



ISOTOPICS

The Cleveland Section of the American Chemical Society

Volume 84 Issue 2

February 2008

On Deck:

Wednesday, March 19

Meeting-in-Miniature

Charles L. Brooks III

Springs and things: Exploring the origins of robustness in Nature's molecular machines with multi-scale models

Venue: Oberlin College

February Meeting Notice

Wednesday, February 20, 2008

GrafTech International

4:30 pm	Executive Committee Meeting
5:30 pm	Social Time: There will be two tours of the GrafTech facility, 5:45 pm and 5:55 pm
6:15 pm	Dinner
7:00 pm	Lecture
8:00 pm	Informal Discussion

Cleveland ACS Officers

Chair:

Rachael Barbour
BASF Admixtures, Inc.
Phone: 216-839-7238
rachael.barbour@basf.com

Chair-Elect:

David Ball
Department of Chemistry
Cleveland State University
Phone: 216-687-2456
d.ball@csuohio.edu

Treasurer:

Dr. Joseph Gorse
Department of Chemistry
Baldwin Wallace College
Phone: 440-826-2314
jgorse@bw.edu

Secretary:

David Miller
Sherwin Williams Auto.
Phone: 216-332-8405
david.f.miller@sherwin.com

How a Quaker Schoolteacher Invented Atoms: John Dalton and His Theory

Dr. Alan Rocke, Case Western Reserve University

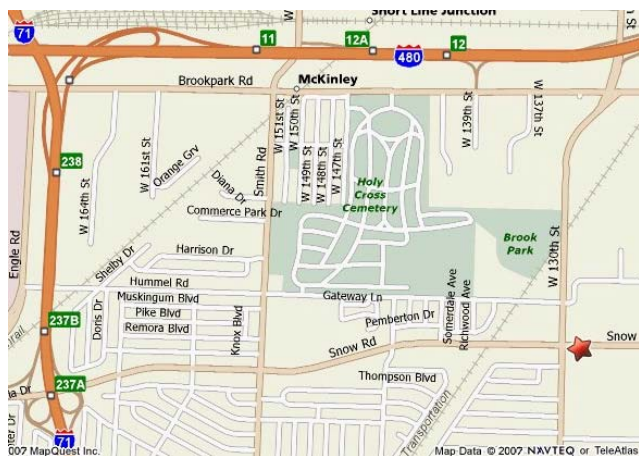
The son of a poor Quaker weaver in the English Lake District, John Dalton (1766-1844) was an unlikely prospect for scientific fame, considering the circumstance that his education was entirely informal. And yet it was Dalton who first developed the idea of the chemical atomic theory. This theory, published piecemeal in the years 1803-1808, posited that different elements were composed of different kinds of atoms, varying by weight, and that compounds were formed by juxtapositions of such atoms. The reason that no scientist had had the temerity to suggest such an idea before this time was that no one had figured out how to apply such a theory concretely and fruitfully to chemical matters. We will explore the empirical basis and early applications of this theory, and especially inquire why it was that someone like Dalton could accomplish what the finest professors at European universities had failed to do.

DINNER RESERVATIONS REQUIRED: Please RSVP by contacting Rachael Barbour, by phone at 216-839-7238 or by e-mail at rachael.barbour@basf.com by **5 pm on Friday, February 15** (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. Vegetarian meal requests should be directed to Rachael Barbour. The dinner will include garden salad, marinated Italian pasta salad, stuffed filet of flounder, sirloin tips of beef, whipped potatoes, glazed carrots, and chocolate mousse. Appetizers will be provided during social time.

Cleveland Section Web Site:
http://www.csuohio.edu/cleveland_acs/

Directions to GrafTech International

12900 Snow Road
Parma, OH 44130



From the South (I-77). Take Route 71 to the Snow Road exit and go east. GrafTech will be on the left, just after West 130th Street. There will be signs directing you in the parking lot.

From the East or West (I-90). Take Route 480 to the West 130th exit and go south to Snow Road. Turn left onto Snow Road and left into the GrafTech parking lot. There will be signs directing you in the parking lot.

Speaker Bio

Alan J. Rocke is H. E. Bourne Professor of History at Case Western Reserve University.

Following a BA in chemistry at Beloit College, he earned a Ph.D. in History of Science at the University of Wisconsin - Madison, and then was hired at CWRU in 1978. He is the author of four books and dozens of journal articles in his specialty field, which is the historical development of chemistry in nineteenth-century Europe. In addition to the history of science, he also teaches courses in science and society, nuclear weapons and arms control, and the history of food.

May Conference - Call for Papers

The 2008 May Conference is scheduled for Thursday, May 15th at John Carroll University. The conference is an all day event with papers on spectroscopy and analytical chemistry concluding with an evening banquet. The conference will feature several keynote speakers and the presentation of the Yeager Award. The conference is co-sponsored by the Cleveland section of SAS, the Analytical Topics group of the Cleveland ACS and the NE Ohio chapter of AVS.

If you are interested in making a presentation at the conference, please contact Brian Perry at 814-868-3611 ext. 3582 or at brian_perry@lord.com. For details concerning the Yeager Award or for submitting a nomination please visit the Cleveland SAS web site at <http://www.s-a-s.org/Cleveland-local/Yeager-award.html>.

