



Vol. 82 (5) May 2006

ISOTOPICS

The Cleveland Section of the American Chemical Society

On Deck:

Wednesday, September 20

50 Year Member Night

Robert Thompson

Oberlin College

The Chemistry of Capsaicinoids:

The Hot Stuff in Peppers and

Pepper Spray

Cleveland State University

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May Meeting Notice

Morley Award

Wednesday, May 24, 2006

Mather Mansion

Cleveland State University

4:30 pm	Executive Committee Meeting
5:00 pm	Social Hour
6:00 pm	Dinner
7:00 pm	Morley Award Presentation and Lecture
8:00 pm	Informal Discussion

An Introduction to Fluorous Techniques for the Synthesis of Small Organic Molecules

Dennis Patrick Curran, University of Pittsburgh

This lecture features a diverse selection of recently introduced fluororous techniques unified by the theme of strategic synthesis and separation. Separation techniques include liquid-liquid extraction, solid-liquid extraction and chromatography over fluororous silica gel. Featured are fluororous monophasic, biphasic and triphasic reactions along with the use of fluororous reagents, reactants, scavengers and protecting groups in traditional, solution phase parallel and mixture synthesis. The ease of separation and product recovery make fluororous methods attractive for large scale chemistry while their speed and reliability are strong assets for small scale chemistry.

DINNER RESERVATIONS REQUIRED: Please RSVP by contacting Zedeara Diaz, by phone at 216-368-3621 or by e-mail at zcd@case.edu by **Noon on Friday, May 19**. (For phone reservations, please clearly spell your last name and leave a return phone number.) Cost of the dinner is \$20 for members & guests and \$10 for students. Checks made out to "Cleveland ACS" are greatly appreciated. Menu includes: Beef tenderloin with salad, redskin potatoes, and broccoli sides. Vegetarian option available with advance notice.





From the South (I-77). Follow I-77 north to the East 22nd/East 14th Street exit (#162B) to East 22nd Street. Turn left onto East 22nd Street; drive several blocks to Euclid Avenue, and turn right. Continue on Euclid and watch for the CSU Visitor Parking Lot on your right, just past the Bookstore.

From the South (I-71). Follow I-71 north to the East 22nd Street exit (#172B). Turn left onto East 22nd Street; drive several blocks to Euclid Avenue, and turn right. Continue on Euclid and watch for the CSU Visitor Parking Lot on your right, just past the Bookstore.

From the East (I-90). Follow I-90 west to the Chester Avenue/CSU exit (#173B). Turn left onto East 24th Street and left at the light onto Chester. Take Chester to East 30th Street, turn right. After one block, turn right onto Euclid Avenue and proceed west across the bridge. Look for the Visitor Parking Lot on your left, just before the Bookstore.

From the West (I-90). Follow I-90 east to the East 22nd Street exit (#172C). Turn left onto East 22nd Street; drive several blocks to Euclid Avenue, and turn right. Continue on Euclid and

watch for the CSU Visitor Parking Lot on your right, just past the Bookstore.

Speaker Biography

Dennis P. Curran received his B.S. in 1975 from Boston College. His Ph.D. was granted from the University of Rochester in 1979 where he worked under Professor Andrew S. Kende. After a two year postdoctoral stay with Professor Barry M. Trost at the University of Wisconsin, Dr. Curran joined the faculty of the Chemistry Department at the University of Pittsburgh in 1981. He now holds the ranks of Distinguished Service Professor and Bayer Professor of Chemistry, and is the founder of Fluorous Technologies (www.fluorous.com). Among other awards, Dr. Curran has received the Pittsburgh Magazine Innovators Award (2003), American Chemical Society Award for Creativity in Organic Synthesis (2000) and the Cope Scholar Award (1988), and the Janssen Prize for Creativity in Organic Synthesis (1998). He is currently an ISI "Highly Cited Researcher" (www.isihighlycited.com). Dr. Curran has authored about 350 papers, twenty patents and one book, and is well known for his work in at the interface of radical chemistry and organic synthesis. More recently he has made significant contributions to the emerging discipline of fluororous chemistry. Additional information is at <http://radical.chem.pitt.edu>.

Meeting-in-Miniature 2006

This year's Meeting-in-Miniature was held on March 15th at Cleveland State University. Students from Cleveland State University, Case Western Reserve, Oberlin College, and the University of Akron participated by giving short talks and poster presentations. In the short talk sessions, four students were recognized for their outstanding achievements. Undergraduates Michael Moore and Aaron Shmookler (Oberlin College) each received a certificate and a \$250 cash prize. Graduate students John Moran (Cleveland State University) and Huikai Sun (Case) each received a certificate and a \$300 cash prize. Congratulations to all student participants for a job well done.

