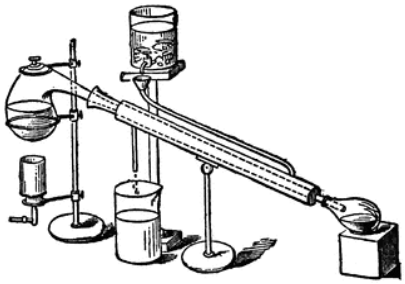
SOUTHWEST RETORT



SIXTY-SIXTH YEAR **MARCH 2014**

Published for the advancement of
Chemists, Chemical Engineers
and Chemistry in this area

published by
The Dallas-Fort Worth Section, with the cooperation of five other local sections of the American Chemical Society in the Southwest Region.

Vol. 66(7) MARCH 2014

Editorial and Business Offices: ***Contact the Editor for subscription and advertisement information.***
Editor: Connie Hendrickson, 802 South Jefferson, Irving, TX 75060; 972-786-4249; retort@acsdfw.org

Copy Editor: Mike Vance, vance2276@gmail.com

Business Manager: Danny Dunn, 6717 Lahontan, Fort Worth, TX 76132; 817-361-0943; dannyldunn@sbcglobal.net

The Southwest Retort is published monthly, September through May, by the Dallas-Ft. Worth Section of the American Chemical Society, Inc., for the ACS Sections of the Southwest Region.

TABLE OF CONTENTS

Contact the DFW Section

General: info@acsdfw.org

Education: ncw@acsdfw.org

Elections: candidates@acsdfw.org

Twitter: acsdfw

EMPLOYMENT CLEARING HOUSE

Job applicants should send name, email, and phone, along with type of position and geographical area desired; employers may contact job applicants directly. If you have an opening, send your listing, including contact info for your company, to retort@acsdfw.org. Deadlines are the 7th of each month.

Position Available:

***Dr Pepper Snapple Group* -**

Ingredient Technology Scientist (1400680) The role of the Ingredient Scientist supports the business application necessary to drive our sweetener based beverage innovation efforts. The Ingredient Scientist will work within a cross functional project team environment helping to evaluate new sweetener systems based on their experience and direction from Sweetener Subject Matter Expert (SME). The Ingredient Scientist will collaborate predominantly with Research and Development, in our Product Development and Ingredient Science groups, as well as with Procurement & Dr Pepper Snapple Group business teams to deliver winning taste innovation to the market place. Apply online at DrPepperSnapple Careers

EDITING AND PROOF-READING SERVICES

Need someone to proof or edit your next paper, grant, or presentation? Let an experienced proofreader and PhD chemist do it for you! I have a strong grasp of English grammar and scientific writing and can condense text without losing the underlying meaning. Competitive rates! Contact Mike Vance:

vance2276@gmail.com

408-786-7451

JENKEM TECHNOLOGY

The PEG and PEGylation Technology People

Manager of Sales and Marketing
Job ID: JKUSA-20131203
Job Type: Full-time **Location:** Plano

Job Description:
This sales and marketing manager position is intended to combine both sales and marketing strategy with the involvement in ongoing day-to-day sales to extract useful market intelligence and take a dynamic leadership role in implementing revenue-generating plans coordinated with our sales efforts. The responsibilities include (1) managing daily sales activities, such as quotations, order confirmations, communication with our production team, coordination of product shipment, and sales personnel training; and (2) operation of the marketing office, whose duties include proposing annual marketing and sales strategies, maintaining customer relationships, supporting the Business Development department, analyzing current sales figures and assisting in the forecasting of future business to implement effective marketing and sales strategies.

Job Requirements:
Bachelor's degree or above in chemistry or a chemistry-related field with 5+ years of sales and/or marketing experience. Very good interpersonal communication skills are critical, including excellent proficiency in both written and spoken English. Familiarity with international trading terms and regulations (Incoterms) a plus.

Compensation:
$60k+ annual salary with potential for commissions or bonus; medical insurance, paid vacation and holidays

Sale/Marketing Assistant
Job ID: JKUSA-20131202
Job Type: Full-time **Location:** Plano

Job Description:
Products sales and customer services; provides quotations/products availability and replies about technical questions to customers by phone or emails; process orders, shipping, and payments; develops and maintains customer relationships; develops new customers and performs other tasks as assigned by the manager, etc.

