal regulation,” wrote Lochbaum. [Kalamazoo Gazette, May 11, 2013; Lochbaum’s work can be found at [www.ucsusa.org](http://www.ucsusa.org)]*



Photo Source: KRCC Facebook

(Any comments included in this summary reflect the views of the author and are not part of an official statement of the ACS.)

# Sudoku Challenge (Solution to January 2013 Puzzle)

Congratulations to Ali Bolandi for solving our last Sudoku puzzle. Ali will receive a \$5 gift certificate to [Fourth Coast Café](#). Below is the solution. A brand new Sudoku Challenge awaits you below...

Difficulty: **MEDIUM**

Digits in **black** were given.

Digits in **red** were blank.

5	6	2	4	8	9	7	3	1
3	1	4	7	5	2	9	6	8
9	8	7	6	3	1	2	5	4
7	3	5	9	4	6	1	8	2
2	9	1	3	7	8	6	4	5
8	4	6	1	2	5	3	9	7
4	2	3	8	6	7	5	1	9
6	5	9	2	1	4	8	7	3
1	7	8	5	9	3	4	2	6

## Sudoku Challenge

**Solve the puzzle, win a prize!**

Here's how to win a prize:

- 1) Solve this Sudoku puzzle on your own.  
(please, **do not use** an online Sudoku solver)
- 2) Email the solved puzzle to [ACSkzoo@gmail.com](mailto:ACSkzoo@gmail.com)
- 3) Submission deadline is **June 1, 2013**.
- 4) Prizes will be awarded to the first 3 correct entries  
(entries must be from Kalamazoo Local Section ACS members who have not won a prize in the most recent newsletter).
- 5) Winners and solution will be announced in the next newsletter.

**Have fun!**

First Name:

Last Name:

Email address:

Difficulty: **HARD**

6	4			3	7			
		8				6	3	
			2			4		
	9			8				
5	8			4		2	1	
				6			9	
		4			8			
7	6					2		
		5	1				4	9

**New to Sudoku?** Click on the [link](#) to learn the few basic rules of the game.

# American Chemical Society – Kalamazoo Local Section Newsletter

July 11, 2013

Vol. 3 - Issue 4



## Comments from the Chair

Elke Schoffers

Dear Readers,

I thank all the volunteers who helped make recent KACS Education events a success: the “High School Chemistry Symposium” on April 30 and the annual “Awards Ceremony” on May 20. A special thank you goes to Dr. James Kiddle (WMU), the KACS Chair of the Education Subcommittee in charge of identifying



James Kiddle, Ph.D.  
(KACS Competitive Exam  
Chair, right) with Elke  
Schoffers, Ph.D. (KACS  
Chair)

outstanding High School chemistry students through the competitive exams process. All winners and awardees are listed in this issue.

We include a special call for volunteers for “**Chemistry Day at the Museum**” scheduled for October 12. **We need you!** Please contact Dr. Lydia Hines **as soon as possible**. KACS also needs to identify officers for our upcoming joint regional meeting in 2015 as outlined on page 2.

Please read on to find out why you should mark your calendar for a **party on Tuesday, September 10** at the Westin Indianapolis Hotel.

We hope that you will continue to check in with us to learn about the events we are planning for our fall schedule.

Thank you!

### 2013 KACS Executive Officers

#### Chairperson

Dr. Elke Schoffers, WMU – Chemistry  
[elke.schoffers@wmich.edu](mailto:elke.schoffers@wmich.edu)

#### Past-Chairperson

Vacant

#### Chairperson-Elect

Dr. John H. Engelmann, Miller Canfield  
[jengelma@hotmail.com](mailto:jengelma@hotmail.com)

#### Secretary

Carolyn Pugh, Perrigo  
[carolyn.pugh@perrigo.com](mailto:carolyn.pugh@perrigo.com)

#### Treasurer

Dr. John Miller, WMU – Chemistry  
[john.b.miller@wmich.edu](mailto:john.b.miller@wmich.edu)

#### Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry  
[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

#### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.  
[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

**We Need Volunteers**  
- SEE PAGE 2 -

**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](mailto:ACSkzoo@gmail.com)

# Volunteering Opportunities

By Lydia Hines

## Seeking Volunteers for our Chemistry Outreach in October

National Chemistry Week (NCW) is coming up again - October 20-26 this year – with the theme “Energy! Now and Forever”. Our popular annual outreach to the community at the Kalamazoo Valley Museum (KVM) will be on **Saturday, October 12, from noon to 4 p.m.**, and as always we are **requesting that you volunteer as a science activity presenter**. This year the KVM needs to ascertain our intent and commitment to participate by mid-July, so I am asking you to let me know **immediately** of your willingness to be a part of this event and to put the date on your calendar. It takes about 50 volunteers to present the 20-25 activities we try to offer. Some sample activities we have had in the past are *electrolysis, super-absorbent polymer, “magic” sand, slime, silly putty, chromatography flowers, liquid nitrogen effects, shiny pennies, emulsions, iron in cereal, chemiluminescence, volcano*. I look forward to hearing from you either by **e-mail at [lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)** or by phone at **269-375-7349 as soon as possible**. Thank you for your willingness to show the relevance of chemistry to our Kalamazoo-area public.