February Historical Events in Chemistry

By Leopold May

The Catholic University of America, Washington, DC

- | | |
|--------------------|---|
| February 5, 1872 | Lafayette Benedict Mendel, who made discoveries concerning the value of vitamins and proteins, was born on this date. Thomas Osborne and he established the modern concepts of nutrition. He discovered vitamins A (co-discoverer, Elmer McCollum) and B complex. |
| February 10, 1846 | Ira Remsen, who was a founder of American Chemical Journal, was born on this date. |
| February 22, 1828. | Frederich Wöhler in a letter to Jöns J. Berzelius, announced the synthesis of urea from ammonium cyanate, asking whether this is a true synthesis of organic from inorganic material. |
| February 27, 1869 | Alice Hamilton, who was the first woman professor at Harvard Medical School, was born on this day. She researched toxic substances in the workplace. |

Call for Nominations: Heller Award

By Kenneth W. Street

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 Kenneth Street, NASA-GRC, MS- 23-2, 21000 Brookpark Road, Cleveland, Ohio 44135 by close of business Thursday, March 13, 2008. 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. Seconding letters are suggested. Nominations should be sponsored by at least one member of the Cleveland Section. If you do not know a local section ACS member willing to serve as Champion for your candidate, contact Ken Street and he will provide one for you. 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 of the American Chemical Society for more information about High School Chemistry Teacher Awards. A detailed curriculum vita of the candidate may also be included. Electronic nominations using Word Files mailed to kenneth.w.street@nasa.gov will be greatly appreciated. Ken Street may be contacted at 216-433-5032 during business hours for assistance with submissions.

The award will be presented at the April 16, 2008 meeting of the Cleveland Section.



NCW Contest Winners - 2007

By Lois Kuhns

The following students (and their teachers) were selected as winners in the 2007 NCW contests sponsored by the Cleveland Section's National Chemistry Week Committee. Many thanks to Dr. Mark Waner and the Student Affiliates at John Carroll University for selecting the winners from hundreds of student entries. Students and their teachers will be honored at the April "Education and Family Night" meeting.

Poster Contest Winners: student (teacher)

Shannon O'Brien	(Cindy Rossman)
Evan Gilner	(Cindy Rossman)
Julia Wolf	(Anne Lavelle)

K-5 Chemistry Contest Winners: student (teacher)

William Liu	(Mike Sprau)
Robert Engoglia	(Lynn Fagerholm)
Owen Miller	(Lynn Fagerholm)

6-8 Chemistry Contest Winners: student (teacher)

Samantha Goodman	(Lynn Fagerholm)
Dom Monteleone	(Mrs. Zanath)
Trevor Levin	(Linda Brown)

9-12 Chemistry Contest Winners: student (teach.)

Dan Mekhail	(Judy Lachvayder)
Mike Follina	(Mrs. Nicholson)
Ramune Bartuskaite	(Mrs. Blech)

Meeting in Miniature - March 19, 2008

By Manish Mehta

Call for Papers: The annual Meeting in Miniature will be held on Wednesday, March 19, 2008 at Oberlin College. The afternoon generally will consist of oral presentations, a plenary lecture, followed by dinner and award presentations. The plenary lecture, to be presented by Charles L. Brooks III, the Warner-Lambert Professor of Chemistry and Professor of Biophysics at the University of Michigan, will be titled "Springs and things: Exploring the origins of robustness in Nature's molecular machines with multi-scale models." Professor Brooks' research, at the Scripps Research Institute and now at the University of Michigan, focuses on large, multi-scale computational models of biological macromolecules, such as molecular motors and membrane proteins.

Abstracts for presentations can be submitted by email only as a Microsoft Word documents (we cannot guarantee that any other format can be properly translated) to Prof. Manish Mehta, program chair, at manish.mehta@oberlin.edu. Abstracts must be submitted no later than February 15, 2007. Monetary awards for best undergraduate and graduate student oral presentations will be given, so encourage your students to participate.

Questions about paper submissions can be directed to the program chair. In addition to oral presentations from undergraduate and graduate students, presentations from principal investigators are also encouraged. More information is available in the Section's website at http://www.csuohio.edu/cleveland_acs/.

2008 Middle Atlantic Regional Meeting May 17 - 21, 2008

By Jill Rehmman

The New York Section of the ACS is proud to host the 40th Middle Atlantic Regional Meeting on the campus of Queensborough Community College. The theme of MARM 2008 is Chemistry and Health, owing to the importance and impact of the health sciences in the New York metropolitan area. Symposia and plenary talks are planned in this field and others, including bio-mimetic catalysis, chemical education, chemistry and the arts, clinical chemistry, forensic chemistry, green chemistry, HIV/AIDS, ionic liquids, medicinal chemistry, nanoscience and technology, polymer chemistry, and process chemistry.

MARM 2008 will open with a keynote address by Dr. Ronald Breslow of Columbia University. Dr. Roald Hoffman of Cornell University is another of several anticipated speakers. The 40th MARM will also offer career enrichment and educational activities for students and educators, as well as an exhibition program, workshops, and awards. Saturday at MARM will include the spring meeting of the United States Section of the Royal Society of Chemistry, as well as the 56th NY-ACS Undergraduate Research Symposium. Students who present at URS will be given free registration to MARM!

Queensborough Community College is located in suburban Bayside, NY in the borough of Queens, only twenty minutes from Manhattan and its attractions. Please join us for MARM 2008 and all that New York City has to offer!



For more information visit the MARM website at <http://www.marmacs.org/2008/index.html>.

ISOTOPICS STAFF

Editor:

Daniel Tyson
OAI/NASA GRC
Phone: 216-433-3187
daniel.s.tyson@nasa.gov

Business and Advertising:

David Miller
Phone: 216-332-8405
david.f.miller@sherwin.com

Associate Editor

Dwight Chasar
dwight.chasar@yahoo.com

Associate Editor

Richard L. Middaugh
Phone: 440-785-0293
rlmiddaugh@ameritech.net

Associate Editor

Dr. Lily Ng
Cleveland State University
Phone: 216-687-2467
l.ng@csuohio.edu

Associate Editor

Daniel Scheiman
QSC/NASA GRC
Phone: 216-433-3223
daniel.a.scheiman@nasa.gov

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.