The Detroit Chemist

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What do dead animals, coffee, and honey wine all have in common?

Chemistry

And they are also upcoming topics at the monthly Brewing Chemistry lectures series. Short descriptions of each can be found on pages 2 and 3, below. These informal talks are designed to make science fun and accessible for all. The lectures take place at 7 p.m. on the third Tuesday of every month at:

Traffic Jam & Snug
511 West Canfield Street, Detroit, MI 48201
Located on the corner of Second Avenue just south of Wayne State University.

www.trafficjamdetroit.com

There is no admission charge, and free parking is available.

Feel free to join us before the talk at 6:30 PM for a dutch-treat dinner.

www.brewingchemistry.com

Tuesday, March 16, 2010 at 7 PM
Seasonal Changes in Mammals
Presented by:Lois Rheaume, Naturalist
Seven Ponds Nature Center (Dryden, MI)

Brewing Chemistry explores natural science this month. Lois Rheaume has a strong background in studying Michigan native plants and animals. She will explain how animals can survive in their environment and the adaptations of mammals from summer to winter months. The science of color change and other animal modifications will be described while fo-

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cusing on the tenets of naturalism. This is a unique opportunity to view rare taxidermy specimens up close.

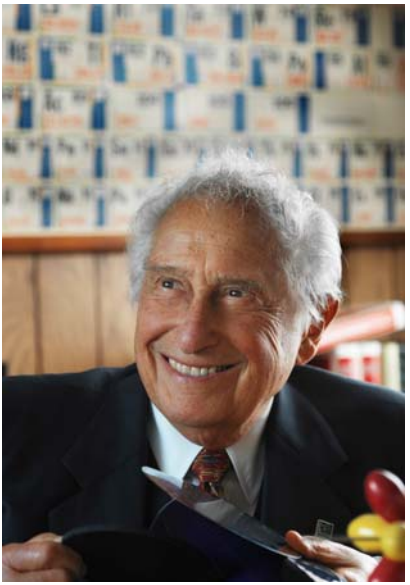
Tuesday, April 20, 2010 at 7 PM
The Chemistry of Coffee
Presented by:James Cadariu, Roastmaster Espresso Source, International and the Great Lakes Coffee Roasting Company

Learn about the science of roasting and brewing coffee. James Cadariu has trained in Italy at Lavazza, Europe's largest coffee roaster, doing espresso cuppings and analyses of coffee sourcing, blending and roasting. With Cimbali, the Italian espresso machine manufacturer, he has trained extensively on the latest superautomatic technology. Having traveled extensively in Europe and the US and being an amateur cook, he has an extensive background in the art and science of making coffee. The Great Lakes Coffee Roasting Co. is a Detroit-area artisan roaster focusing on Fair Trade Organic coffees. Samples will be available!!

Tuesday, May 18, 2010 at 7 PM
The Alchemy of Mead
Presented by:Diana Phillips, Ph.D, Associate Professor and Program Director of Chemistry Kettering University, Flint, MI

•Mead - often called honey wine - is the world's oldest fermented beverage. It's place in history is well documented in song, myth and legend, but what gives each mead an individual quality has gone largely unstudied. Phillips and her fellow mead makers in the International Mead Association (IMA) have set out to change all that. Phillips is part of the Research Committee of the IMA, working on understanding how the variables integral to making mead affect the outcome of the mead produced. Dr. Philips' mead tastes good too - her habanero pepper mead was judged best of show from among more than 4,700 wines at a competition conducted by WineMaker magazine in Manchester Center, Vt. Join us to learn about the chemistry of mead and sample all that it has to offer.

2009 Midgley Award Presentation
To Stanford Ovshinsky
Thursday, April 22
6:00 PM Reception
7:00 PM Presentation
MSU Management Education Center
Amphitheater



The Detroit Section of the American Chemical Society is pleased to announce that the 2009 Thomas Midgley Award will be presented to Stanford Ovshinsky of Ovshinsky Innovation, LLC. This endowed award was established in 1965 in honor of the late Thomas Midgley, Jr., a prolific inventor whose discoveries included tetraethyl lead antiknock additive and halocarbon ("Freon") refrigerants. The award recognizes outstanding research contributions in the field of chemistry related to the automotive industry. Past awards have recognized a broad range of chemical contributions to the industry.