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## Be a part of a successful Professional Meeting in our Region, the 2015 JGLCRM (Joint Great Lakes-Central Regional Meeting)

Our Local Section (in the Great Lakes Region) has been given a wonderful opportunity to co-host a Regional Meeting in Grand Rapids along with the Western Michigan Section (in the Central Region) in 2015. The most recent past time that the Kalamazoo Section acted as co-host of a Regional Meeting was in 2001, also in Grand Rapids with the Western Michigan Section. [For a short *history* of Regional Meetings and a *map* of the 10 Meeting Regions go to our website [www.wmich.edu/acs](http://www.wmich.edu/acs) and follow the link to KACS History and then to Great Lakes Regional Meetings]. 2015 may sound like a long way away, but if we want to have a successful meeting we need to start planning immediately. At this point I want to **thank those who have already volunteered for the positions of Program co-chair (James Kiddle) and Exhibits/Fundraising co-chair (John B. Miller)**. Our **immediate needs** are to identify a **Publicity co-chair and an Awards co-chair** from our Section for our Region. The success of any Meeting is in large measure dependent on the nature of the program and the diligence of its organizing committee, so it is imperative that we have a full complement of co-chairs as soon as possible and no later than the beginning of August. To learn more about the responsibilities of either of the 2 positions being solicited and **to volunteer**, please contact the 2015 JGLCRM General co-chair Lydia E. M. Hines either by **e-mail at [lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)** or by phone at **269-375-7349**. Thank you.

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Feel free to contact KACS at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu) if you would like to announce specific events or share links.



Find us on  
**Facebook**

# Announcement

## Good News about our Section – KACS is ChemLuminary Finalist



By Lydia Hines

It has been six years since our Section received a ChemLuminary Award [2007 for *Best on-going event for National Chemistry Week*]. This year our self-nomination has brought us the designation of “finalist” (one of three) in the “Most Innovative New Activity or Program” category – look in our September Newsletter after the Fall National ACS Meeting in Indianapolis to see if we were declared the winner; better yet, **if you**



**are attending the Indy Meeting, join the ChemLuminary party on Tuesday evening, September 10, at the Westin Indianapolis Hotel from 8:00 p.m. to midnight [free hors d'oeuvres and dancing, too] and learn first-hand if our Section is declared the winner in this category!**

# Report

## Report of the 40<sup>th</sup> High School Chemistry Symposium, April 30, 2013

By Don Schreiber and Lydia Hines

It was a wet morning when sixty High School students from 6 high schools in a 9-county area along with their teachers arrived at the Chemistry Building on the WMU campus for the 40<sup>th</sup> KACS-sponsored High School Science Symposium. No morning event would be complete without donuts and Kool-Aid. The local section is always indebted to Western Michigan University for hosting the event and to members and friends who take the time to hold interactive sessions with the students or give tours of their facilities.

This year's keynote address was given by Bridget Lorenz Lemberg of Forensic Fluids who gave a talk entitled "Oral Fluid Drug Testing: The Story of Forensic Fluids". The other presenters and their topics were Manuel Bautista, "Our Place in the Universe"; Frank Meints & M. Morris, "Glass Blowing" Demonstration; Sherine Obare, "Nanotechnology" Demonstration; Stephanie Morley, "Veterinary Medicine"; Torrey Wenger, "Tales of a Field Biologist"; Asghar Kayani, "Linear Accelerator"; Mark Wolf, "Food Chemistry – the Spices of Life"; Kathryn Docherty, "Microbial Biodiversity"; and Robert Eversole, "Electron Microscope" Demonstration.

Sincere appreciation is extended to the Education Committee – Drs. Donald Schreiber, James Kiddle, Sherine Obare, and Andre Venter - for organizing and publicizing the Symposium, and to Mrs. Robin Lenkart for her able organizational assistance once again.

# Annual Award Ceremony

## Report of the 40th KACS Awards Gathering, May 20, 2013

By Lydia Hines

What a pleasant evening we had hosting a gathering of approximately 100 enthusiastic attendees: students, parents, grandparents, high school teachers, and KACS members, for our Section's fortieth Awards presentation to High school students who have excelled in Chemistry either routinely in the classroom, as recommended by their teachers, and/or as a result of success on a two-stage chemistry exam administered by our Section. In the last couple of years we have also formally recognized past chairs of the Section with "Past-Chair" pins. Also recognized at this ceremony are KACS members who have been members of the Society for 50 years, outstanding College Students nominated by the two 4-year colleges in our Section, an outstanding high school teacher, and one (or more) Section member(s) or friend(s) who has consistently given of his/her time and energy for the successful execution of any of our Section's activities – it is always "fun" to see the surprise on the recipient's face.



Reception in the atrium of the WMU Chemistry Building



Outstanding high school seniors



Examination winners



Outstanding College Chemistry students: Brandon Barr (left), WMU, and Joshua Abbot (right), K-College



Outstanding high school teacher Theresa Schwartz with Elke Schoffers

# Awards Ceremony cont'd

## Examination winners

James Gibson – Gull Lake  
Michael Melbow – Gull Lake  
Grey Braybrooks – KAMSC/Kalamazoo Central  
Tyler Leverton – KAMSC/Loy Norrix  
Daniel Woodworth – KAMSC/Kalamazoo Central  
Henry Spies – Gull Lake  
Callahan Katrak – Mattawan  
Cooper Quartermaine – KAMSC/Gull Lake  
Quinton Colwell – KAMSC/Portage Central  
Sarah Glass – Wayland Union  
Nicholas Bertoldi – Mattawan  
Kylee Chaffin – Gull Lake  
Caelan Deater – Gull Lake  
Kelsey Ernst – Plainwell  
Morgan Freeby – Portage Central  
Katie K. Lee – KAMSC/Portage Central  
Alex Z. Lim – Kalamazoo Central  
Madelene McKenzie – KAMSC/ Portage Northern  
Joshua Mussche – KAMSC/Comstock  
Sergio Rodriguez-Labra – Portage Northern

## Outstanding high school seniors

Andrew Behrman – Comstock  
Zachary Carr – Gull Lake  
Samantha Ternes - Hackett Catholic Central  
Alex Lim – Kalamazoo Central  
Nolan Stoffer – Kalamazoo Christian  
Quinton Colwell – KAMSC/Portage Central  
Lucas Ryan – Lawton  
Nicholas Bertoldi – Mattawan  
Renee Schwartz – Otsego  
Samantha Pursley – Paw Paw  
Kelsey Ernst – Plainwell  
Scott Linder - Portage Central



**Past chairs** in attendance were Michael Kiella (left), Monica Whitmire (middle) and Elke Schoffers (right)



**50-year members** in attendance were Dr. Robert C. Kelly (right) and Dr. Douglas L. Rector (left); each received a certificate supplied by the National ACS. Drs. Fred Antosz and Charles Hall did not attend.



