



Vol. 82 (4) April 2006

# ISOTOPICS

The Cleveland Section of the American Chemical Society

## On Deck:

**Wednesday, May 17**  
*50<sup>th</sup> Annual May Conference*

**Bruce Christman**  
Cleveland Museum of Art  
*Where Science and Art Collide*

John Carroll University

**Also in May**  
*Morley Award*

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[http://www.csuohio.edu/cleveland\\_acs/](http://www.csuohio.edu/cleveland_acs/)

## April Meeting Notice

### Awards Night

Wednesday, April 19, 2006  
NASA Glenn Research Center  
Visitors Center

4:30 pm	Executive Committee Meeting
4:30 pm	Social Hour and a Half (Visitors Center)
6:00 pm	Dinner
7:00 pm	After Dinner Talk – Jesse Bernstein, Hawken School
8:00 pm	Informal Discussion

## Discrepant Events and Other Chemical Demonstrations

*Jesse Bernstein, Hawken School*

Certain investigations in science do not always yield results that one might “expect to occur.” These observations are often referred to as discrepant events. Part of my presentation will be to present some discrepant events and then I will ask the audience to explain their observations. In addition to the discrepant events, I will also present some demonstrations for pure enjoyment.

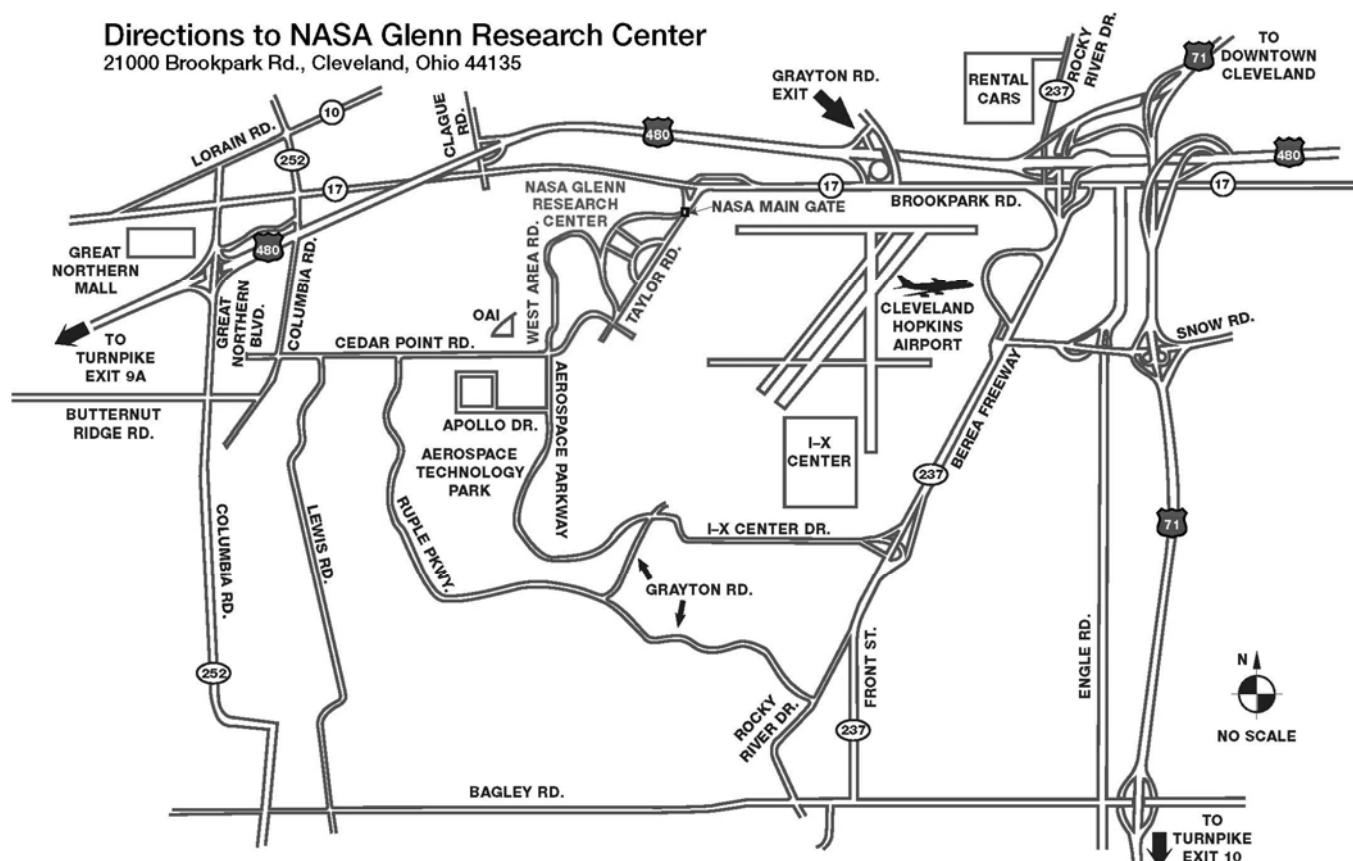
**DINNER RESERVATIONS REQUIRED:** Please RSVP by contacting Zedeara Diaz, by phone at 216-368-3621 or by e-mail at zcd@case.edu by **Noon on Wednesday, April 12.** (For phone reservations, please clearly spell your last name and leave a return phone number.) Cost of the dinner is \$20 for members & guests and \$10 for students. Checks made out to “Cleveland ACS” are greatly appreciated. Menu includes: Chicken piccata, pasta with marinara sauce, vegetable medley, garden salad with dressings, rolls and butter, and assorted pastries and cookies.

