



ISOTOPICS

The Cleveland Section of the American Chemical Society

Vol. 82 (1) January 2006

On Deck:

Wednesday, February 15

Joint with NEO ACS & History Night

Dr. John Fortman

Wright State University

John Adams, Saltpeter, and Black

Powder: A Lighthearted Look at

Some Colonial Chemistry

Sterle's Slovenian Restaurant

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http://www.csuohio.edu/cleveland_acs/

January Meeting Notice

**Joint Sponsorship with the Akron ACS
and Past Chairs' Night**

Wednesday, January 18, 2006

Noveon

9911 Brecksville Road, Brecksville, OH 44141

4:30 pm	Executive Committee Meeting
5:30 pm	Social Hour
6:00 pm	Dinner
7:00 pm	After Dinner Talk - Dr. Oleg Lavrentovich, Liquid Crystal Institute, Kent State University
8:00 pm	Informal Discussion

Liquid Crystals: Emerging Opportunities in Research and Applications

Dr. Oleg L. Lavrentovich, Liquid Crystal Institute, Kent State University

Liquid crystals (LCs) represent an important state of matter, intermediate between regular solids and isotropic fluids. The basic feature of liquid crystals is orientational order of building units, which might be individual molecules or their aggregates, and complete or partial absence of the long-range positional order. Molecular interactions responsible for orientation order are relatively weak and thus the direction of molecular orientation is very sensitive to the external factors, such as electric field and boundary conditions. This sensitivity opened the doors for applications of liquid crystals in information displays (flat panel TVs, laptop monitors, etc.), which has grown to become a 50 billion dollar industry.

Liquid crystals, discovered more than 100 years ago, represent nowadays one of the best studied classes of soft matter, along with colloids, polymer solutions and melts, gels and foams. The presentation will review recent advances in research and new applications of liquid crystals at the Liquid Crystal Institute, Kent State University, such as lyotropic liquid crystals for biological sensing, fast switching liquid crystals for beam steering, liquid crystal lasers, 3D imaging of orientational order, liquid crystal colloids, and more.

DINNER RESERVATIONS REQUIRED: Please RSVP by contacting Zedeara Diaz, by phone at 216-368-3621 or by e-mail at zcd@case.edu by **5:00 PM** on **Friday, January 13**. (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: salad, rolls, chicken piccata, pasta primavera, redskin potatoes, green beans, dessert and beverage.

Vote on Proposed Changes to Cleveland Section's By-Laws at February Meeting

The Cleveland Section of the ACS needs to revise our By-laws to maintain currency with National By-laws and reflect our current mode of operation. Our By-laws have not been revised since 1992. In 2004 we voted to change the term for our Secretary position to two years which precipitated an exhaustive review of our By-laws by National. They now demand that we revise the entire document. After careful consideration and extensive revision by the Section's By-laws Committee, the Executive Committee voted to accept the proposed changes. The next step is for the Cleveland Section to vote to approve the proposed changes at a regular meeting in February of 2006 in accordance with our current By-laws. The 1992 approved By-laws and proposed changes to those By-laws can be found at the link http://www.csuohio.edu/cleveland_acs/ (note: there is an underline between cleveland and acs) under Important Documents. Please examine the proposed changes and be prepared to vote on them at our **February 15, 2006** meeting. If you are not able to obtain these documents electronically, either at the web site or from the monthly email meeting announcements that you have been receiving for the past two years, a hard copy may be obtained by written request from: Professor David Ball, Department of Chemistry, Cleveland State University, Cleveland, OH 44115.

Election Results for 2006



Chair Elect: **Lily Ng** (06)

Secretary: **Heather Watrob Hargett** (06)

Councilor: **Anthony Pearson** (06-08)

Alternate Councilor: **Mekki Bayachou** (06-08)
Mary Zeller (06-07)

Director: **Horton Dunn** (06-07)
Stan Duraj (06-08)

Trustee: **James Burrington** (06-07)
John Protasiewicz (06-08)

Directions to Noveon

From the North: Take Route 77 South. Exit at Miller Road and turn left onto Miller Road. Proceed to Brecksville Road and turn left at the light. Noveon is on the right; use the second entrance.

From the South: Take Route 77 North. Exit at Brecksville Road and proceed two miles north to Noveon. Turn right into Noveon at the second entrance.

From the East or West: Take I-480 to 77 South and follow directions "From the North" above.

From the Ohio Turnpike (I-80): Take Exit 12 and proceed north on Brecksville Road. Turn right into Noveon at the second entrance.

Speaker Biography

Oleg D. Lavrentovich is the Director of the Liquid Crystal Institute (LCI) and Professor of Chemical Physics at Kent State University. He received his Ph.D. (1984) and Doctor of Sciences (1990) degrees in Physics and Mathematics from the Ukrainian Academy of Sciences. He joined the LCI 1992. He is a Fellow of the International Society for Optical Engineering (SPIE) and an Editorial Board member of Physical Review E. His scientific interests include topological defects and pattern, surface- and light-induced phenomena, electrooptics of liquid crystals, and lyotropic liquid crystals. With Maurice Kleman, he coauthored a textbook on "Soft Matter Physics: An Introduction" (Springer NY, 2003).