Our startled **Section Awardee** was Robin Lenkart of the Chemistry Department at Western Michigan University.

**Thanks** are due once again to our Awards Committee, and to our KACS Education Committee – Drs. Donald Schreiber, James Kiddle, Sherine Obare, and Andre Venter - for another successful event.

# Student Group Reports

## CGSA's 2013 BBQ for Kalamazoo Chemists

On June 7, the Chemistry Graduate Student Association (CGSA) of Western Michigan University hosted its 3<sup>rd</sup> annual cookout for local chemists at Oshtemo Township Park. First and foremost, CGSA would like to thank KACS and Western's Graduate Student Advisory Committee for the generous financial support. The event was successful. We had more than 60 attendees, including faculty, staff, undergraduate and graduate students from WMU, and KACS members from around Kalamazoo. This was a 50% increase in attendance over last year. Many participated in activities such as tennis, volleyball, and soccer. We are glad to see this event gaining popularity as a local tradition.



## DOW-BQ at Kalamazoo College

On May 17, 2013 the chemistry and biology departments of Kalamazoo College gathered for DOW BBQ. The event was sponsored by Kalamazoo College's ACS student group. A strong turnout of over 50 students and faculty enjoyed some tasty food and science camaraderie. Students and faculty mingled over lawn games, chatting about various scientific interests. Seniors swapped stories about their Senior Individualized Projects (SIPs) and discussed their plans for after graduation. Freshmen and sophomores were provided the opportunity to ask upperclassmen questions about SIPs and applying to postgrad programs. Upperclassmen readily shared advice they wish they had gotten before embarking on their own SIPs and application processes. DOW BBQ provided a comfortable and casual setting for students to socialize with classmates in other departments and years, along with faculty. The event was successful, connecting students to like-minded individuals with a passion for the sciences.

# Sudoku Challenge (Solution to May 2013 Puzzle)

Congratulations to Tim Evans for solving our last Sudoku puzzle. Tim will receive a \$5 gift certificate to [Black Owl Café](#). Below is the solution. A brand new Sudoku Challenge awaits you below...

Difficulty: **HARD**

Digits in **black** were given.  
Digits in **red** were blank.

6	4	9	8	1	3	7	5	2
2	1	8	4	7	5	9	6	3
3	5	7	2	9	6	4	1	8
4	9	2	3	8	1	5	7	6
5	8	6	7	4	9	3	2	1
1	7	3	5	6	2	8	9	4
9	2	4	6	5	8	1	3	7
7	6	1	9	3	4	2	8	5
8	3	5	1	2	7	6	4	9

## Sudoku Challenge

**Solve the puzzle, win a prize!**

Here's how to win a prize:

- 1) Solve this Sudoku puzzle on your own.  
(please, **do not use** an online Sudoku solver)
- 2) Email the solved puzzle to [ACSkzoo@gmail.com](mailto:ACSkzoo@gmail.com)
- 3) Submission deadline is **July 28, 2013**.
- 4) Prizes will be awarded to the first 3 correct entries  
(entries must be from Kalamazoo Local Section ACS members who have not won a prize in the most recent newsletter).
- 5) Winners and solution will be announced in the next newsletter.

**Have fun!**

First Name:

Last Name:

Email address:

Difficulty: **EVIL**

8	1	4						
		5	6	3	4			
		2						
4			9			1		
	7			2			5	
		8			3			7
						5		
			2	6	5	4		
						7	6	9

**New to Sudoku?** Click on the [link](#) to learn the few basic rules of the game.

# American Chemical Society – Kalamazoo Local Section Newsletter

September 6, 2013

Vol. 3 - Issue 5



## 2013 KACS Executive Officers

### Chairperson

Dr. Elke Schoffers, WMU – Chemistry  
[elke.schoffers@wmich.edu](mailto:elke.schoffers@wmich.edu)

### Past-Chairperson

Vacant

### Chairperson-Elect

Dr. John H. Engelmann, Miller Canfield  
[jengelma@hotmail.com](mailto:jengelma@hotmail.com)

### Secretary

Carolyn Pugh, Perrigo  
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### Treasurer

Dr. John Miller, WMU – Chemistry  
[john.b.miller@wmich.edu](mailto:john.b.miller@wmich.edu)

### Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry  
[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.  
[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

## Comments from the Chair

Elke Schoffers

Dear Colleagues,

The busy summer season has come to an end. If you didn't follow KACS closely during that time you may have missed some exciting news. Our Local Section received a glowing review from Section Activities (Local Section Activity Committee) and our "Chemistry & Culture: Elements of Dance"

