



ISOTOPICS

The Cleveland Section of the American Chemical Society

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April 2019

On Deck:

Morley Award

Wed. May 15, 2019

**Michelson & Morley
Restaurant, Case Western
Reserve University**

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April Meeting Notice

Education Night

Wed. April 17, 2019

Cleveland Museum of Natural History
1 Wade Oval Drive, Cleveland, OH 44106

4:30 pm	Executive Committee Meeting
5:30 pm	Social/Networking and posters
6:00 pm	Dinner
7:00 pm	Presentation and Awards

Presentation: Geological History of Ohio

By Dr. David Saja, Endowed Chair and Curator of Mineralogy, Cleveland Museum of Natural History

Dr. Saja is a structural geologist by training. He is an expert at analyzing a rock sample and extracting information about how it formed, as well as its chemical and physical composition. He obtained his Ph.D. in 1999 from the University of Pennsylvania and joined the museum as curator of mineralogy in 2000.

DINNER RESERVATIONS Please RSVP ASAP, preferably by Thursday April 11, 2019, by emailing Chris Boyd (w.c.boyd59@csuohio.edu). At the event, we can take credit card payments, checks made out to "Cleveland ACS", or cash. The cost is \$20 for members, non-members and guests, \$10 for retirees or unemployed, and \$5 for students.

2019 Heller-Dabrowski Award

The Cleveland Section of the American Chemical Society annually sponsors an award to recognize an outstanding high school chemistry teacher in the Cleveland Section. The award is named for Irene Heller of North Olmsted High School and Betty Dabrowski of St. Magnifican in recognition of their contributions as outstanding high school chemistry teachers and their service to the Cleveland Section.

We are pleased to award Richard Kawolics this year's Heller-Dabrowski Award. Richard has taught at Laurel School in Shaker Heights for the past 17 years. He is a strong advocate for girls in science and uses a standards-based assessment geared towards an emphasis on demonstrating knowledge and skills over grades. The students who wrote support for his nomination commented that this "took the pressure off of pursuing a high grade in the class and got [them] to focus on learning the material". In addition to teaching Chemistry, Richard founded and directs the Speech and Debate program helping his students find their voice. Richard will be recognized at the April meeting of the Cleveland-ACS.

NEOSEF Awards

The 2019 Northeastern Ohio Science and Engineering Fair (NEOSEF) was held at Cleveland State University March 12th, 2019. Approximately 500 students in grades 7-12 participated in the fair. During the judging session, volunteer judges for the Cleveland section of ACS reviewed projects entered into the Chemistry Category and selected the best projects for each grade categories. The number of awards was proportional to the number of students presenting in each category, and the award amount is \$150 each. The 8 winners are:

CHEM 7-8:

Daman Dhillon, Incarnate Word Academy, "Which has more Vitamin C: 100% Fruit Juice or Artificially Flavored Orange Drink?"

Maeve Galla, SS Joseph&John, "Does Formaldehyde in Nail Polish Impact its Durability?"

April Hauzie, Lawrence Upper, "Homemade Bubbles"

Zoltan Kotrebai, St Paschal Baylon Elementary, "Optimizing Elecgtrolytic Hydrogen Production to Aid the Storage of Renewable Energy"

Carlo Polisena, St Francis of Assisi Elementary, "And I'll Rise Up!"

CHEM 9-10:

Meghan Searle, Beaumont, "Change in Charge: The Study of Temperature's Effect on the Decrease of a Battery's Voltage"

CHEM 11-12:

Jing-Jing Shen, Beachwood High, "Investigation of Materials for Top Electrode of Transparent Organic Solar Cells"

2018 Morley Award

Congratulations to the newly selected 2019 Edward W. Morley award winner, Dr. Daniel Scherson, Professor, Dept. of Chemistry at Case Western Reserve University. The award presentation and address is scheduled for Wed. May 15. Details will be on the section web page when available, and in the May Isotopics.

Announcement: 50th CERM of the ACS

The 50th Central Regional Meeting of the American Chemical Society will be held in Midland, Michigan, from June 4 – 8, 2019, at the H Hotel (111 W. Main Street, Midland). The theme of the Meeting is "Molecules to Materials" and it recognizes the 100th anniversary of the Midland Local Section. Registration is open, and advance registration (a \$50 discount on meeting registration fees) ends on April 1. MEALS ARE INCLUDED with registration (breakfast and lunch only). To get information about CERM, including a preliminary program and registration information, go to <https://acscerm2019.org>.

Announcement: PINO Career Fair

The Graduate Macromolecular Student Organization at Case Western Reserve University would like to invite post-doctorate,

graduate, and undergraduate students from all science and engineering programs to attend the PiNO Career Fair on June 14, 2019 in Cleveland, Ohio. PiNO is a one-day job fair and conference that allows students seeking internships, co-ops, or full-time employment to present posters, network with industry representatives, and win cash prizes.