Change in Editorship of Isotopics

Paula Fox, former editor of Isotopics, has moved from the Cleveland area to be closer to family in New England. She and her husband have purchased a house in southern New Hampshire that they plan to convert into a bed & breakfast inn. They hope to be open for business later this year (www.LittleRiverBB.com).

Please welcome Dan Tyson as the new editor of Isotopics. Dan is also very active with the Cleveland Section as an Alternate Councilor, YCC Co-chair, and a member of the NCW Planning Committee.

Meeting in Miniature – March 15, 2006**CALL FOR PAPERS**

The annual Meeting in Miniature will be held on March 15, 2006 at Cleveland State University. The afternoon session will consist of oral presentations. A poster session will be presented during the social hour before dinner. Submit abstracts online (web address for submissions will be posted on the Cleveland ACS Section website, www.csuohio.edu/cleveland_acs, and published in

the February issue of Isotopics). Include the type of paper (oral or poster) you plan to present, by **February 17, 2006**. Monetary awards for best undergraduate and graduate student oral presentations will be given, so encourage your students to participate. Questions about paper and poster submission can be directed to Dr. David W. Ball at d.ball@csuohio.edu or 216-687-2456.

Spring 2006 Chemistry Colloquia & Frontiers Lectures

Case Western Reserve University - Department of Chemistry

4:30 p.m. Clapp Hall, Room 108

Visitors are welcome for coffee and cookies at 4:15 p.m.

Date	Title	Speaker Affiliation
January 19	Enhancing the Efficiency of Chemotherapy	Jeze Tepe Michigan State U.
January 26	The Bacterial Cell Wall, the Ribosome, and Antibiotics	Shahriar Mobashery U. of Notre Dame
February 2	Conformation/Activity Relationships in Complex Natural Products	Rich Taylor U. of Notre Dame
February 9	Chemical Approaches to Studying Cell Migration	Gabriel Fenteany U. I. Chicago
February 16	Some Recent Developments in Low Valent/Low Coordinate Main Group Chemistry	Alan H. Cowley U. of Texas, Austin
February 23	Green Chemistry: Theory and Practice*	Paul Anatas Green Chem. Inst.
March 2	Our Future Challenges in Chemical Synthesis*	Choi-Jun Li McGill
March 9	What a Difference One Electron Makes	Daniel Mindiola Indiana University
March 23	Threshold Collision-Induced Dissociation: From Dynamics to DNA Bases	Mary Rodgers Wayne State
March 30	Green Chemistry in the Pharmaceutical Industry*	Berkeley Cue Pfizer
April 6	Ion Solvation in Reverse Micelles and Ionic Liquids Probed by Vibrational Spectroscopy and Dynamics	Jeff Owrusky Naval Research Lab
April 13	Liquid Fluoropolymers: A Gateway to Green Chemistry*	Joseph DeSimone U. North Carolina
April 20	Organometallic Electrochemistry: New Directions in Redox Chemistry and Catalysis	William Geiger University of Vermont
April 27	New Life for an Old Reaction: Unprecedented Reactivity in the Morita-Baylis-Hillman Reaction	Marie Craft Florida State U.

* Denotes Frontiers in Chemistry Lecture

Evening Classes at Cleveland State

The Chemistry Department at Cleveland State University is offering a variety of chemistry courses after 4 p.m., perfect for the full-time or part-time working student. General, organic, physical, analytical and environmental chemistry undergraduate courses are available, as well as several specialty graduate courses. Go to www.csuohio.edu and click on the "Class Schedule" link, or call Dr. David W. Ball at 216-687-2456 for more information.

CALL FOR NOMINATIONS

2006 IRENE C. HELLER AWARD

Annual Award Presented to the Outstanding High School Chemistry Teacher in the Cleveland Section

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 consists of an honorarium of \$1,000 and a framed certificate. The award is named for Irene Heller of North Olmsted High School in recognition of her contributions as an outstanding high school chemistry teacher and her service to the Cleveland Section.

Nominations for the award should be presented to Betty Dabrowski, Magnificat High School, 20770 Hilliard Blvd., Rocky River, OH 44116-3397 by **March 14, 2006**. The nominations should consist of information on the candidate's education, professional experience and activities, awards and honors, offices held and specifics on significant contributions. The letter of nomination should highlight these significant contributions. A detailed Curriculum Vitae of the candidate may also be included. Seconding letters are suggested. Nominations should be sponsored by at least one member of the Cleveland Section. The Cleveland Section is geographically confined to the counties of Cuyahoga, Geauga, Lorain, Medina, Huron, and Erie. Nominators of candidates who work outside of these counties may contact the Cleveland Section or the American Chemical Society for more information about High School Chemistry Teacher Awards. Electronic nominations using Word Files mailed to edabrows@ix.netcom.com or edabrowski@magnificaths.org will be greatly appreciated.

The award will be presented at the April 19, 2006 meeting of the Cleveland Section.

Happy New Year to All!

Cleveland Section
American Chemical Society
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