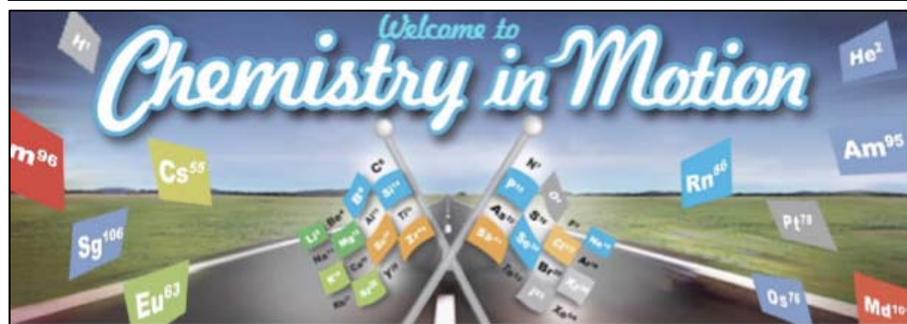


Elke Schoffers, Ph.D.  
(KACS Chair)

event is a **ChemLuminary Finalist**. It is only a matter of days until we learn the results. Join us on Tuesday evening, Sept. 10 at the Westin Indianapolis Hotel at 8 PM, where the section will also participate in a poster session. Please keep your calendar free for a **Science Café** on Horticultural Chemistry on Sept. 17 at Wedel's and for a **Sci-Mix Poster Session** on Oct. 8 at Bell's Eccentric Café (sponsored by Zoetis). We also need volunteers to help out during **Chemistry Day at the Museum** (Oct. 12), to become the **Awards co-Chair for the 2015 JGLCRM**, and to serve as **new EC Officers (Secretary and Chair-Elect)**. There is more to come. Please stay in touch, join us for upcoming events and help out to support our Local Section.

Thank you!

246<sup>th</sup> ACS National Meeting in  
Indianapolis, IN. Sept. 8-12



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

Do you have questions, comments, or would like to contribute to this newsletter?  
Send an email to: [ACSkozoo@gmail.com](mailto:ACSkozoo@gmail.com)

# Welcome New Volunteers

By Elke Schoffers

## Mark Wolf is KACS Web Master for New Site: [KalamazooACS.org](http://KalamazooACS.org)

We welcome Mark Wolf (Kalsec) as our new web master. He already transitioned our site to a new host at <http://KalamazooACS.org>. We invite you to take a look and to follow ongoing changes to our online presence. Last but not least, we thank our outgoing web master Dr. Steve Bertman (WMU), who has been very helpful in recent years.



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## Roxana Manta-Bielanski joins KACS Photography Team

We welcome Roxana Manta-Bielanski, a WMU Chemistry major and undergraduate researcher, who is helping us document KACS activities as ad hoc photographer. Please contact us if you are interested in taking pictures as well.



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## Dr. Megan Grunert is New Chair of the KACS Education Committee

We are pleased to announce that Dr. Megan Grunert, Assistant Professor of Chemical Education ([megan.grunert@wmich.edu](mailto:megan.grunert@wmich.edu)) at WMU, has assumed the role of Chair of the KACS Education Committee. She conducts research related to academic motivation, career decision-making, teaching practices, graduate student professional development, and student experiences in novel learning environments. Among others, she will be in charge of organizing the annual KACS Awards Ceremony during which high school students from Kalamazoo, Allegan and Van Buren counties are recognized. The Local Section thanks Dr. Donald Schreiber for having served in this capacity for many years.



Feel free to contact KACS at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu) if you would like to announce specific events or share links.



Find us on  
**Facebook**

By Elke Schoffers

**KACS**  
Kalamazoo Section of the American Chemical Society

ACS  
Chemistry for Life®

**KACS NEWS**  
The Local Sections Activity Committee (LSAC) gave KACS a glowing review. Read more here.  
Pictures by DIB Photography

Prev Next

1 2 3 4 5 6 7 8 More pictures

Thanks to our donors!

**AAAS**  
ADVANCING SCIENCE. SERVING SOCIETY

**ChemLuminary Awards**

KACS is a ChemLuminary Award finalist. Join us when all the recipients will be announced and the presentation of awards will occur at the 240th ACS National Meeting in Indianapolis, IN at 8 PM on Tuesday, September 10, at The Westin Indianapolis Hotel. Our "Chemistry and Culture: Elements of Dance" event (11/9/12) at the Kalamazoo Institute of Arts is a finalist for the ChemLuminary Award in the category of "Most Innovative Activity or Program". We thank all the donors and volunteers who helped us make this event a success (179 attendees).

- Chemistry and Culture: Elements of Dance
- Elements of Dance Report [PDF]

**MISSION STATEMENT:**  
We are a dynamic and visionary organization committed to improving people's lives in our community through the transforming power of chemistry. We strive to advance the broader chemistry enterprise and its practitioners for the benefit of Kalamazoo, Allegan and Van Buren counties.

Stay connected with your colleagues in the Kalamazoo ACS Local Section by liking our Facebook page.

Other Links:  
ACS Presentations on Demand  
Content from recent ACS Meetings  
Directory of Graduate Research  
Career Services  
Articles from ACS National  
The ACS Staff: How Does It Support Governance?  
Kalamazoo Links  
Chemical Abstracts Service  
Chemistry News Groups  
Chemistry Educational Resources  
Go to the ACSWeb  
Safety Advice by Dow

KACS strives to provide helpful resources for its membership and the public through its website. We have launched a new site. I hope that you will regularly check in with us at

<http://KalamazooACS.org/>

to learn about upcoming and past section activities in addition to useful links. With the help of Mark Wolf, our new web master, we have incorporated some new features such as rotating pictures of our **Chemistry & Culture: Elements of Dance** event, a current **ChemLuminary Finalist**. Over the summer, the KACS EC Committee has formulated an official mission statement, which can also be found online:

### ***KACS Mission Statement:***

*We are a dynamic and visionary organization committed to improving people's lives in our community through the transforming power of chemistry. We strive to advance the broader chemistry enterprise and its practitioners for the benefit of Kalamazoo, Allegan and Van Buren counties.*