Don't let our name fool you - PiNO, the Polymer Initiative of Northeast Ohio attracts industry from all STEM fields, not just polymers. This conference is geared towards, but not limited to, students in the following fields: macromolecular/polymer science and engineering, chemistry, chemical engineering, biomedical engineering, and materials science and engineering. Registration is just \$10 for poster presenters and \$5 for students, researchers, and young professionals. For more information on registration, conference information, and a growing list of our company sponsors please visit our website at www.pinoconference.com.

If you have any questions, concerns, or comments please contact us at pino2019@pinoconference.com. Also, you can contact our co-directors Erik Price (ejp68@case.edu) or Sunsheng Zhu (sxz352@case.edu).

Job Adds:

THE DEPARTMENT OF CHEMISTRY, CASE WESTERN RESERVE UNIVERSITY invites applications for one or two part-time lecturer positions for the July 2019 Summer semester (July 9-August 2) and/or Fall 2019 (strong candidates will be considered for both positions). Teaching responsibilities in the summer will comprise the second semester lecture of sophomore organic chemistry, while the fall responsibilities will include two lecture-based courses drawing from the general and/or organic chemistry course sequence. A Ph.D. or Master's degree in chemistry and teaching experience in chemistry are required.

To apply, submit a letter of application, CV, and three confidential letters of reference

at <http://apply.interfolio.com/61221>. Review of applications will begin on March 29, 2019 and continue until the position is filled.

In employment, as in education, Case Western Reserve University is committed to Equal Opportunity and Diversity. Women, veterans, members of underrepresented minority groups, and individuals with disabilities are encouraged to apply.

THE DEPARTMENT OF CHEMISTRY, CASE WESTERN RESERVE UNIVERSITY invites applications for a full-time lecturer position starting August 19, 2019. Teaching responsibility will be determined based on the qualifications of the applicants but may include lecture and/or laboratory courses in general and organic chemistry. Lecturers are expected to teach the equivalent of two courses per semester, which may have multiple sections. A Ph.D. in chemistry and demonstrated excellence in teaching lecture and/or laboratory courses are required.

To apply, submit a letter of application, CV, and three confidential letters of reference at <http://apply.interfolio.com/61191>. Review of applications will begin on May 14, 2019.

In employment, as in education, Case Western Reserve University is committed to Equal Opportunity and Diversity. Women, veterans, members of underrepresented minority groups, and individuals with disabilities are encouraged to apply.

Case Western Reserve University provides reasonable accommodations to applicants with disabilities. Applicants requiring a reasonable accommodation for any part of the application and hiring process should contact the Office for Inclusion, Diversity and Equal Opportunity at 216-368-8877 to request a reasonable accommodation. Determinations as to granting reasonable accommodations for any applicant will be made on a case-by-case basis.

Announcement: May Conference

The 63rd Annual May Conference will be held on Wednesday, May 22, 2019 at John Carroll

University, Dolan Science Center. The conference typically has 180+ attendees and 30 or more vendors and is a joint meeting that includes participation/sponsorship from a number of societies including SAS, MSNO, ACS, AVS/Ohio, and SPE. There are 30+ oral presentations from a mix of invited speakers, vendors, and students. The cost for students to attend is minimal and students are encouraged to present both papers and posters. There are monetary awards for the best papers/posters and two MSNO awards that include a trip to the national conference. The conference includes the joint SAS/ACS Yeager Award and presentation. Topics are varied and include microscopy, surface science, and spectroscopy. We also recognize the John Bell Award winners from the NEO Science & Engineering fair at the reception. The keynote speaker is Chris Yuan, Associate Professor, CWRU, "*Electric Vehicles for Transportation: Facts, Prospects, Mysteries and Folklore*". Additional information can be found at <http://www.msneo.org/2019-sasmsnoacsavs-may-conference.html>

ACS Discoveries: Artificial retina could someday help restore vision

Nano Letters

The loss of eyesight, often caused by retinal degeneration, is a life-altering health issue for many people, especially as they age. But a new development toward a prosthetic retina could help counter conditions that result from problems with this crucial part of the eye. Scientists published their research on a new device, which they tested on tissue from laboratory animals, in the ACS journal *Nano Letters*.

Yael Hanein and colleagues point out that a growing range of medical devices has become available to treat conditions, including visual impairment, that involve sending sensory signals to the brain. Patients with one type of eye disorder called age-related macular degeneration (AMD), for example, could potentially benefit from such a device, they say. AMD usually affects people age 60 or older who have damage to a specific part of the retina, limiting their

vision. Scientists are trying different approaches to develop an implant that can "see" light and send visual signals to a person's brain, countering the effects of AMD and related vision disorders. But many attempts so far use metallic parts, cumbersome wiring or have low resolution. The researchers, an interdisciplinary team from Tel Aviv University, the Hebrew University of Jerusalem Centers for Nanoscience and Nanotechnology and Newcastle University, wanted to make a more compact device.

The researchers combined semiconductor nanorods and carbon nanotubes to create a wireless, light-sensitive, flexible film that could potentially act in the place of a damaged retina. When they tested it with a chick retina that normally doesn't respond to light, they found that the film absorbed light and, in response, sparked neuronal activity. In comparison with other technologies, the researchers conclude theirs is more durable, flexible and efficient, as well as better able to stimulate neurons.

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