Job Requirements:
Bachelor's or higher (Chemistry/Biology/Biochemistry or similar background REQUIRED); Excellent interpersonal and communication skills; Excellent English reading and written skills; Proficiency in business English and grammar preferred; English/Chinese bilingual preferred; Good arithmetic skills and attention to details required; Proficiency in the use of Microsoft Word, Excel, PowerPoint, and Outlook required; Ability to work independently required.

Compensation:
Up to $30,000 annual salary, medical insurance, paid vacation, and holidays

To Apply:
Interested candidates should submit a letter of application including salary expectations to

hr@jenkemusa.com.

Please do not call; we will contact you.

FIFTY YEARS AGO IN THE SOUTHWEST RETORT

The two ACS tour speakers for March are **William Shive**, Professor and Chemistry Department Chair at the University of Texas and **Frederick C. Nachod**, Head of the Physical Chemistry Department of the Sterling-Winthrop Research Institute in Rensselaer, NY. Dr. Shive's topics will be "Relationship of Techniques to Progress in Biochemistry" and "Some Biological Control Mechanisms." Dr. Nachod will speak on "Nuclear Magnetic Resonance Spectroscopy."

The 17th Annual LSU Symposium on Modern Methods of Analytical Chemistry was held in Baton Rouge Jan. 27-30, with speakers **Rudolf Pribil, Stephen Dal Nogre, William I. Stephen** and **Hermann Flaschka**.

At the University of Texas **George Watt** has been appointed to the Editorial Advisory Board of *The Journal of Inorganic and Nuclear Chemistry*. **Dr. Allan Bard** delivered an invited lecture at the Gordon Conference on Electrochemistry in Santa Barbara, while **Dr. L. O. Morgan** gave a seminar at Los Alamos Laboratories. The University now ranks 4th in the nation in the number of ACS certified bachelor's degrees awarded in 1962-63. In the number of Ph.D.'s awarded in chemistry, the University ranked 7th.

Faith L Smith has accepted a graduate fellowship in biochemistry at the University of Missouri. She is the first Sul Ross coed to receive a graduate fellowship in chemistry.

In San Antonio the Southwest Research Institute has now occupied its new Chemistry Laboratory. It has 19,500 square feet. **Dr. William C. McGavock** of Trinity University has been named a Piper Professor.

The new $2,000,000 Marrs McLean Physical Science Building at Baylor was dedicated on Feb. 1. These ceremonies took place on the 119th anniversary of the founding of Baylor, which was chartered in 1845 by the Republic of Texas. **Dr. George Scatchard** of MIT gave a Welch lecture to the chemistry department on "Ion Exchange."

Dr. E. A. Moelwyn-Hughes of Cambridge University will be an NSF Senior Foreign Scientific Fellow at the University of Arkansas for the 1964-65 academic year. **Drs. H. Arino, H. L. Hodges** and **O. K. Manuel** recently completed their Ph.D. requirements under the direction of **Dr. Paul Kuroda**. **Dr. Edward S. Amis** attended the Denver ACS meeting. The speaker at the next U. of A. local section meeting will be **Dr. Thomas Sugihara**, Chair of the Chemistry Department at Clark University. His topic will be "Chemical Studies of Nuclear Reactions." :

Contributed by

E. Thomas Strom

Man Made Global Warming Revisited
by
John E. Spessard, PhD, PE

In December of 2007, I published in The Retort "Man Made Global Warming: How Good is the Data?" In that paper, I evaluated the sources of data that had been used to develop the climate models. The United Nations Intergovernmental Panel on Climate Change (IPCC) had just published its Fourth Assessment (IPCC4). Some six years later IPCC has just published its draft Fifth Assessment (IPCC5). I want to examine the current thinking.

I need to state that I have had an unpleasant personal experience dealing with mathematical models and modelers. This has colored my thinking and attitudes. I was working in an industrial research group that had two California research laboratories. One was in Whittier and I was in the Trona laboratory.

We had hired a very fine chemical engineer. Alan had done his PhD research developing a mathematical model of a crystallizer. The model carried the assumption of perfect mixing. I had no problem with this because the stirring energy per liter was much greater in a one liter lab reactor than could be achieved in a 100,000 liter production reactor. Alan left to return to Academia, and I inherited crystallization research which I was enjoying.

