April Meeting Notice

Education Night

Wednesday, April 20, 2011
GrafTech International, Parma

4:30 pm Executive Committee Meeting
5:30 pm Social Hour (with lab tours)
6:30 pm Dinner
7:30 pm Presentation

Tech versus Teach, besides a letter "a", what is different and how can they be synergistic?

Michael Kenny, Teagle Professorial Fellow and Senior Instructor of Chemistry at Case Western Reserve University

Classroom technology has changed tremendously since I started school almost 50 years ago. While I never had to carry my own slate to class, I still remember the days when blackboards were, indeed, black and filmstrip projectors were the rage. Luckily, those days are gone. However, we now find SmartBoards, audience response systems, twitter, facebook and web-based textbooks in classrooms. The question that arises is simple….have things improved?

This presentation will share some of the investigations we have completed using various electronic technologies…Kindles to the Entourage Edge, clickers that are sold in the bookstore to clickers that are sold at the cell phone kiosk. Our objective will be to highlight some of these technologies and try to determine if they are any better or worse than technologies that existed before Bill Gates, Paul Allen and Steven jobs made their personal marks on the world (not to mention Sergey Brin, Larry Page and Mark Zuckerberg.)

Of course, as a chemist and teacher, I can’t pass up the opportunity to show off some chemical demonstrations as well. So, several of these will be interspersed throughout the presentation. Whether I can incorporate these into a coherent lesson or simply use them to maintain your interest will be up to you to decide….and I will ask.

DINNER RESERVATIONS REQUIRED: Please RSVP by either by responding to the online survey at http://tinyurl.com/CleveACS-April or by contacting John Protasiewicz, by phone at 216-368-5060 by noon on Friday, April 15. (For phone reservations, please clearly spell your last name and leave a return phone number, and indicate choice of entree below). Cost of the dinner is $20 for members & guests, $5 for students, and $10 for retirees/unemployed. Checks made out to “Cleveland ACS” are greatly appreciated. Social Hour to include Vegetable Tray W/Dip, Cheese & Crackers, Pretzels & Chips, Pop & Water. Dinner will include Tossed Salad, Baked Rigatoni W/Meat Sauce, Chicken Marsala, Green Beans Almandine, Rice Pilaf, Dinner Rolls W/Butter, Ice Cream Dessert Bar, Coffee, Tea, Pop & Water.
Directions to GrafTech International
12900 Snow Road, Parma, OH 44130

From the East or West: Take I-480 to the W 130th exit. Go south on W 130th. Turn left on Snow Road. GrafTech will be on your left. The entrance to the parking lot is after the main building. Enter the building using the side employee entrance.

From the North or South: Take I-71 to the Snow Road exit. Turn east on Snow Road, toward Parma. GrafTech will be three miles on your left. The entrance to the parking lot is after the main building. Enter the building using the side employee entrance.

In his past, both distant and recent, he has taught at both the high school and college level. His class sizes have ranged from 3 to 435. He has taught Introductory Chemistry, Physical Chemistry, Analytical Chemistry, Introductory Physics as well as Introductory Computer Science and Telecommunications. He has also done stints as Director of Marketing, Director of Education, Director of Business Development and Program Manager of National Chemistry Week for the American Chemical Society. In short, he hasn't quite figured out what he wants to do but loves to do different things. A native of MN, he has lived in NE Ohio since 2001.

Selected from ACS Discoveries!

“Perfumery radar” brings order to odors
Industrial & Engineering Chemistry Research

Scientists are announcing development and successful testing of the first “perfumery radar (PR).” It’s not a new electronic gadget for homing in on the source of that Eau de Givenchy or Jungle Tiger in a crowded room. Rather, PR is a long-awaited new tool for bringing scientific order to the often arbitrary process of classifying the hundreds of odors that make-up perfumes. A report on the advance appears in ACS’ journal Industrial & Engineering Chemistry Research.