2006 SAS/ACS/AVS May Conference
(50th Annual SAS/ACS/AVS May Conference)

Wednesday, May 17th at John Carroll University

The 50th annual May Conference will be held this year at John Carroll University's Dolan Science Center on May 17. For more information, visit the SAS website: <http://www.s-a-s.org/Cleveland-local/> or contact Perry (bperry@lord.com) or Tom Spudich (tspudich@edinboro.edu). The general schedule is shown below.

7:30 AM	Registration
8:45	First invited talk
11:30	Yeager Award
12:00 PM	Lunch
4:30	Second invited talk
5:45	Cocktails
6:30	Dinner
7:30	After-dinner talk
8:30	Recognition of sponsors, Bell Award, Speaker Awards

To register for the symposium and/or to make dinner reservations, please contact Sara Freeman at the Ferro Corporation (freeman@ferro.com, 216-750-6655, main number: 216-750-7000).

After-dinner talk

Bruce Christman, The Cleveland Museum of Art
Where Science and Art Collide: Art Conservation

Abstract: In the examination and treatment of works of art in the Cleveland Museum of Art, a wide range of analytical techniques are used to understand how a work of art is made, the types of materials that are used as well as determining authenticity. The conservators need to fully understand how a work of art is made and what materials are used before any treatment begins. When works of art are being considered for purchase, the condition of the object as well as its authenticity needs to be fully understood. This presentation will discuss a number of the techniques that are used in examining and testing works of art and present the results of selected case studies.

Speaker Biography: Bruce Christman has been a conservator of three-dimensional objects including sculpture, furniture and decorative arts at the Cleveland Museum of Art since 1979 and has been the Chief Conservator since 1991. He earned Bachelor degrees in Chemistry and Art History from the University of Delaware. In addition, a Masters of Science degree in Art Conservation was earned from the University of Delaware and Winterthur Museum Conservation Program. Over the years at the Cleveland Museum of Art, a number of research projects on parts of the collections or on individual objects have been undertaken. Areas of research have included examination and analyses of the American Silver collection, Chinese mirror collection, Tibetan and Chinese silver, as well as Egyptian and Renaissance bronzes.

Second Invited Talk

Leonard J. Brillson, The Ohio State University
Recent Advances in Spectroscopy of Electronic Materials Surfaces and Interfaces

Abstract: The last few years have seen exciting developments in techniques to explore the surfaces and interfaces of electronic materials by optical spectroscopy. This talk will survey new approaches to measuring electronic, chemical, and structural properties of semiconductors and their interfaces with metals, insulators or other semiconductors on nanometer scale. Researchers worldwide have employed spectroscopy and microscopy successfully to probe local properties using near-field scanning tip photoluminescence, tunneling

microscope-induced cathodoluminescence, electroluminescence, and scanning electron beams. The Ohio State group has combined depth-resolved with laterally resolved electron-beam-induced luminescence spectroscopy to probe surface and interface properties of semiconductors and insulators for next-generation transistors, lasers, and solar cells.

Speaker Biography: Leonard J. Brillson is a Professor of Electrical & Computer Engineering, Professor of Physics and Center for Materials Research Scholar at The Ohio State University. Prior to moving to academia, he held a number of management positions and was Research Head of the Advanced Componentry Laboratory at Xerox Corporation's Joseph C. Wilson Center for Research and Technology. He completed his A.B. in Physics at Princeton University in 1967 and his Ph.D. in solid state physics at the University of Pennsylvania in 1972. His research program focuses on the physics and chemistry of semiconductor interfaces using surface science and nanoscale probe techniques. Prof. Brillson is author of over 275 refereed papers, 6 chapters on solid-state physics and surface science, and a Citation Classic monograph.

Volunteer for National Chemistry Week 2006

NCW is Oct 22-28: "Your Home - It's All Built on Chemistry". Whether you want to be in the forefront by helping put on a chemistry/science demonstration in a library for children aged 7-10 or be more in the background helping to plan experiments, organize, shop, transport materials, or assemble demonstration kits, your commitment can be up to a few days throughout the summer or only a few hours on one bigger day during NCW itself. You don't even need to know kids science to participate, just a desire to share our fun! While

we haven't officially scheduled a date yet, we hope to have the first planning meeting in May. You can attend monthly planning meetings or simply keep up to date for now by receiving meeting minutes via email and/or the internet and jump in to help when you see something you'd like to do. If interested email Kat at katkat@neo.rr.com or call 330-819-0518. Backup emails for the traveling Kat are ch_kuhns@hotmail.com and MarSchiele@aol.com.

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