The 2009 Midgley Award will honor Stanford Ovshinsky, another prolific inventor with over 400 patents, "for his pioneering accomplishments in the development and commercialization of rechargeable nickel metal hydride (NiMH) batteries for hybrid and electric vehicles." The awardee will receive the Midgley Medal and a $1000 honorarium.

Educational Opportunity

Chemists

Thinking about a career change? Looking for a way to make use of all that chemistry? Interested in a rewarding career in an applied science? Consider a new career in occupational and environmental health. A large portion of our graduates came from a chemistry background and have found a rewarding new career in environment, health and safety.

The Occupational and Environmental Health Sciences (OEHS) program at WSU offers a Master of Science degree in OEHS, with a specialization in Industrial Hygiene or Industrial Toxicology and graduate certificates in Occupational Safety and in Environmental Health. A post-masters certificate in Industrial Toxicology is also available.

Industrial Hygiene is the recognition, evaluation and control of environmental factors that may affect the health, comfort or productivity of the worker or residents. The environmental factors include chemical, physical and biological stressors. Industrial Hygienists work for the government (OSHA, EPA, etc.), industry, unions, insurance companies, institutions (universities, hospitals) and consulting firms.

Toxicology is the science that studies the harmful effects of drugs, environmental contaminants, and naturally occurring substances found in food, water, air and soil. Industrial Toxicology is an application of toxicology which protects workers, residents and the environment. Industrial Toxicologists work for the government (OSHA, EPA, FDA, etc.), industry, unions, consulting firms, etc.

Classes are offered in late afternoons and evenings to allow for full or part-time studies. Some scholarships are available.

To find out more about these personally and financially rewarding occupations and the opportunity to pursue them at WSU, go to http://www.cphs.wayne.edu/oehs/ or (313)577-1551 or call Dr. Ed Kerfoot at (313) 577-1210.

ANACHEM/SAS APRIL MEETING

"CHEMICAL MEASUREMENTS IN SUPPORT OF STUDIES OF THE BIOGEOCHEMISTRY OF ARSENIC"
DR. JULIAN TYSON
TUESDAY, APRIL 6, 2010
TIME 6:00PM
HALLE LIBRARY ROOM 300
955 W. CIRCLE DR.
EASTERN MICHIGAN UNIVERSITY, YIPSILANTI, MI

Arsenic is the 20th most abundant element in the earth's crust with average concentrations in rocks of about 2 mg/kg and in soil of about 5 mg/kg. Although arsenic appears to be relatively stable in soils and rocks, we have been able to extract it and make a wide range of compounds with a variety of uses. Arsenic compounds have been, and still are, pesticides, herbicides and fungicides. We spray solutions of them on roadsides, orchards, lawns, and we used to impregnate timber for construction purposes with a solution of chromium, copper and arsenic. This kind of "pressure-treated" wood has been phased out of use for domestic purposes, but there is still a considerable legacy with which to deal. It is not known to what extent this material is responsible for environmental contamination. There is also the legacy of chemical manufacturing, as arsenic was often discarded along with other wastes. Arsenic compounds are number 1 in the US in terms of chemicals in the environment that pose the most significant potential threat to human health. Naturally occurring arsenic can get into drinking water, and the contamination of ground water is a serious issue--not just for the US. In major Bangladesh and West Bengal millions of people are drinking highly contaminated water and are showing signs of chronic arsenic poisoning. The relevant issues are (a) how can we remove arsenic from contaminated water and (b) how can we test--in remote, rural communities--that the water is safe. We are starting to see arsenic contamination in food, especially rice. There are other issues: arsenic-containing drugs are fed to chickens, arsenic was a component of some embalming fluids and may now be leaching out of cemeteries, and arsenic may be a contaminant of deicing salts. To study any of these issues, we have to be able to make measurements of the relevant compounds that are reliable. In the laboratory, we can use instrumentation such as high per-

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formance liquid chromatography with element specific detection by plasma-source optical or mass spectrometry; however, for field measurements, simple test kits are needed. My group's recent research has been directed at overcoming the shortcomings in both kinds of analytical methods. Graduate students, upper-level undergraduates, summer students, first-year undergraduates, K-12 students and their teachers are all involved in this arsenic-related research.

