



ISOTOPICS

The Cleveland Section of the American Chemical Society

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September 2014

On Deck:

October 22, 2014

Tour of NASA Glenn Research Center followed by dinner at the 100th Bomb Group. Space is limited!

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Isotopics

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September Meeting Notice

Joint Meeting with the Akron Local Section
Wednesday, September 24, 2014
Yellow Tail Restaurant, Fairlawn, OH

4:30 pm	Executive Committee Meeting
5:30 pm	Social/Networking
6:30 pm	Dinner
7:15 pm	Presentation

Synthesis and applications of a library of polyesters and polyurethanes with 'peptide-like' pendant functional groups

Dr. Abraham Joy, Assistant Professor, Department of Polymer Science, University of Akron

The central theme of the Joy Lab is in developing advanced polymeric materials for applications in regenerative medicine and drug delivery. The Joy Lab designs and develops polymers in three research areas i) biomaterials functionalized with multiple functional groups which modulate the physical and biological properties ii) photoresponsive materials that respond to a specific wavelength of light to bring about degradation, crosslinking or changes in mechanical or adhesive properties iii) self-assembling polymers that exhibit emergent material properties and will be useful for applications such as drug delivery. The above polymers are polyesters, polycarbonates, polyurethanes or acrylates.

DINNER RESERVATIONS REQUIRED:

Please RSVP via e-mail to Dr. Michael Davis (mdavis.nmr@gmail.com) and cc Dr. Mike Kenney (eigensolutions@gmail.com) by Monday, September 17 with your name, total number of guests in your party, and a phone number. Checks made out to "Akron ACS" are greatly appreciated; cash otherwise. \$20 for members and guests, \$10 for retirees or unemployed, \$5 for students Delicious Buffet that features a 160-foot seafood buffet counter brimming with over 30 kinds of sushi and over 15 dishes are served at both the fresh salad bar and hot entrée section. A delectable dessert bar with over 20 petite cakes and fresh fruits are included. A cash bar will also be provided. Dinner includes coffee, herbal tea, and water.

Directions to Yellow Tail Restaurant

The Yellow Tail Restaurant is located on Medina Road (Route 18) approximately 500 feet east of the Interstate 77 – Route 18 cloverleaf, in the Market Square at Montrose shopping center. The address and phone number are 4054 Medina Road Fairlawn, OH 44333, (330) 666-9988.

Save the Date for the October Meeting

Save the Date and Register for an Evening of Aeronautics and Space!

Our October 2014 meeting will include a tour of NASA Glenn Research Center followed by dinner at the 100th Bomb Group. **The date to save is Wednesday, October 22** with a check-in time of 4:45 p.m. at NASA Glenn. There is a maximum of 45 attendees that can take part in the tour, and we need to provide NASA with names and citizenships in advance so they can prepare badges. **If you wish to attend the tour, please send an email with your full name and citizenship status no later than 6:00 p.m. on September 20 to Theresa Nawalaniec at t.nawalaniec@csuohio.edu.**

Congratulations to Anna Cronin

In May 2014, Anna was awarded the Technical Achievement award by the Cleveland Technical Societies Council (CTSC). This award recognizes an individual under 40 years of age, who has contributed to the field of engineering, science or technical education, and has demonstrated outstanding performance, creative ability and technical competence in the conduct of his or her professional duties.

We are pleased that Dr. Cronin has been recognized for her outstanding contributions to the profession and the Cleveland Section of the ACS, through her role on the executive committee. Congratulations!

CERM ACS 2014 Teacher and Undergraduate Programming

By Heather Juzwa

Calling all ACS Student members and High School Teachers! Did you know that CERM 2014 has full days dedicated you? Check out our website for Friday, October 31 Undergraduate Programming here:

<http://www.pittsburghacs.org/national/undergraduate-programming/>

We look forward to seeing you at CERM 2014!

Call for Nomination: The Morley Medal

The Cleveland Section annually sponsors a regional award, which consists of the Morley Medal and an honorarium of \$2,000. The next presentation of the Morley Medal will take place at the meeting of the Cleveland Section ACS in May 2015. The award is presented at a banquet, at which time the recipient will deliver the Edward W. Morley Lecture for that year. Travel expenses for the medalist and spouse will be provided.

The purpose of the award is to recognize significant contributions to chemistry through achievements in research, teaching, engineering, research administration and public service, outstanding service to humanity, or to industrial progress.

The area of eligibility includes those parts of the United States and Canada within about 250 miles of Cleveland. The contributions for which the award is given should have been made by the awardee when a resident of this area, or if a major contribution was made elsewhere, the nominee should have continued to make contributions while a resident of this area. Nominations may be made by any member of the American Chemical Society, The Chemical Society or the Chemical Institute of Canada.

Nominations for the Morley Medal should include a letter of nomination and curriculum vitae including the candidate's education, professional experience & activities, awards & honors, offices held and specifics on significant contributions.

The letter of nomination should highlight these significant contributions. A representative list of references to the candidate's more important contributions, an evaluation of the significance of these achievements, and a listing of the nominee's most significant publications and patents are also appropriate. Added consideration will be given to individuals under the age of 48 with demonstrated accomplishments and for continuing significant future accomplishments. Strong seconding letters are suggested. The specific reference for every publication or patent is neither required nor encouraged. Electronic submissions are preferred.

Deadline for receipt of nominations is December 12, 2014. Send nomination and supporting material to:

Dr. Mark J. Waner

Cleveland Section Morley Medal Committee

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An anti-glare, anti-reflective display for mobile devices?

ACS Applied Materials & Interfaces

If you've ever tried to watch a video on a tablet on a sunny day, you know you have to tilt it at just the right angle to get rid of glare or invest in a special filter. But now scientists are reporting in the journal *ACS Applied Materials & Interfaces* that they've developed a novel glass surface that

reduces both glare and reflection, which continues to plague even the best mobile displays today.

Valerio Pruneri and colleagues note that much effort has been poured into anti-reflective and anti-glare technology. In the highly competitive digital age, any bonus feature on a device gives it an edge. But for the most part, that hasn't included an integrated anti-glare, anti-reflective display. Users still typically have to dish out extra cash for a filter or film — some of questionable effectiveness — to lay on top of their glass screens so they can use the devices in bright light. One of the most promising developments involves layering anti-reflective nano-structures on top of an anti-glare surface. But the existing technique doesn't work well with glass, the material of choice for many electronic displays, so Pruneri's team at ICFO (The Institute of Photonic Sciences) in collaboration with Prantik Mazumder's team at Corning Incorporated set out to find a new method.

On a very fine scale, they roughened a glass surface so it could scatter light and ward off glare but without hurting the glass's transparency. Then the researchers etched nano-size teeth into the surface to make it anti-reflective. In addition to achieving both of these visual traits, the researchers showed the textured surface repelled water, mimicking a lotus leaf. Although the anti-glare roughening protects the nano-size glass teeth, further research is needed to ensure that the surface can withstand heavy touchscreen use, they say. They add that the method is inexpensive and can easily be scaled up for industry use.

Isotopics is looking to highlight local chemistry professionals, companies, teachers, research groups, students, events, and more. If you have an idea for an *Isotopics* article, please contact the editor. *Isotopics* is also looking for local members to join our staff. Time commitments for staff members are minimal (a few hours a year!) and your contributions will be invaluable to our local section. If you are interested in joining *Isotopics*, please contact the editor.