Alírio Rodrigues and colleagues note that the typical perfume has 50-100 fragrant ingredients. Experts who make perfumes have long described those ingredients with highly subjective terms like “floral,” “citrus,” “woody,” and “oriental.” Many different classification systems have been proposed, but they still leave perfumers describing the same smell with different words that often are arbitrary.

In an effort to bring order to odor classification, the scientists developed “perfumery radar” system, which relies on plots similar to the displays used to track aircraft. They used the PR to classify the primary odor families of 14 commercial perfumes and found that the results closely matched those of experienced perfume makers. With the PR, manufacturers could speed up the development of

Speaker Bio

Michael Kenney is the Teagle Professorial Fellow and Senior Instructor of Chemistry at Case Western Reserve University. He has taught at CWRU for the last five years. His interests are in the appropriate uses of technology in the classroom.
new perfumes — namely the so-called preformulation stage in which they experimentally evaluate the product — thus saving time and money, the report states.

**Congratulations to Professor Joseph S. Francisco: 2011 Morley Medal Winner**

The Cleveland section of the American Chemical Society Congratulates;

Professor Joseph S. Francisco  
Department of Chemistry  
Purdue University  
Recipient of the 2011 Edward W. Morley Medal

Joseph S. Francisco, the William E. Moore Distinguished Professor of Earth and Atmospheric Sciences and Chemistry at Purdue University, was selected by the Cleveland Section of the American Chemical Society as the Morley Award recipient for 2011. Dr. Francisco completed his undergraduate studies in chemistry at the University of Texas at Austin and received his Ph.D. at the Massachusetts Institute of Technology. He was the recipient of numerous research fellowships including the Alfred P. Sloan Fellowship, the John Simon Guggenheim Fellowship, and a Cambridge University Fellowship. Dr. Francisco has received numerous awards for his research including the Henry Dreyfus Foundation Teacher-Scholar Award, Purdue University’s McCoy Award, and the Percy L. Julian Award for Pure and Applied Research. He is a Fellow of the American Physical Society and the American Association for the Advancement of Science, and was elected President of the American Chemical Society for 2010. He has published over 400 peer-reviewed publications in the fields of atmospheric chemistry, chemical kinetics, quantum chemistry, laser photochemistry and spectroscopy. Dr. Francisco will be presenting the Morley Lecture at the May meeting of the Cleveland Section, on “From Earth’s Atmosphere to Planetary Engineering of Mars: An Adventure in Chemistry.”

This year the Morley Presentation will take place in conjunction with the Annual May Conference cosponsored by the local sections of the Society for Applied Spectroscopy and the American chemical Society.

**Awards for Outstanding Student Presentations**  
Meeting-in-Miniature of the Cleveland Section of the ACS  
Ursuline College, March 16, 2011

**Graduate Students ($300)**

Satya Nandana Narla, Cleveland State University  
Sushabhan Sadhukhan, Case Western Reserve University  
Kerri Smith, Cleveland State University  
Amanda Way, Case Western Reserve University

**Undergraduate Students ($250)**

Matthew Chaves, Oberlin College  
Nathaniel Kadunce, Oberlin College  
Jennifer Schloss, Oberlin College  
Amelia Zessin, John Carroll University
ACS Special Award Winners at the 2011 Northeastern Ohio Science and Engineering Fair

By Michael A. Lienhard

The 2011 NEOSEF was held at Cleveland State University on March 14–17, 2011. Over 600 students in grades 7-12 participated in the fair. During the judging session on March 15, ten volunteer judges for the Cleveland section of the ACS reviewed approximately 150 projects entered into the Chemistry Category and selected the award winners:

First Place: Sam Stroebel, Mentor High. “Infrared spectral analysis of Erythropoietia”
Second Place: Krish Shah, Westlake High. “Electrochemical Detection of Nitric Oxide with a Diamond Electrode”
Third Place: Leigh Ann Fairley, Laurel. “Investigating the ideal solvent for the extraction of oil from seaweed”
Honorable Mention: Alex Pianalto, St Vincent St Mary High. “Which temperature is the most efficient at inducing the nucleation of quantum dots?”
Honorable Mention: Iulia Barbu, Hudson Middle School. “Smart and safe around the house: A comparison Study of Protective Gloves Vs. Common Household Chemicals”
Honorable Mention: Halle Miller, Columbia High. “Lead Content of Public Drinking Water”
Honorable Mention: Sarah DiGennaro, St Angela Merici Elem. “Ohio Produce = Ethanol”
Honorable Mention: Jane Kim, Beaumont. “Antioxidant Levels in Various Types of Vitamin Water”