**This event is open only to US citizens and all attendees must register by noon on April 12. Attendees must present a photo ID (driver’s license or student ID); children will be admitted with parent’s ID.**



## Directions to NASA Glenn Research Center

21000 Brookpark Rd., Cleveland, Ohio 44135



**From the South:** Follow I-77 or I-71 North to I-480 West. **From the East:** Follow I-480 West. **From the Turnpike (Eastside):** Follow westbound Ohio Turnpike, Exit 10 to I-71 North to I-480 West. **From Downtown:** Follow I-90 to I-71 South to I-480 West.

*Exiting from I-480 West:* Exit at Grayton Road and turn right (south) onto Grayton Road. Turn right (west) onto Brookpark Road. Travel west for approximately 1/2 mile until you see the NASA Glenn Research Center sign. Turn right at the sign. Follow the road underneath the bridge to the other side of Brookpark Road to the Main Gate. Attendees will go through security at the Main Gate and then be directed to the Visitors Center.

**From the West:** Follow I-480 East. **From the Turnpike (Westside):** Follow eastbound Ohio Turnpike, Exit 9A to I-480 East.

*Exiting from I-480 East:* Exit at Brookpark Road and turn right (west) onto Brookpark Road. Travel west for approximately 1/2 mile until you see the NASA Glenn Research Center sign. Turn right at the sign. Follow the road underneath the bridge to

the other side of Brookpark Road to the Main Gate. Attendees will go through security at the Main Gate and then be directed to the Visitors Center.

## Speaker Biography

Jesse Bernstein received a B.A. in Chemistry from The State University of New York at Buffalo in 1968 and a Ph.D. in chemistry also from S.U.N.Y. at Buffalo. He was a Post-Doctoral Fellow at Kent State University in 1973-1974. He has been a chemistry teacher at Hawken School since 1974. Jesse was the chair of the Cleveland Section H.S. Chemistry Olympiad Chair for the first fifteen years of the program. He also served as a Mentor for the National Chemistry Olympiad Program from 1998-2000. He is a workshop leader for Flinn Scientific Summer Workshops and also was a mentor for Weird Science in August, 2005 at the University of Illinois-Chicago. He is a former winner of the Irene H. Heller Award as an outstanding high school chemistry teacher in the Cleveland Section and a 2004 Regional Award Winner from the American Chemical Society.

## Electronic Isotopics

In addition to distributing Isotopics by post, the Cleveland Section newsletter is routinely available online at [http://www.csuohio.edu/cleveland\\_acs/](http://www.csuohio.edu/cleveland_acs/) and is e-mailed monthly to our members. The master lists of postal and e-mail addresses are updated monthly using the national ACS registry. Please take a moment to confirm and/or update your information on the national site (<http://acswebcontent.acs.org/home.html>). If you experience any problems accessing Isotopics by any of these methods, please contact the editor at [Daniel.S.Tyson@grc.nasa.gov](mailto:Daniel.S.Tyson@grc.nasa.gov) or 216-433-3187.