# Special Announcements

## Seeking Volunteers for our Chemistry Outreach in October

By Lydia Hines

National Chemistry Week (NCW) is coming up again – October 20-26 this year – with the theme “Energy: Now and Forever!” Our Section’s popular annual outreach to the community at the Kalamazoo Valley Museum (KVM) will be on **Saturday, October 12, from noon to 4 p.m.**, and as always I am **urging you to volunteer as a science activity presenter**. It takes about 50 volunteers to present the 20-25 activities we try to offer. Thus far I have heard from only ten (10) willing members, so I am asking that you make this a professional priority and let me know **immediately** of your willingness to be a part of this event and to put the date on your calendar. Some sample activities we have had in the past are *electrolysis*, *super-absorbent polymer*, *“magic” sand*, *elephant toothpaste*, *slime*, *chromatography*, *iron in cereal*, *volcano*, etc. For ideas of other activities you may want to consider go to [www.acs.org/ncw](http://www.acs.org/ncw) and peruse the *Celebrating Chemistry* publication for this year. I look forward to hearing from you either by **e-mail at [lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)** or by telephone at **(269)375-7349**.

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## Changing Climates Speaker Series

Bill McKibben: “Notes from the Front Lines of the Climate Fight”  
October 10, 2013, at 7 PM  
Miller Auditorium, WMU

Bill McKibben is not a person you’d expect to find handcuffed in the city jail in Washington, D.C. But that’s where he spent three days in the summer of 2011, after leading the largest civil disobedience in thirty years to protest the Keystone XL Pipeline. A few months later the protesters would see their efforts rewarded when President Obama agreed to put the project on hold. His new book is *Oil and Honey: The Education of an Unlikely Activist*.

McKibben realizes that this small and temporary victory on the Pipeline is at best a stepping-stone. With the Arctic melting, the Midwest in drought, and Sandy scouring the Atlantic, the need for much deeper solutions is obvious. Some of those would come at the local level, and McKibben recounts a year he spends in the company of a beekeeper raising his hives as part of the growing trend toward local food. Other solutions would come from a much larger fight against the fossil-fuel industry as a whole. *Oil and Honey* is McKibben’s account of these two necessary and mutually reinforcing sides of the global climate fight—from the absolute center of the maelstrom and from the growing hive of small-scale local answers to the climate crisis.

For more information, see <http://www.wmich.edu/humanities/events/bill-mckibben.html>

# Kalamazoo Local Section of the American Chemical Society and Project SEED 2013

By Lydia Hines and Elke Schoffers; photos by Roxana Manta-Bielanski

This summer the KACS had 3 students (2 Summer II and 1 Summer I) who participated in the Section's annual SEED (Summer Experience for the Economically Disadvantaged) program organized by Dr. Donald Schreiber of the WMU Chemistry Department.

We are most grateful for the faculty mentors who shepherded these high school students for 8 weeks through their summer projects. This year the mentors were Dr. Gellert Mezei (Summer I student: Robert "Brice" Calco), Dr. Ramakrishna Guda (Summer II student: Mikayla Markus) and Dr. Sherine Obare (Summer II student: Tayler Martin).

The students presented posters of their work and fielded questions from attendees at a poster session in WMU's Haenicke Hall Atrium on August 7, 2013, from 10 a.m. -12n. The pictures below show the students with their posters and their respective mentors. What will our students be doing come fall? Mikayla Markus will continue as a Senior at Mattawan high school with the long-term goal of becoming a pediatric nurse; Tayler Martin of Bloomington high school will begin her college career at WMU in Engineering; and Robert Calco of Portage high school / KAMSC will matriculate at Kalamazoo College as a science student via a Heyl Scholarship.

Optical Sensors based on Dipyrrophanazine (DPPZ) Derivatives  
Tayler Martin with Dr. Sherine O. Obare

Protein Folding and Aggregation Towards Early Detection of Alzheimer's Disease  
Mikayla Markus with Dr. Ramakrishna Guda

Nanojars with enhanced Sulfate Ion Selectivity  
Robert Brice Calco with Dr. Gellert Mezei



Left to right: Mikayla Markus, Dr. Guda, Tayler Martin, Dr. Obare, Robert Calco, Dr. Mezei



The Project SEED poster session took place in Haenicke Hall, concurrent with the WMU-HHMI (Howard Hughes Medical Institute) poster session.

# Special Event #1

The KALAMAZOO Section  
of the American Chemical Society  
presents a Science Cafe:



## Horticultural Chemistry: Colors in Flowers

Presented by Dr. Gus Guzinski



6 PM, Tuesday, September 17, 2013  
Wedel's, 5020 Texas Drive, Kalamazoo, (269) 345-1195

**Public event - refreshments served**

This presentation will describe the effect of pigments present in flowers and other parts of plants. The slides will show colors produced by the different types of pigments in flowers with the chemistry of these pigments described in "popular science" terms. That is, **the average gardener should find this talk as informative as the average chemist.** Flower pigments produce an amazing range of colors. Despite this, the bio-synthetic pathways of pigment production is very similar in all plant genera; this is true whether describing flowers or fruit or vegetables. This talk will describe carotenoid and anthocyanin pigments and their visual interactions to produce a range of colors. Pigment color is also modified by the chemical environment and its position in plant cells. There is a reason that no one has produced a blue rose or a blue daylily despite the presence of this color in other flowers.

For questions, contact the Chair at [Elke.Schoffers@wmich.edu](mailto:Elke.Schoffers@wmich.edu).  
Learn more about KACS at <http://kalamazooacs.org/>.  
Like us on Facebook at [www.facebook.com/ACSKalamazoo](http://www.facebook.com/ACSKalamazoo).



