



ISOTOPICS

The Cleveland Section of the American Chemical Society

Volume 93 Issue 1

January 2017

January Meeting Notice

Wednesday, January 18, 2017

Market Garden

1947 W 25th St, Cleveland, OH 44113

4:30 – 5:30 pm Executive Committee Meeting
5:30 – 6:15 pm Networking/social
6:15 – 7:00 pm Dinner
7:00 – 8:00 pm Presentation

On Deck:

Wednesday 02/15/17

T.B.A.

Cleveland ACS Officers

Chair:

Lisa Ponton
Baldwin Wallace University
(440) 826-2314
lponton@bw.edu

Chair-Elect:

Michael Levy
mjlevy34@gmail.com

Treasurer:

Bhagya Gunasekera
Cleveland State U.
m.gunasekera@csuohio.edu

Secretary:

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Cleveland Section Web Site:

http://www.csuohio.edu/sciences/dept/cleveland_acs/

“Batman, The Lone Ranger and The Chemist”

Mr. Robert Ponton

We'll explore the centuries old connection between the chemist and the scientific glassblower.

DINNER RESERVATIONS REQUESTED:

Please RSVP to Dr. Lisa Ponton (lponton@bw.edu) with the names and number of people in your party by 5:00 pm on Friday, January 13th. A buffet dinner will be offered. We can take credit card, checks made out to “Cleveland ACS”, or cash. The cost is \$20 for members and guests, \$5 for students.

From the Dest of the Past Chair

Dear Members of the Cleveland Local Section:

About six years ago, I was looking to expand my interactions with fellow chemists in the Cleveland area. A couple of my colleagues encouraged me to become more active in the activities of the Cleveland Local Section (LS) of the American Chemical Society (ACS). It was wonderful advice, as I have come to know chemists throughout the Cleveland area and beyond. I continue to look forward to monthly events of the Cleveland LS as a time to network and socialize with friends and colleagues over dinner, to learn something new from an invited speaker or potentially, to tour a local industrial company, listening with interest to the passion of a fellow chemist talking about his or her work.

I consider myself fortunate to have been elected Alternate Councilor for the section (serving from 2013-2015), as I had wanted to give back to the Cleveland LS. This position was a good way for me to learn more about the Cleveland LS and its activities. I was then privileged to be elected to serve as Chair Elect (2015), Chair (2016), and now Past Chair (2017).

My year as Chair went by quickly, and I attribute this to a passionate group of fellow members on the Executive Committee. These individuals were generous with their advice and assistance, which were vital to the continued success of our ACS section. The hard work of this committee was important as we worked towards the continued implementation of the Strategic Plan that was generated in October 2015. One visual sign of progress made on the Strategic Plan will be the roll-out of a new and enhanced Cleveland LS website in the very near future.

I hope you will indulge me as I highlight the events of the Cleveland LS in 2016:

Our Section's January Past Chair's Night was held at Market Garden Brewery. Ten Past Chairs came back to enjoy the evening with us, which allowed us to thank them again for their service to the Cleveland LS. In addition, we heard a

stimulating talk on fuel alternatives by William B. Chamberlin. In a few weeks we will be coming up on that time again for this year's Past Chairs night, again at Market Garden Brewery, and I hope you can join us.

In February, we tried something new, when from a technology-enhanced seminar room at Cleveland State University, we engaged in a live video conference with a couple members of the newly formed ACS section in Lima, Peru. (You can still view the conversation online at <https://youtu.be/gva-csjFLtE>.) It is our hope that we can expand on this type of event in the future, and thus to continue to meet and engage with chemistry professionals in other parts of the world.

The Meeting-in-Miniature (MIM) was once again a wonderful event, with this year's MIM held at Case Western Reserve University. There were nearly 40 oral papers presented by undergraduate and graduate students. For their excellent papers, four undergraduate and four graduate students were presented awards of \$350 and \$400, respectively. In addition, we listened to an interesting plenary talk by Dr. David E. Lewis on the history and influence of Russian chemists on the field of organic chemistry.

April's Education Night meeting was held at the Ohio Aeronautical Institute (OAI). We presented awards to young (K-12) students who participated in the Cleveland LS's National Chemistry Week contests, which are held annually. In addition, we listened to an enlightening presentation by Matt Melis of NASA Glenn Research Center on the discovery of the cause of the Columbia Shuttle accident.

Again, to try something new, the 2016 Morley Award event in May was held at the Michaelson-Morley Restaurant on the campus of Case Western Reserve University. We had a dinner of excellent food and drink, wonderful fellowship, and heard an engaging talk by the 2016 Morley Awardee, Dr. Claudia Turro of Ohio State University, on the potential use of transition metal complexes in cancer treatment. It is our

plan to hold the 2017 Morley Award dinner and presentation again at the Michaelson-Morley Restaurant.

Following our annual September joint meeting with the Akron Local Section at Yellowtail Restaurant (with a talk on tissue engineering by Dr. William J. Landis), the October event was held at Sherwin-Williams Automotive & Diversified Brands Campus in Warrensville Heights. Sherwin-Williams employees were very gracious hosts, giving extended tours throughout the facility, and providing a generous dinner and a wonderful atmosphere for fellowship and conversation.