## 2006 Irene H. Heller Award

The Cleveland Section of the American Chemical Society annually sponsors the Irene C. Heller 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. For more information about the Irene C. Heller Award see [http://www.csuohio.edu/cleveland\\_acs/Heller.htm](http://www.csuohio.edu/cleveland_acs/Heller.htm)

This year the award winner is Roger Storm, a 35 year veteran of Fairview Park High School. Roger is actively involved in teaching and in the production of educational materials, having written one of the most highly downloaded educational files from NASA. He has portrayed one of the Wright Brothers for various NASA functions and has appeared on Jeopardy. He is actively involved in leadership roles in many local activities and has won prestigious national awards. Please join us in celebrating his award.

## May Conference – Announcement and Call For Papers – May 17, 2006

The 50<sup>th</sup> annual May Conference, sponsored jointly by the Cleveland Sections of the American Chemical Society (ACS), Society for Applied Spectroscopy (SAS) and American Vacuum

Society (AVS), will be held this year at John Carroll University on May 17.

### Invited speakers include:

- Dr. Daniel Raftery, *Purdue University*, NMR Spectroscopy
- Dr. Leonard Brillson, *The Ohio State University*, Secondary-Ion Mass Spectrometry
- Dr. Bruce Christman, *The Cleveland Museum of Art*, “Where Science and Art Collide”

In addition to these talks, The Yeager Award speaker will present his/her award winning research as well as 16 other submitted papers on analytical chemistry and spectroscopy. Cash awards will be presented to the best student speakers. There is still time to submit a paper to Brian Perry ([bperry@lord.com](mailto:bperry@lord.com)) or Tom Spudich ([tspudich@edinboro.edu](mailto:tspudich@edinboro.edu)) with a final abstract required by April 22<sup>nd</sup>. To view previous conference programs, visit the SAS website: <http://www.s-a-s.org/Cleveland-local/>

## 2006 NEOSEF Winners

At the North Eastern Ohio Science and Engineering Fair (NEOSEF) at Cleveland State University on March 14, 2006, six projects were selected by American Chemical Society (Cleveland Section) Special Awards as winners. The results are as follows:

### **First Place:** Jennifer Haag,

School: Beaumont, University Hts.

Project Title: Only skin deep? An analysis of tattoo inks and their effects on yeast cells (*saccharomyces cerevisiae*)

### **Second Place:** Nathan Szabados

School: Benedictine High, Cleveland

Project Title: Gravimetric determination of the synthetic oil olestra versus vegetable oil contained in potato chips and the decomposition by visible spectroscopy

### **Third Place:** Julia Bramante

School: Laurel Middle, Cleveland Hts.

Project Title: Metal contamination in the Cuyahoga River

**Honorable Mention:** Krystal Hobbs  
School: Horizon Science Academy, Cleveland  
Project Title: Lycopene amount in organic and nonorganic tomatoes

**Honorable Mention:** Derek Poindexter  
School: Horizon Science Academy, Cleveland  
Project Title: Determination of urea amount in different milk brands

**Honorable Mention:** Antonia Kopp  
School: Mayfield High, Highland Hts.  
Project Title: Chlorine neutralizers and swimsuit preservation

The winners are invited to the Cleveland Section of American Chemical Society Awards Night at NASA Glenn Research Center on April 19, 2006 to receive their prizes.

### **Name This Scientist**

Correctly identify this scientist and you may win a free dinner at a local section meeting. Entries should be submitted to Heather Hargett (hargeth@ccf.org) by 5 pm **April 19**. Alternatively, entries may be submitted via post to the Cleveland Section of the ACS, P.O. Box 681, Amherst, OH 44001 and must be postmarked by **April 19**. A winner will be chosen at random from the correct entries. The winner shall receive a complimentary dinner at the April meeting. One entry per person, please.



Last month's scientist of the month was Gertrude Elion (1918-1999). Dr. Elion studied how growth and reproduction in diseased cells and viruses differ from those processes in normal cells. Working with her colleague at the Burroughs Wellcome Company, George Hitchings, they developed many new drugs including mercaptopurine, the first drug effective in treating leukemia, and acyclovir, the first antiviral drug to treat herpes. For developing logical new approaches to drug design, Gertrude shared the 1988 Nobel Prize in Physiology or Medicine with George Hitchings and British scientist James Black. Gertrude became a member of the National Academy of Sciences in 1990 and received the National Medal of Science in 1991. There was no winning entry last month.

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