# Special Event #2



## The KALAMAZOO Section

presents

## Kalamazoo Sci-Mix Poster Session

## “Sustainable Science - Recycle a Poster”

5:00-9:00 pm, Tuesday, October 8, 2013

BELL'S®



Inspired Brewing®

Bell's Eccentric Café  
355 E. Kalamazoo Ave

*Open bar. \* Complimentary hors d'oeuvres will be provided.*

The Kalamazoo area has always been historically rich with exciting chemistry. Please join us and share the area's wealth of exciting chemistry by bringing a poster of your chemistry accomplishments. Your poster can either be newly prepared or a recycled poster from a previous event. This Mixer invites local academic and industrial chemists from all areas of chemistry: Analytical, Biochemistry, Inorganic, Organic, and Physical, in addition to Food and Medicinal Chemistry. See you there!

### *Present Science, Network, Mingle, Celebrate Kalamazoo Chemistry*

\*Please note that attendees must be (1) a current ACS member, or (2) a poster presenter or (3) a Zoetis employee. **Poster presenters should email Dr. John Wendt at [john.a.wendt@zoetis.com](mailto:john.a.wendt@zoetis.com) by Thursday, October 3 to reserve an easel by sending: (a) the title of the poster and (b) a list of authors.**

Stay in touch with KACS at <http://KalamazooACS.org/>

Funding provided by The Zoetis logo consists of the word "zoetis" in a lowercase, orange, sans-serif font. The letter "z" is stylized with a curved underline that extends to the right.

# Sudoku Challenge (Solution to July 2013 Puzzle)

Congratulations to Doug Williams for solving our last Sudoku puzzle. Doug will receive a \$5 gift certificate to [Bell's](#). Below is the solution. No new puzzle this week: the Sudoku Challenge is going on vacation for a little while...

Difficulty: **EVIL**

Digits in **black** were given.  
Digits in **red** were blank.

8	1	4	5	9	2	6	7	3
7	9	5	6	3	4	8	1	2
6	3	2	7	8	1	9	4	5
4	2	3	9	5	7	1	8	6
1	7	9	8	2	6	3	5	4
5	6	8	4	1	3	2	9	7
3	4	6	1	7	9	5	2	8
9	8	7	2	6	5	4	3	1
2	5	1	3	4	8	7	6	9

## Final thoughts

By David Bolliet

When is the last time you checked your medicine cabinet for these expired or unwanted medications? When you do, instead of flushing them down the toilet or putting them in your household trash, take advantage of this special medication recycling program: [Red Med Box](#). With 5 convenient locations in Kalamazoo, Portage and Schoolcraft, disposing of your unwanted medicine is easy: Just look for the red med box.

### Red Med Box will accept

- Expired and unused medications
- Over the Counter medications
- Antibiotics/steroids
- Cold and flu medications
- Vitamins and herbal supplements
- Medication samples
- Pet Medications
- Medicated ointment/lotion/drops
- Unopened Epi-Pens
- Liquid medications



This local program is brought to you by a number of local law enforcement departments, the Kalamazoo Household Hazardous Waste Center, Kalamazoo County Substance Abuse Task Force, and many other Community Partners.

# American Chemical Society – Kalamazoo Local Section Newsletter

October 28, 2013

Vol. 3 - Issue 6



## 2013 KACS Executive Officers

### Chairperson

Dr. Elke Schoffers, WMU – Chemistry  
[elke.schoffers@wmich.edu](mailto:elke.schoffers@wmich.edu)

### Past-Chairperson

Vacant

### Chairperson-Elect

Dr. John H. Engelmann, Miller Canfield  
[jengelma@hotmail.com](mailto:jengelma@hotmail.com)

### Secretary

Carolyn Pugh, Perrigo  
[carolyn.pugh@perrigo.com](mailto:carolyn.pugh@perrigo.com)

### Treasurer

Dr. John Miller, WMU – Chemistry  
[john.b.miller@wmich.edu](mailto:john.b.miller@wmich.edu)

### Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry  
[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.  
[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

## 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.



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

Thank you!

**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](mailto: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](mailto: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



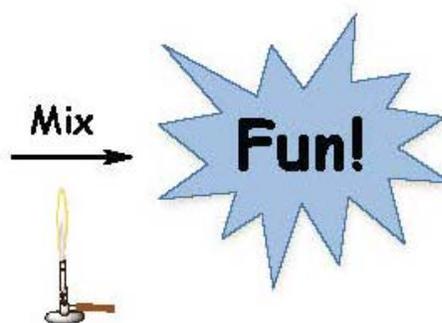
## Chemistry & Culture: Elements of Dance



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](http://www.KalamazooACS.org) and on Facebook at [www.facebook.com/ACSKalamazoo](http://www.facebook.com/ACSKalamazoo). Contact [Elke.Schoffers@wmich.edu](mailto: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.



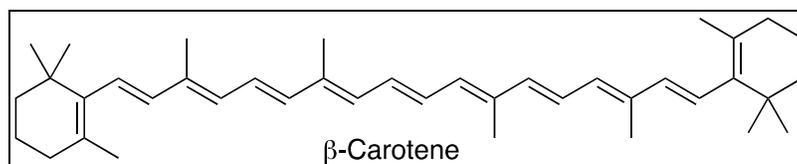
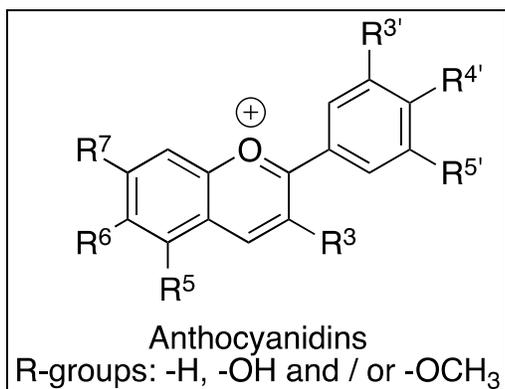
Graduate and undergraduate students participated as well as faculty and staff members to welcome new students to WMU's campus.