The Speaker: Julian Tyson, Associate Dean of the College of Natural Sciences and Professor of Chemistry at the University of Massachusetts, Amherst, received his B.S. in Chemistry from Aberdeen University in Scotland in 1971, his Ph.D. in Analytical Chemistry from Imperial College of Science and Technology, London University in England in 1975, and did post-doctoral work in Analytical Chemistry at Aberdeen University in 1975. He was a faculty member at Loughborough University of Technology in the UK from 1976 to 1989, when he relocated to UMass.

During his time at UMass, he has served as Graduate Program Director, Associate Department Head, and Department Head. He is the coordinator of the Chemistry Department's Preparing Future Faculty (PFF) program, one of the five programs selected by the American Chemical Society for funding following a national competition in 1999. He is a former member of the Chemistry Department Personnel Committee, and a past chair of the College of Natural Sciences and Mathematics Personnel Committee. He has reviewed the files for personnel actions of many tens of individuals, both at the University of Massachusetts Amherst and at other institutions in the US and for several institutions around the world. He chaired the external review committee for the Chemistry Department at Bates College, and he holds a visiting professor position in the Department of Chemistry at Smith College, where he has taught several classes as well as directed independent studies. He has advised some 45 Ph.D. students (32 of these since starting at UMass), about 10 MS students, and about 8 post-doctoral assistants and a large number (over 40) of undergraduates. He was a participant in the UMass Collaborative for Excellence in Teacher Preparation (CETP), a member of the National Visiting Committee for the Maine University system NSF-funded CETP, and was lead PI on an NSF GK-12 grant. He is Co-PI of the NSF-funded NE Alliance for Graduate Education and the Professoriate.

Dr. Tyson is a pioneer of the microfluidic sample handling techniques

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for atomic spectrometry now widely used in the atomic spectrometry research community. He has contributed over 150 papers in the primary literature, 30 reviews in the secondary literature, including 25 Atomic Spectrometry Updates in *J. Anal. At. Spectrom.* and various chapters in text books. He is currently developing new analytical methods for the determination of trace species in complex matrices, based on the coupling of reaction chemistry in flowing streams with atomic spectrometry detection, in support of problem solving in areas related to nutrition, clinical studies, and the biogeochemical cycling of key elements. Work on the issues of arsenic contamination forms the basis for research experiences for first-year chemistry students who work in small groups with a junior and graduate students. Over 300 students have participated in this "arsenic project," which also forms the basis of outreach to the local K-12 sector.

Tyson has been awarded the Distinguished Service Award from the Royal Society of Chemistry, the 14th SAC Silver Medal from the Royal Society of Chemistry, the Lester Strock Award from the Society of Applied Spectroscopy, and a Discovery Corps Senior Fellowship from the NSF Division of Chemistry. He has given nearly 200 invited lectures at conferences in about 15 countries. He is the author of 17 articles on aspects of education, training, and curricular reform in the analytical sciences, a student text, "Analysis: What Analytical Chemists Do", Royal Society of Chemistry, Cambridge, 1988, 3rd reprint (1997), and the recent "Short Guide to Writing about Chemistry" (with H. Davis and J. Pechenik) Longman 2010).

Call for Section Historians

The Detroit Section of the ACS is turning 100 years old in 2012 and we need your help. We need old pictures and stories about chemistry over the last 100 years. Everybody loves to look at pictures of old glassware and speculate what it was designed to do. If you have or can get historical material pertaining to chemistry in southeastern Michigan, please share it with us. And don't stop there, we also need help to organize and document this information. The Detroit Section will be hosting the Central Regional ACS meeting in 2012 and hope to present a comprehensive history of chemistry in Southeastern Michigan.

We invite you to be a part of the event. If you have information to share or would like to join us in our quest to document our chemical history, please contact either Steven Scribner, sscribner@marygrove.eduor Kevin Perry, kevin.l.perry@gm.com.

2010 Section Officers and Committee Chairs

Elected Officers

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Gina Ludwig (Kids and Chemistry Co-chair)
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Walter Siegl (Kids and Chemistry Co-chair)
(see above)

Walter Siegl (Long Range Planning)
(see above)

Mark Benvenuto (Membership)
(see above)

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(see above)

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James Landis (Publications)
(see above)

Megan Klein (Professional Relations (Career Program))
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Gina Ludwig (Public Relations)
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Meghann Mouyannis (Younger Chemists)
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Phone: 321-393-3685

A Call for Nominations

Every year the Detroit Local Section of the American Chemical Society honors people that have gone above and beyond the call of duty. These volunteers have taken time and energy out of their busy schedules to provide assistance and resources to the field of chemistry in various roles. We like to recognize their efforts with a Salutes to Excellence award (description below). The awardees are honored at our June 9 Joint Section/CIC Awards meeting.

