



ISOTOPICS

The Cleveland Section of the American Chemical Society

Volume 93 Issue 5

May 2017

On Deck:

Sept. 20, 2017

T.B.D.

May Meeting Notice

Edward W. Morley Award Lecture

Wednesday, May 17, 2017

Michelson and Morley Restaurant
Case Western Reserve University

5:00 – 5:45 pm Social/Networking
5:45 – 7:00 pm Dinner
7:00 – 8:00 pm Award and Presentation

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“Trekking Toward *In-Vivo* Nanosensors”

Prof. Frank V. Bright, Department of Chemistry, SUNY-Buffalo

Abstract: A long-standing aspect of our research program has aimed to develop robust chemical sensors for a variety of applications. This presentation will walk the audience along from our research program's infancy to where we stand today making real time measurements on live animals under stimulus and moving toward measurements on the single synapse level.

DINNER RESERVATIONS REQUESTED:

Below is the dinner menu. Please indicate your dinner selection by 5:00 pm Wednesday, May 10th by emailing to Dr. Lisa Ponton (lponton@bw.edu). At the event, we can take credit card payments, checks made out to “Cleveland ACS”, or cash. The cost is \$20 for members and guests, \$10 for retirees or unemployed, and \$5 for students.

Other details:

The Social Hour and Dinner will be in the Michelson & Morley Restaurant in the Tinkham Veale University Center on the campus of Case Western Reserve University. Parking may be obtained in the Severance Hall garage, entrance off East Boulevard, and there is an entrance to the Tinkham Veale Center from the garage. (On street parking may also be available.) The Award Presentation and Seminar will immediately follow dinner and be in the Thwing Center located next door to the Tinkham Veale University Center.

Dinner menu:**First Course**

Mixed Green Salad

Second Course*Choice of the following entrees:*

Sea Scallops

sweet potato hash, sautéed spinach, saffron cream sauce

Skirt steak

German potato salad, cauliflower puree, red wine demi

Grilled chicken palliard

Pappardelle, haricot vert, wild mushroom demi

Third Course

Chef's Selection of Dessert

Speaker's Biography:

A San Diego area native, Frank earned his B.S. degree in chemistry from the University of Redlands in 1982. His Ph.D. studies, supervised by Professor Linda B. McGown, were completed at Oklahoma State University in 1985. He then carried out postdoctoral research with Professor Gary M. Hieftje at Indiana University until 1987 whereupon he joined the UB Department of Chemistry as a tenure-track Assistant Professor. At UB he rose through the professorial ranks and currently holds the Henry M. Woodburn Chair and is a SUNY Distinguished Professor.

Frank's research program focuses on chemical sensors, advanced materials, antifouling coatings, wound restitution and corneal surface chemistry. He and his associates have authored over 300 articles and they hold 18 U.S. patents.

Frank's scholarship has been recognized by several awards: 3M Non-tenured Faculty Award (1988-'91), Buck-Whitney Medal (1999), Society for Applied Spectroscopy Gold Medal (2003), Akron Award (2003), A.A. Benedetti-

Pichler Award in Microchemistry (2005), Jacob F. Schoellkopf Medal (2006), and the ACS Award in Spectrochemical Analysis (2015). He is also an elected member of the International Society for Contact Lens Research (2011) and was named a Fellow of the Society for Applied Spectroscopy (2010) and the Royal Society of Chemistry (2014). Frank has also earned awards for teaching including the Faculty of Natural Sciences and Mathematics Dean's Award for Excellence in Teaching (1998) and SUNY Chancellor's Award for Excellence in Teaching (2000).



**Announcement: Special Lecture
at Cleveland State University**

Dr. Mark Cesa, Immediate Past President of IUPAC (International Union of Pure and Applied Chemistry) will be giving a special lecture, May 5, 2017 at Cleveland State University 2:30 pm, Science Research Center (SR) Rm 151. Questions? Contact Dr. David Ball at 216-687-2467 or by email at d.ball@csuohio.edu. Visitor parking available: See https://www.csuohio.edu/sites/default/files/media/about_csu/documents/campusmap.pdf for parking details.

Some info from the ACS Council meeting and Board of Directors meetings at the 2017 Spring National Meeting in San Francisco, CA

Candidates for President-Elect, 2018: By electronic ballot, the Council selected Bonnie A. Charpentier and Willie E. May as candidates for 2018 President-Elect. These two candidates, along with any candidates selected via petitions, will stand for election in the Fall National Election.

2018 Member Dues: The Council voted on the recommendation of the Committee on Budget and Finance to set the member dues for 2018 at the fully escalated rate of \$171. This rate is established pursuant to an inflation-adjustment formula in the ACS Constitution and Bylaws.

Membership: As of December 31, 2016, the ACS membership was 156,129, which is 0.5% less than on the same date in 2015. The number of new members who joined in 2016 is 23,700. The Society's overall retention rate is 83.5%. The Committee on Membership Affairs also reported that the number of international members has increased to 27,388, exceeding the committee's target by 5%. Retention of graduate students increased by 2% to 76.2%.

San Francisco Meeting Attendance:

As of Tuesday, April 4:

Attendees	9,797
Students	6,914
Exhibitors	1,198
Expo only	475
Guest	466
Total	18,850

From ACS Discoveries: How to measure potentially damaging free radicals in cigarette smoke

Chemical Research in Toxicology

Smoking cigarettes can lead to illness and death. Free radicals, which are atoms or groups of atoms with unpaired electrons, in inhaled smoke

are thought to be partly responsible for making smokers sick. Now researchers report in ACS' journal *Chemical Research in Toxicology* a method for measuring free radicals in cigarette smoke that could help improve our understanding of the relationship between these substances and health.

Cigarette smoking is the leading preventable cause of death in the U.S., according to the Centers for Disease Control and Prevention. Understanding why is a challenge, given that cigarette smoke is a complex mixture of more than 7,000 compounds. Much of the blame has been placed on the 93 cigarette-related carcinogens and toxins on the U.S. Food and Drug Administration's list of hazardous and potentially hazardous chemicals. But previous studies have reported that risk assessments based on these compounds underestimate the actual number of illnesses caused by smoking. Accounting for free radicals, which are known to cause oxidative damage in the body, could help fill that gap. But they are not listed on the FDA's list and are difficult to study because they don't stick around for long. So John P. Richie Jr. and colleagues wanted to find a reliable way to measure free radicals in cigarette smoke.

The researchers developed a standardized protocol for measuring free radicals in smoke first by using a control cigarette and a technique called electron paramagnetic resonance spectrometry. They then applied the same protocol to 27 varieties of commercial cigarettes. The study found that the levels of gas-phase radicals ranged widely across the varieties while particulate-phase radicals showed less variability. An analysis of potential factors accounting for the differences found that highly ventilated cigarettes tended to produce lower levels of both gas- and particulate-phase free radicals. The researchers say their method could be used to assess people's exposure to free radicals, which can help determine potential health effects.

The authors acknowledge funding from the National Institute on Drug Abuse and the Center for Tobacco Products of the U.S. Food and Drug Administration.