

March ANACHEM Meeting:

Joseph Chaiken speaks on “Hunting the Deceitful Turkey”: Recent progress in noninvasive in vivo blood and tissue analysis by Raman spectroscopy”

Date: Thursday, March 31, 2011
Time: 6:00 PM Presentation
Location: HALLE LIBRARY ROOM 300
955 W. CIRCLE DR.
EASTERN MICHIGAN UNIVERSITY,
YIPSILANTI, MI

Abstract: Roughly 50 years passed between the conception of noninvasive measurement of the degree of oxygenation of blood (SpO₂) by passing light through the skin and the commercial realization of modern pulse oximetry, and improvements to that technology are still being introduced. We are now approaching roughly 35 years since the conception of noninvasive glucose measurement and very few techniques introduced during that period remain realistic commercial prospects to achieve that hallowed goal. In the 10 years since our initial publication of actual noninvasive in vivo concentration measurements of blood glucose in humans, at least two other groups have corroborated our results, using different modus operandi, indicating that Raman spectroscopy has sufficient sensitivity and selectivity to equal the quality of care provided by fingerstick technology. In this talk I review the work of the Syracuse University/LighTouch® group in noninvasive in vivo blood and tissue analysis by Raman spectroscopy and offer our view of the future. While we do not expect to eat the turkey this Thanksgiving, or perhaps even over the next two, we are

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confident that its goose will eventually be cooked.

Joseph Chaiken earned a Bachelor of Science with Honors in Chemistry from the University of Chicago in 1977 and a PhD in Physical Chemistry at the University of Illinois at Urbana-Champaign working with Prof. J. D. McDonald in 1982. His thesis was titled "Quantum Beat Spectroscopy and Radiationless Processes in Intermediate Case Molecules" and included the first observations of vibrational-electronic quantum beats. He has been a Professor of Chemistry at Syracuse University since 1982 and his research has spanned bulk gas and nozzle beam spectroscopy, laser chemistry of organometallics and thin film deposition, coalescence growth processes, optical memory and switching devices and for most of the last dozen years, noninvasive in vivo biomedical spectroscopy. In this last connection he is also the Chief Science Officer of LighTouch Medical, Inc and in 2000 published the first Raman spectrum of human blood, noninvasive, in vivo.

Directions from Detroit Take exit 183 to Huron St 0.3mi turn right at Huron St. go 1.0mi to W. Cross Ave turn left go 0.7mi to E Washtenaw Ave and bare right on Washtenaw go 0.2mi to Oakwood turn right on Oakwood to Structure Dr and use visitor parking. Parking is \$1/hr cash only

Contact Felix Schneider at felixschn@wowway.com or voice mail 248-583-1578.

New Section Website

The Detroit Section has a new website! It can be found at:

<http://detroit.sites.acs.org/>

A great thank you to Ed Havlena for his work managing the section's website until now and to Kevin Perry for setting up the new site!

Please email any comments or submissions for the site to our Webmaster Gina Ludwig at:

smile11540@wowway.com

or via the Contact Us link on the Website:

<http://detroit.sites.acs.org/contactus.htm>

**American Chemical Society – Detroit Local Section –
Younger Chemists Committee Presents:**



Brewing Chemistry is a monthly lectures series. 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

There is no admission charge, and free parking is available. Feel free to join us before the talk at 6:00 PM for a dutch-treat dinner. For more information, contact Meghann at 313.993.1259 or meghann@brewingchemistry.com

Tuesday, April 19, 2011 at 6:30 PM

Tour of Traffic Jam & Snug

**A behind the scenes look at the science of brewing beer and
making cheese**

Since 1965, the Traffic Jam & Snug has been one of Detroit's hidden treasures. They are known throughout Midtown for their in-house bakery, microbrewery, and dairy, their curiously intimate multi-level dining rooms, and an eclectic menu of made-from-scratch dishes. They only use the best, freshest ingredients. Each day, their bakery turns out a new Bread of the Day, from authentic ethnic crusted rolls and vegetable breads to whole grain sourdoughs and cheese loaves. A shamefully delicious selection of pies, cakes, and cookies are made there too, not to mention their very own hot fudge and ice cream.

Their award-winning cheeses and beers are a local favorite. They actually use the same equipment for brewing beer and making cheese. On December 18, 1992, after a decade-long legal battle, Michigan became the last Midwest state to enact a brewpub law. Traffic Jam became the first brew-pub in the state of Michigan. Since then, the Traffic Jam has been brewing an uncommon, ever-changing selection of hand-crafted beers.

Traffic Jam & Snug uses its homemade cheese, beer and baked goods in the restaurant. You can also buy the cheese -- including the Asiago varieties -- and bakery items to take home. Or find them at a local farmer's markets, including Eastern Market on Saturdays and Royal Oak on Fridays.

Join us to explore and sample the chemistry of beer brewing and cheesemaking! The tour will begin at 6:30 PM, but feel free to stay for dinner after.

www.brewingchemistry.com

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Tuesday April 5, 2011 | 2pm-3pm ET

Successfully Working with Recruiters – Do’s and Don’ts

Learn from seasoned recruiters in the chemical and life sciences sectors, tips for building relationships and how to communicate your knowledge, skills, and abilities. Speakers: Patrick Ropella, The Ropella Group and Don Alexander, Carlyle & Conlan

Thursday April 7, 2011 | 2pm-3pm ET

Optimizing the Workplace Across Five Generations of Scientists

Each generation’s assumptions, values, and experience with technology shapes their fundamental assumptions about how to get things done. Learn practical approaches that can help leverage each generation’s values in your lab, group, or department. Speaker: Tamara Erickson, Researcher and McKinsey Award winning author

Thursday April 14, 2011 | 2pm-3pm ET

Me Too Drugs: R&D Innovations or Imitations?