Salutes to Excellence

Salutes to Excellence is an award program that gives ACS members an opportunity to conduct an event within their communities that recognizes the positive impact on everyday life made by a product of chemistry, a practitioner of chemistry, or a place of importance in chemistry. A central part of the event is the presentation of a commemorative plaque, furnished by Office of Community Activities, for the honorees for the chemistry achievement being honored.

If you know of an individual (or business) that deserves this recognition, please submit their name(s) to Mary Kay Heidtke, Recognition Chair, Detroit Local Section. Her email address is mkheidtke@aol.com Please submit your nominations no later than March 31, 2010.

April Section Meeting
ACS Presideny Joseph Francisco speaks on "Sustainability of the Chemical Enterprise… The Road Ahead"

Time: Thu April 15 2010 06:00 PM to 10:00 PM
Location: Lawrence Technological University, Management Building Rm. 218

Please see the April Chemist for more details.

Chemists Celebrate Earth Day
Theme: "Plants-The Green Machine"
(Thursday, April 22, 2010)

ACS observes Earth Day with the Chemists Celebrate Earth Day (CCED) program.
The events bring together members, chemical educators, students and chemistry enthusiasts to illustrate the positive role that chemistry plays in the world.

The Detroit Section will hold an event at the Detroit Science Center. The Earth Day event at the Detroit Science Center will include hands-on experiments and live demonstrations on Saturday, April 17 from noon to 4 PM. If you are interested in participating, please contact Denise Grimsley at denise.grimsley@basf.com.

Upcoming April ACS Webinars

Creating a Successful Career in Public Policy and the Chemical Industry – Lessons Not Taught in Classrooms. Have you ever wondered how policies that affect directions in science and research are made? Would you like a career that helps shape science policy? From stem cells research to climate change, these scientific issues are as much driven by policy decision as scholarly research. Our speaker will share her observations of policy making in the chemical industry and give you an insightful glimpse into the decision process. Join us to learn about science policy and how you can prepare for a career in that field.
ACS Webinars: Your Career Matters! Series – Thursday, April 8, 2010, 2:00-3:00 PM ET; free registration and more information online at https://www2.gotomeeting.com/register/894562635

US Immigration for Foreign-born Scientists – What You Should Know about Employer-Sponsored and Self-Petitions for Green Cards. What do foreign-born scientists, technology entrepreneurs, and investors need to know to legally work in the US? How can one gain path to citizenship as a scientist? Foreign-born

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scientists and scholars have and continue to contribute to the technical wealth and economic growth in the US. According to 2005 ChemCensus, about twenty percent of chemical professionals are foreign-born. Learn from our speaker the various US immigration avenues available for scientific and technical professionals.
ACS Webinars: Professional Growth and Development Series – Thursday, April 15, 2010, 2:00-3:00 PM ET; free registration and more information online at
https://www2.gotomeeting.com/register/382353915

Raising Capital with Angels: What They Don't Tell You at Business School. Do you know what it takes to raise capital in this economic environment? Raising capital is an important life blood for entrepreneurs and small businesses, yet the process is often a black box. Learn from our speaker strategies to raise smart money and avoid the pitfalls of fools money. Join us to explore the ins and outs of raising funds and building a successful marriage with your investors. This is a must attend event for entrepreneurs, scientific professionals, investors and business leaders who are interested in learning about capital raising and angels financing.
ACS Webinars: Small & Medium Business Series – Thursday, April 22, 2010, 2:00-3:00 PM ET; free registration and more information online at
https://www2.gotomeeting.com/register/917951850

Success Factors for a Consulting Practice in Chemistry. Thinking about being a consultant? Independent scientific/technical consultanting is a fast growing career option undertaken by many chemical professionals. But do you know what it takes to build a successful consulting practice? To be a successful consultant, you need to know who needs your expertise, how to sell your expertise, and what legal constraints you may encounter along the way. Join us as our speaker shares his two decades of experience building a successful scientific consulting career.
ACS Webinars: Small & Medium Business Series – Thursday, April 29, 2010, 2:00-3:00 PM ET; free registration and more information online at
https://www2.gotomeeting.com/register/566989659

2010 Central Regional Meeting of the ACS Announces Call for Papers

The Dayton Section of the American Chemical Society invites you to the 2010 Central Regional Meeting of the American Chemical Society (CeRMACS-2010), June 16-19, 2010, at the Dayton Convention Center and Crowne Plaza Hotel in historic downtown Dayton, Ohio. Abstracts in all fields of chemistry are being accepted through April 15, 2010.