# Science Café on Horticultural Chemistry

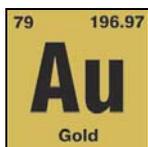
## Natural Colors: The Chemistry of Pretty Flowers

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

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## 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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# American Chemical Society – Kalamazoo Local Section Newsletter

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## 2013 KACS Executive Officers

### Chairperson

Dr. Elke Schoffers, WMU – Chemistry  
[elke.schoffers@wmich.edu](mailto:elke.schoffers@wmich.edu)

### Past-Chairperson

Vacant

### Chairperson-Elect

Dr. John H. Engelmann, Miller Canfield  
[jengelma@hotmail.com](mailto:jengelma@hotmail.com)

### Secretary

Carolyn Pugh, Perrigo  
[carolyn.pugh@perrigo.com](mailto:carolyn.pugh@perrigo.com)

### Treasurer

Dr. John Miller, WMU – Chemistry  
[john.b.miller@wmich.edu](mailto:john.b.miller@wmich.edu)

### Councilor

Dr. Lydia E. M. Hines, WMU – Chemistry  
[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.  
[dWilliams@kalsec.com](mailto:dWilliams@kalsec.com)

## Comments from the Chair

Elke Schoffers

Dear Colleagues,

KACS held its final event of the year on November 1, when more than 200 people visited the Kalamazoo Institute of Arts to attend “Chemistry & Culture: Elements of Dance”. A brief summary has been included in this newsletter and an extended report will be made available online. Our next event will be in January,

titled “Chemistry & Culture: Food – Sense-ational Molecules in Nutrition”. Details will be announced soon.

On December 31, 2013, I will bow out as KACS Chair. Dr. John Engelmann will take over for 2014 and I wish him best of luck as he oversees upcoming activities.

Over the last two years it has been a pleasure to work with local area chemists. I appreciate the work put forward by every volunteer and was pleased to see so many participants at our events. I would like to give special thanks to all the Local Section officers and four local chemistry student groups: the ChemClubs at Kalamazoo College and Western Michigan University (WMU), the WMU Chemistry Graduate Student Association (CGSA) and the WMU Chapter of the National Organization for the Professional Advancement of Black Chemist and Chemical Engineers (NOBCChE). Lastly, our events would not have been successful without collaborators and donors.

I will continue to volunteer for KACS as Past-Chair and will work with two new members in 2014: Dr. Brian Eklov (Chair-Elect) and Angela Willson (Secretary). Please stay in touch with KACS, I hope to see you in 2014 and wish you a Happy New Year!



Elke Schoffers, Ph.D. (2013 Chair, photo by Denis Billen)

**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](mailto:ACSkzoo@gmail.com)

# Announcements

## Comments from the 2014 Chair

As the Chairman of the Kalamazoo section for 2014 I would like to take this opportunity to introduce myself and tell you about some of the Section activities for 2014. I am John Engelmann and have been a member of the ACS for many years. I did my undergraduate work at the University of Wisconsin Milwaukee, and I got my Ph.D. at the University of Illinois.



Dr. John Engelmann  
(2014 Chair)

Our Section Councilor, Lydia Hines, and I were at the University of Illinois at the same time and actually worked in labs close together. After a number of years of going our own ways we now find ourselves working together in the Kalamazoo Section of the ACS!

In addition to my love for chemistry I have always been interested in law. I got my law degree from the University of Illinois and found a way to combine my interests by becoming an Intellectual Property attorney.

We have a number of interesting Section activities lined up for 2014: Our January meeting will relate to food chemistry, with samples. In early April we are having the High School Science Symposium and later that month we have a small outreach in connection with Chemists Celebrate Earth Day. We supervise a competitive exam, and in May we have the Awards Gathering where high school teachers and students and others are recognized for their educational and volunteer activities. In June we will anticipate participating in the WMU Chemistry Graduate Student picnic. In October, as part of National Chemistry Week, we have a Saturday afternoon (Chemistry Day) at the Kalamazoo Valley Museum, an event in which we reach out to the community to encourage an interest in chemistry. Once again Zoetis is supporting a poster session, in October or November, where members can exhibit posters displaying their work – it is a wonderful way to discover the great diversity of work being done by chemists of our Section. In addition to these events we will have meetings where we invite speakers on various topics, so stay tuned. You will receive meeting announcements as the date of each event approaches.

Please accept my personal invitation to attend some or all of these events, and introduce yourself to me; I look forward to meeting you. Greater participation makes for greater enthusiasm at each meeting. I would welcome any suggestions for other chemistry-related events you would like to see in our Section, so please contact me at [jengelma@hotmail.com](mailto:jengelma@hotmail.com).

John Engelmann

# KACS Elections

By Elke Schoffers

Dear Colleagues,

KACS could not have accomplished much without the efforts of its volunteers. That is why I would like to thank Carolyn Pugh who has served as Secretary over the last two years. I herewith welcome two new Executive Committee officers beginning January 2014, Dr. Brian Eklov (Chair-Elect) and Angela Willson (Secretary). Below please find additional information.

## **Brian Eklov, Ph.D. – KACS Chair-Elect 2014**

Dr. Eklov received a B.S. in Chemistry with honors from the University of Michigan in 1998, and a Ph.D. from the University of Minnesota in 2005 (T. R. Hoye). After post-doctoral studies at the University of Illinois (S. E. Denmark), he joined the staff at Kalexsyn as a research chemist in 2007, and is currently associate director of chemistry. During his time at Kalexsyn, he has led a large team of scientists in a collaboration with a major pharmaceutical company to search for inhibitors of mTor. He also is collaborating with a major chemical supplier to develop chemistry that enables academic discoveries to be translated into marketable reagents.



