ISOTOPICS

The Cleveland Section of the American Chemical Society

Volume 92 Issue 7 October 2016

On Deck:

11/16/2016

T.B.A.

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October Meeting Notice

Wednesday, October 26, 2016
Sherwin Williams
4440 Warrensville Center Road, Cleveland, OH 44128

4:30 pm	Executive Committee Meeting
5:30 pm	Registration
6:00 pm	An Introduction to Sherwin Williams
6:30 pm	Facility Tour
7:00 pm	An evening of Socializing and Networking, Hors d'oeuvres will be served

Celebrating Sherwin Williams in Cleveland: A Social/Networking Event

Sherwin William is celebrating its 150th year, having been founded in 1866 to produce ready-to-use paints.

http://careers.sherwin-williams.com/history

DINNER RESERVATIONS REQUIRED:

Please RSVP to Dr. Lisa Ponton (lponton@bw.edu) with the names and number of people in your party by 5:00 pm on Wednesday, October 19th. Hors d 'oeuvres will be offered. Advance RSVP is required so that your name is included on the list of attendees at the security gate. We can take credit card, checks made out to "Cleveland ACS", or cash. The cost is $20 for members and guests, $10 for retirees or unemployed; $5 for students.

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Announcement: Local Students in the National Spotlight

If you're like most of us, when you receive your weekly issue of Chemical and Engineering News you immediately open to the Newscripts section to read the quirky and fun news about what's hip in chemistry. Readers of the May 2 issue of C&EN were treated to the Newscripts story of how chemistry students at our own Lorain County Community College are using GC-MS to characterize the flavor compounds in unique and unprecedented bourbon whiskey flavors created by Cleveland Whiskey. Kudos to the gang at Lorain County Community College for promoting analytical chemistry in such a flavorful fashion!

Chemical & Engineering News, Volume 94 Issue 18
http://cen.acs.org/articles/94/i18/High-tech-ways-whip-whiskey.html?utm_source=Twitter&utm_medium=Social&utm_campaign=CEN&hootPostID=e712329cc26fe3333dc631a777ad80a2

Photo (L-R): Lorain County Community College students Clayton Mastorovich and Valerie Gardner. Senior Analytical Chemist, Envantage, Inc., Coleen McFarland. Lorain County Community College Professor of Chemistry Regan Silvestri. Lorain County Community College students Christopher Wright and Katie Nowlin.
(Photo by Ronald Jantz).

From ACS Discoveries: How cancer cells spread and squeeze through tiny blood vessels

ACS Nano

The spread of cancer from a tumor's original location to other parts of the body can play a major role in whether the disease turns deadly. Many steps in this process, called metastasis, remain murky. But now scientists are gaining new insights into how cancer cells might squeeze through and even divide within narrow blood vessels while travelling in the body. They report their study using microtubular nanomembranes in the journal *ACS Nano*.

One thing scientists do know about metastasis is that spreading cancer cells elongate to fit through capillaries — blood vessels as fine as spider silk. They can get trapped in these skinny passages, but despite becoming misshapen, they seem to still be able to divide and form little colonies of cells before dislodging and moving on. If scientists could better understand this process, they could potentially improve anti-metastatic treatment strategies. But studying it in molecular detail is not possible with conventional analytical techniques. So Wang Xi, Christine K. Schmidt and colleagues used transparent, rolled-up nanofilms to study how cancer cells divide in capillaries.

The researchers trapped live cancer cells in the tubular membranes and, with optical high- and super-resolution microscopy, could see how the cells adapted to the confined environment. Cell structures significantly changed in the nanomembranes, but it appeared that membrane blebbing — the formation of bulges — at the cells' tips helped keep genetic material stable, an important requirement for healthy cell division. The researchers say their technique could be a useful tool for further investigating metastatic cancer.

The authors acknowledge funding from the European Research Council, the Volkswagen Foundation, the German Research Foundation, the Federation of European Biochemical

Societies, the Welcome Trust, the Alexander von Humboldt Foundation, the U.S. National Science Foundation and Cancer Research U.K.