A “me too” drug is similar in chemical structure or has the mechanism of action as the prototype. What are the merits of these me too drugs? Innovations in targeted therapies or wasteful R&D? Speaker: Dr. Joseph DiMasi, Tufts University

Thursday April 21, 2011 | 2pm-3pm ET

Is Being an Entrepreneur/Innovator Your Cup of Tea?

Do you have an idea you want to get off the ground? What are the considerations you need to know for this high-stake but high reward challenge? This discussion walks you through the skills and emotional readiness you need from idea to realization. Speaker: Dr. Judith Giordan, VentureWell

Thursday, April 28, 2011 – 2pm-3pm EDT

Cheers! The Chemistry of Wine

La vérité est dans le vin, as the French say, “The truth is in the wine.” Uncork everything (chemistry) you need to know to fully appreciate this best companion of good food. *Santé!* Speaker: Dr. Ariel Fenster, McGill University

**The Council for Chemical Research
Register Today!
CCR ANNUAL MEETING MAY 1-3, 2011
Dearborn, MI**

Advanced Materials:
"Driving Transformative Research in Energy & Automobiles"
Plenary Speaker: Dr. Harriet Kung
Associate Director of Science for Basic Energy Sciences
Office of Science, Department of Energy

The 21st century brings with it staggering challenges for more advanced energy technologies that are abundant, clean, and economical.

Transforming the ways we generate, supply, transmit, store, and use energy are the paramount opportunities for the world in the coming decades. Throughout our history, America's leadership in manufacturing has depended on having the best materials.. To convert sunlight to fuel, efficiently store energy, or enable a new generation of energy production and utilization technologies requires the development of new materials and processes of unprecedented functionality and performance. New materials and chemical processes are critical pacing elements for progress in advanced energy systems and virtually all industrial technologies. Dr. Kung will discuss the strategic planning, current and planned future research activities in Basic Energy Sciences program in DOE's Office of Science to support cutting-edge science aimed at laying the foundation for major energy technology breakthroughs.

In addition, CCR will once again host a Federal Funding Agency Forum that lets you interact directly with knowledgeable government staff one-on-one. Find out what the current budget battles in Congress will mean for the long-term funding of basic chemical research.

To view a Preliminary Agenda go to the following website:

[https://theeventconn.com/event/
Council_for_Chemical_Research_32nd_Annual_Conference/register](https://theeventconn.com/event/Council_for_Chemical_Research_32nd_Annual_Conference/register)

CCR's 32nd Annual Meeting will feature exciting sessions on the latest developments in materials for electric vehicles and lightweighting, solar energy, carbon sequestration, photovoltaics, large scale energy storage, renewable fuels and feedstocks, emission control catalysts, and much more.

Also at the meeting will be breakout sessions for chemistry and chemical engineering department chairs; networking opportunities, and an exciting off-site dinner & tour of the Ford Rouge Truck Plant. Join fellow researchers from industry, academia, and government laboratories.

This interdisciplinary meeting will help to shape the research agenda in energy and transportation materials for the coming decade, with an emphasis on sustainability and green technologies that will enhance US competitiveness. You don't want to miss it!

The Henry Hotel, Autograph Collection
Fairlane Plaza, 300 Town Center Drive
Dearborn, MI 48126
May 1-3, 2011
313-441-2000

About the Henry Hotel, Autograph Collection
Situated in an ideal location to both downtown Detroit and the Detroit Metropolitan Airport, The Henry is only minutes from Ford Motor Company World Headquarters. Each of the guest rooms and suites include complimentary internet access, DirecTV with 24 HD channels, Frette 400-count Egyptian cotton bedding and marble bathrooms with RUSK bath amenities. The Henry also boasts an on-site fitness center, indoor pool, whirlpool and sauna.

CCR Room Rate: \$139/night
Make reservations by calling 313-441-2000

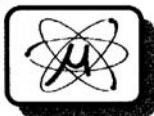
The Council for Chemical Research (CCR) is a nonprofit membership organization consisting of chemistry and chemical engineering researchers in industry, academia, and government. CCR exists to advance research and promote leadership collaboration across discipline, institution, and sector boundaries. CCR's membership represents a significant portion of the U.S. chemical research enterprise, currently comprising more than 100 companies, universities, and government laboratories with a combined R&D budget of more than \$7 billion.

CCR
1550 M Street, Suite 300
Washington, District of Columbia 20005
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"If you don't like something, change it. If you can't change it, change your attitude. Don't complain."

Maya Angelou

Business Directory



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Calendar of Upcoming Events

Second Tuesday of the Month: Section Executive Committee Meeting – The April 12th Executive Committee Meeting will be held at the University of Michigan Dearborn, Science Building. The meeting will start at 7:00 PM.

Third Tuesday of Every Month: Brewing Chemistry. Please see <http://brewingchemistry.com> for information on upcoming events. Please see page 6 for the March program.

March 31: March ANACHEM Meeting. Please see pages 1-2 for details.

April 19: April Brewing Chemistry. Please see page 3 for details.

May 1-3: Council for Chemical Research 32nd Annual Meeting. Please see pages 5-6 for details.

June 6-10: 22nd North American Catalysis Society Meeting. Please see January Chemist for details.

June 5-9, 2012: CeRMACS (Central Region ACS 2012 Meeting) sponsored by the Detroit Section.



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