Brian Eklov, Ph.D.  
(KACS Chair-Elect)

## **Angela Willson – KACS Secretary 2014**

Angela Willson may be a new WMU Graduate Teaching Assistant and student pursuing her Masters in Chemistry and PhD in Science Education through the Mallinson Institute for Science Education, but she is neither a stranger to Kalamazoo nor the ACS. Angela was born and raised in the Kalamazoo area and attended Portage Northern High School. She then went on to attend Saint Mary's College and received her Bachelor of Science in Chemistry in 2012. At Saint Mary's College, Angela acted as co-President of the Saint Mary's Affiliation of the American Chemical Society (SMAACS). She then spent a year in Minneapolis, MN working in food science with Cargill. Most recently she has spent time in the area attending KACS events and volunteering for Chemistry Day at the Kalamazoo Valley Museum.

# Report

## Chemistry & Culture: Elements of Dance 2013

By Elke Schoffers

With Photos by Denis Billen (DB) of *DB Family Photography DJ*  
and by Roxana Manta-Bielanski (RM)

The connection between *chemistry* and *culture*, especially *chemistry* and *dance* may not be obvious to everybody. However, there are some interesting aspects to consider when contemplating these combinations. John Bohannon (<http://www.johnbohannon.org/>, a biologist and science journalist, has collaborated with AAAS to create the "Dance Your PhD" competition. It is in response to a dreaded situation that scientists encounter when they try to explain their research to laymen. How does one respond to "So, what's your PhD about?" For the fourth year running, PhD scientists can compete to win up to \$1,000, and they are required to dance. Bohannon has also performed at TEDx Brussels (<http://www.tedxbrussels.eu/>). With the help of the Black Label Movement dance troupe he proposed to replace Powerpoint software with live dancers. Zafra M. Lerman of the *Institute for Science Education and Science Communication* thinks that the "arts can play a valuable role in reversing [a negative] public perception" and help "improve the public understanding of chemistry" ("CHEMISTRY: AN INSPIRATION FOR THEATRE AND DANCE" *Chemical Education International*, Vol. 6, No. 1, 2005). A notable example is the play "Oxygen", written by Carl Djerassi and Nobel laureate Roald Hoffmann. And "Nobel laureate John Planyi has referred to molecular movement as 'the dance of the molecules'".

On November 1, over 200 people were curious enough to find out about "dancing chemists" when KACS connected "atoms and molecules to exercise science" in the lobby, while offering showcase dances, line dances and open dances in the auditorium of the Kalamazoo Institute of Arts during "Chemistry and Culture: Elements of Dance". Mayor Bobby Hopewell was the "Surprise Celebrity MC".

Many chemists dressed in elegant evening attire and joined local ballroom dancers and the general public. The lobby featured refreshments and several displays as part of an exhibit that explained exercise chemistry:

*Amino Acids, Peptides, Proteins, and Endorphins*  
*Doping in Sports*  
*Steroids*  
*Chemicals Used in Sports Attire*  
*Chemistry, Body Odor and Pheromones*

Participants were able to win prizes. For example, correct crossword puzzles, based on the science in the exhibit, were entered into a drawing for trial gym memberships, T-shirts, Meg-A-Moles, and dance passes, among others.

There was also a computer set up and dedicated to playing a YouTube video of “Chemists Can DANCE! The first ever dancing periodic table of elements”. It was produced by ACS (see <https://www.youtube.com/watch?v=yg54Tp85S-Y>). Another demo showed how one can isolate iron from cereal; iron being critical for muscle function. Last but not least, there was a special poster as a tribute to Dr. Alfred Bader, founder of Aldrich Chemicals. He is an avid art collector and philanthropist. The event was made possible through generous donations by AAAS, WMU, Aldrich Chemistry, Alfred Bader Fine Arts, and WMU-BTR. It was also a collaboration of KACS with the Kalamazoo Institute of Arts, Southwest Michigan Ballroom Dance and the Kalamazoo Chapter of USA Dance.



The KIA lobby featured exercise chemistry posters and refreshments, among others (RM).



Chemistry students began the Cupid shuffle (left, RM), before the audience joined in (right, DB).



WMU Chemistry major Sarah Ellison read the display to fill out the crossword puzzle (RM).



Showcases performers, from left: Gus Guzinski and dance partner Jenny Grunberg, a Kalamazoo dentist, and Elke Schoffers with Art Downey, a professional dance instructor; shown with celebrity MC mayor Bobby Hopewell (right, DB).



Drs. Isabelle and Alfred Bader (Chemist, Entrepreneur, Art Connoisseur & Philanthropist)

## A Thank You

This is a public note of thanks to **Dr. Sherine Obare of WMU** who has responded affirmatively to my several requests in past Newsletters for an **Awards co-chair** for the 2015 Joint Great Lakes Central Regional Meeting (JGLCRM), which we are co-hosting with the Western Michigan Section in May of 2015 in Grand Rapids. She joins our other Section members on the Organizing Committee - Drs. James Kiddle, Program co-chair, John Miller, Exhibits and Fundraising co-chair, Elke Schoffers, Publicity co-chair.

Lydia Hines  
General co-chair

## A Report on Kalamazoo College Mole Day 2013

By Amanda Bolles

We are very happy to report a recent successful Chemistry Club outreach on our campus: In an effort to promote chemistry and membership in Kalamazoo College's Chem Club a *Mole Day* Event was held in the Dow Science building on *October 23, 2013*. Over fifty students participated in the activities, which included mole jokes, donuts, fun mole facts, and mole-related games. This was an opportunity for chemistry and biology majors to socialize and learn more about the Chemistry Club, as well as explore future activities. Thirty students took a guess at how any moles of glucose were in a graduated cylinder full of candy – the winner's guess was within 2 moles of the correct number! As a bonus, the Chem Club gained 5 members!