In November, we gathered at the Speakeasy on West 25th Street, and enjoyed a relaxed evening in conversation, and a thought-provoking talk (especially for a biochemist like myself) by Dr. Leah Shriver on the use of mass spectrometry-based metabolomics in investigating the biochemical pathway of the CNS. In December, we ended the year with a social at Quicken Loans Arena for a Lake Erie Monsters game.

I would be remiss not to mention another year of success with the National Chemistry Week program. The theme was “Solving Mysteries Through Chemistry,” and if you are interested, you can check out an overview of the 2016 educational hands-on demonstration program online at http://www.csuohio.edu/sciences/dept/cleveland_acs/NCW/programs.html.

From our current Strategic Plan, one of our goals is to increase member turn-out at Cleveland LS events and to diversify our meeting types. In recent years, we have had an increase in students attending monthly events and we continue to look for ways to reach younger chemists. Members of the Executive Committee are also looking for ways to better meet the needs of our membership. We would love to hear your ideas on the topic. If you would like to become more involved in the Cleveland LS, please let us know.

Lastly, please welcome our newly elected Executive Committee members, who will serve the Cleveland LS membership in the coming year. Each is highly qualified and looking forward to serving our local section with continued dedication regarding our section’s mission. (Note that the * indicates individuals serving on the Executive Committee for the first time.)

Chair Elect: Michael Levy* (2017)

Treasurer: Bhagya Gunasekera* (2017, 2018)

Councilor: Dwight Chasar (2017, 2018, 2019)

Councilor: Michael Kenney (2017, 2018)

Alternate Councilor: David Ball (2017, 2018)

Alternate Councilor: Stephanie Vivod* (2017, 2018, 2019)

Director: Mark Waner (2017, 2018, 2019)

Trustee: Don Jaworske (2017, 2018, 2019)

Thank you for giving me a chance to serve the Cleveland Local Section.

Sincerely,

David E. Orosz, Ph.D.

2017 Past Chair

Call for Abstract: Meeting-in-Miniature 2017

Meeting-in-Miniature (MIM) of the Cleveland Section has become a much anticipated event in the calendar of many local graduate, undergraduate, postdoctoral and industrial researchers. Researchers find MIM to be a stepping stone for the presenting their work at the ACS Spring National Meeting that follows the MIM. MIM also provides a great opportunity for to network among the scientific community.

The 2017 MIM of will be held on Monday, March 13th at the Main Campus of Cleveland State University. Stemming from a strategic planning initiative, the of ACS Cleveland Section is on a mission to expand the breadth of chemistry research showcased at MIM 2017. Local area students from a number of community colleges, and researchers from area industries will also be invited to present at this year’s conference.

The half day program of MIM 2017 starting early afternoon will accommodate oral presentations of 15min and 5min questions by audience in each of its sections. Graduate and undergraduate presentations will be recognized with certificates and may be eligible for monetary awards. MIM 2017 will also include a Plenary Lecture, followed by dinner buffet.

Submission of abstracts is now open. The registration is free for this event. Please limit your abstract to 250 words and include names and affiliations of all authors. Abstracts should be submitted through the online submission system; <http://goo.gl/forms/EQCo7TRkXC>. The deadline for submission is Feb. 28th. For further information please contact Dr. David Ball, Chair - Department of Chemistry, Cleveland State University at d.ball@csuohio.edu.

Special meeting: multi section retreat at Kalahari Resorts Feb. 24-25, 2017

Please join us for our first multi-section ACS retreat. We hope this will be an opportunity for professionals and students to socialize and network, and families to have some fun. The formal programming is on Saturday so that everyone will have the opportunity to enjoy the water park on Sunday! For more information, please visit our website:

http://www.csuohio.edu/sciences/dept/cleveland_acs/ Hurry, Hotel registration ends Jan. 25, 2017 and event registration ends Feb. 17th, 2017.

From ACS Discoveries: Vapors from some flavored e-liquids contain high levels of aldehydes

Environmental Science & Technology

Traditional cigarettes pose a well-established risk to smokers' health, but the effects of electronic cigarettes are still being determined. Helping to flesh out this picture, researchers are reporting in the ACS journal *Environmental Science & Technology* what happens to e-liquid flavorings when they're heated inside e-cigarettes or

electronic nicotine-delivery systems. The study found that when converted into a vapor, some flavorings break down into toxic compounds at levels that exceed occupational safety standards.

Since electronic cigarettes were first introduced to the market in 2003, health officials have been tracking usage and studying potential health effects. A 2015 survey by the National Center for Health Statistics reported that 3.7 percent of adults used the devices regularly, and 12.6 percent had tried them at least once. Some studies have identified the ingredients in e-liquid flavorings, but very little research has been done to determine what happens to them when they are transformed inside the device. A growing body of research on e-cigs has shown that the heat that converts e-liquids into vapor decomposes its contents, producing aldehydes and other toxic compounds that can potentially cause health problems. Andrey Khlystov and colleagues wanted to investigate the specific role that flavorings play in these reactions.

The researchers analyzed vapors created from both unflavored and flavored e-liquids loaded into three popular types of e-cigarettes. The tests for 12 different aldehydes showed that the amount of potentially harmful compounds varied widely across e-liquid brands and flavors. However, the study also showed that in general, one puff of flavored vapor contained levels of aldehydes exceeding the safe thresholds for occupational exposure — set by the American Conference of Governmental Industrial Hygienists — by factors of 1.5 to 270. Vapors from unflavored e-liquids contained aldehydes at significantly lower levels.

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