The theme for CeRMACS-2010 is Chemistry: Reacting to Provide New Technologies. In addition to the traditional symposia on Analytical, Biological, Inorganic, Organic, Physical, and Polymer Chemistry the meeting organizers are planning symposia on:

- New Vistas in Biotechnology: Chemistry, Materials & Applications
- Chemistry & Materials for Alternative Energy
- Metamaterials: from RF to NIR
- Materials for Aerospace and Space Applications
- Chemical Education Symposium and HS Teacher Award
- Computational Materials Science: Theory, Modeling, & Simulation
- Nanomaterials: Synthesis, Structures, Functionalization & Applications
- Laser-Based Technologies for Chemical Measurements
- Small Business Innovations in the Chemical & Materials Industries
- Chemistry for Peace: Building on the Dayton Accords

Don't forget about social events - the CeRMACS-2010 event not to missed is the totally awesome Chemipalooza at the Boonshoft Museum of Discovery. Explore the museum while consuming fabulous food and cocktails. Take in the free planetarium shows or dance to the music of a live band playing your favorite '80s tunes.

Visit http://CeRMACS2010.org for more information about registration, abstract submission, social events, and awards.

Employment Forum

By Scott Gearig, The Mergis Group
Dinner and Presentation (Open to the General Public)
sponsored by the Toledo Section of the American Chemical Society

The economy has unfortunately affected the chemical industry. With graduation approaching and the increased unemployment of chemists, this is a dinner that you can't miss. This presentation and discussion will encompass what to do in interviews. You will also find out what companies consider a good resume. A presentation from the national ACS will also be available.

The Mergis Group is a leading professional placement firm dedicated to delivering the highest level of service to their clients and candidates. Built on 30 years of expertise, they provide high-touch, specialized recruiting services to a diverse portfolio of clients ranging from Fortune 500 companies to small and mid-sized businesses spanning multiple industries. They operate through a nationwide network of offices led by a team of recruiting experts with extensive knowledge and proven career experience in the industries they service.

Scott Gearig is a Toledo native with a bachelor's degree from Ohio State University. In 1982 Scott joined Aim Executive as a recruiter. Aim was later bought by Interim, which changed names to Spherion, with a new division for professional recruiting called The Mergis Group. Since then he has progressed from recruiter to account manager to team leader to branch manager to his current position as Managing Director of the Toledo operation.

Tuesday, March 30, 2010

The Beirut Restaurant
4082 Monroe Street
Social hour: 5:30 pm w/ dinner served family style at 6 pm
Presentation at 7 pm
Cost: $15, students and unemployed members $8
(pay at the door – cash or check)
Cash bar for alcoholic beverages

RSVP for dinner by March 24, 2010
Phone: 419-530-4072
E-mail: edith.kippenhan@utoledo.edu

The Detroit Section will pay for the first 10 Section Members that wish to attend, contact Megan Klein for details:
klein_megan@hotmail.com

Business Directory

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Calendar of Upcoming Events

Third Tuesday of Every Month: Brewing Chemistry, *see pages 1-2 for details*

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March 31 Salutes to Excellence Nominations Due, *see page 10 for details*

April 6 April ANACHEM Meeting: "Chemical Measurements in Support Of Studies of the Biogeochemistry of Arsenic", *see pages 5-7 for details*

April 15 April Section Meeting: "Sustainability of the Chemical Enterprise…The Road Ahead" *see page 10 and April Chemist for details*

April 15 Abstracts Due, *see page 13 for details*

April 17 Chemists Celebrate Earth Day, *see page 12 for details*

April 22 Midgley Award Presentation, *see page 3 for details*

June 9 Joint Annual Awards Meeting with CIC, *details to be announced*

June 16-19 CERMACS 2010, *see page 13 for details*

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