In recognition of their achievements, the award winners have been invited to attend the April ACS meeting, display their posters at the social hour, and receive their awards.

Call for Nominations

By Mekki Bayachou

The ACS Cleveland Section is still accepting nominations (or self-nominations) of potential candidates to run for the following open positions in the Executive Committee:

1- Chair-Elect
2- Secretary
3- Councilor
4- Alternate Councilor
5- Director
6- Trustee

The description of the various positions can be found in the "Documents" subfolder at our section's website at:

http://www.csuohio.edu/sciences/dept/cleveland_acs/documents.htm

Then click on "ACS Cleveland Section Job Manual" pdf or Word versions. Please send your nominations or self-nomination by mail or email (preferred) to:

Mekki Bayachou
Chemistry Department SR 397
Cleveland State University
2399 Euclid Ave
Cleveland, OH 44115
email: m.bayachou@csuohio.edu
Phone: 216-875-9716

The election slate will be printed and announced in our May meeting and ballots will be sent out in the beginning in August 2011.
The Cleveland Section of the Electrochemical Society invites you to attend:

**Our Spring 2011 symposium**

*The event is co-sponsored by the Cleveland Section of the ECS, Yeager Center for Electrochemical Sciences, the Joint Yeager Center-ECS student chapter, and Department of Chemistry, CWRU.*

**Tuesday, April 12, 2011**

**Clapp 405, CWRU**

**Program**

2:00-2:45 pm  **Dr. Angel Cuesta** (Institute of Physical Chemistry, "Rocasolano", Madrid Spain) "Atomic Ensemble Effects in Electrocatalysis: The Site-Knockout Strategy"

2:45-3:30 pm  **Prof. Scott Calabrese Barton** (Michigan State University) "Non Precious Metal Catalysts for Oxygen Reduction in Fuel Cells"

3:30-4:30 pm  Talks by senior students

4:30-6:00 pm  Wine and Cheese Reception

The abstracts for these talks are on the ECS section website. We will continue to update the information. **Event is Free to all attendees, but registration is required for reception headcount.** For full event details and to register, go to the Cleveland ECS Section website: http://filer.case.edu/hbm/ecs/ecslocal.html. For directions to the Clapp 405, see https://www.case.edu/maps/. Free Parking in the Veale and Rainbow Babies Hospital Visitor parking garages on Adelbert Road (see https://www.case.edu/maps/). Bring your parking stub in for validation.

**Event is brought to you by the Cleveland Section of the Electrochemical Society**

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**CONGRATULATIONS**

Ms. Nikki Anderson of Vermillion High School

**Recipient of the 2011 Irene C. Heller Award**

Recognizing Outstanding High School Chemistry Teaching
# April Historical Events in Chemistry

By Leopold May  
The Catholic University of America, Washington, DC

April 2, 1953  Francis H. C. Crick and James D. Watson mailed a 900-word article on the structure of deoxyribonucleic acid (DNA) to Nature on this date.

April 5, 1956  Marshall Gates & G. Tschudi announced synthesis of morphine on this date.

April 15, 1861  One hundred and fifty years ago on this date, Ernest Solvay received his first patent entitled "Industrial Production of Sodium Carbonate by Means of Marine Salt, Ammonia, & Carbon Dioxide.

April 22, 2007  Celebrated by ACS on this day but the first Earth Day was founded by Sen. Gaylord Nelson, Father of Earth Day and organized by Denis Hayes on April 21, 1970.

April 23, 1917  Rohm & Haas Co. was incorporated on this date.

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