I made the mistake of searching Chemical Abstracts where I discovered a paper describing the behavior of an imperfectly stirred crystallizer. I compounded the error by obtaining a copy of this paper and reading it. The indicated results were a perfect match of my experimental results. I felt that this was an important consideration in controlling crystal size which was the objective of the crystallization research program. I even filed an Invention Disclosure.

The mathematical modelers claimed that the model was valid and that my research results were due to my incompetence. By this time I had been transferred to Oklahoma City and I was unaware of this development. I later found about this third or fourth hand. My experimental work was repeated. And the results were duplicated. One copy of the project report was issued. It promptly fell into the archives never to be heard from again. In another third hand report, a colleague had visited Alan's academic laboratory. His laboratory crystallizer had a very powerful agitator.

In Trona, the impression of the Whittier mathematical modelers was that if their model and the universe were in conflict, they would maintain that the Universe was in error. I have detected much of this attitude in climate research.

Climate Change is a major industry. The Congressional Research Service provides information searches for Members of Congress at their request. Direct federal funding to address global climate change totaled approximately $77 billion between fiscal years 2008 to 2013. $11.6 billion has been requested for Fiscal Year 2014.In addition, the Office of Management and Budget estimated that tax concessions in the 2008-2013 period reduced Federal revenues by $9.8 billion.

The University Corporation for Atmospheric Research operates a website on behalf of the U.S. Global Change research program. This web site discloses that 13 federal agencies funded climate change research by $2.24 billion, S2.51 billion and $2.67 billion in Fiscal Years 2010.2011 and 2012 respectively. In addition, participating agencies contributed $2.68 million to the United Nations Intergovernmental Panel on Climate Change. Therefore, many people are dependent upon climate change research for their funding.

I have reviewed the Fifth Assessment (IPCC5). An assumption is that carbon dioxide concentrations are the primary driving force for climate change. Volcanic action, El Nino and El Nina provide lesser perturbations. The sun's energy output varies by about 0.1% and is held not to be a significant factor. This conclusion is based upon about 33 years' measurement of the sun's energy output through three 11 year solar sunspot cycles. However global temperatures have remained constant since 1998. IPCC5 holds that 33 years of results are truly significant but the 13 year's observations are meaningless scatter. IPCC5 states "It is useful for purposes of analysis and description to consider the pre-industrial climate system as being in a state of climatic equilibrium with a fixed atmospheric system and an unchanging sun." The Medieval Warm Period and the Little Ice Age are considered to be localized events with compensating warm or cold areas assumed to occur else

where. IPCC5 notes that stratospheric water vapor showed a significant long-term variability and an upward trend over the last half of the 20th century but no long term increase since 1996.his is the actual results.

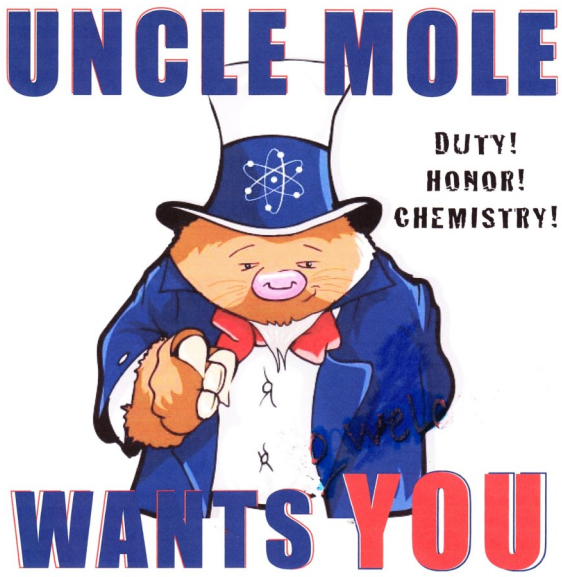
The Medieval Warm Period took place between about 950 to 1200 CE. Eric the Red settled Greenland in 946. For over 200 years they grew enough crops to feed themselves. In Julius Caesar's time (about 60 BCE) they were able to grow wine grapes in the British Isles. Recently, the possibility of planting vines in the British Isles has been mentioned. For most of the rest of this time, the British Isles were too cold to grow wine grapes. The Little Ice age ran between about 1500 to 1700 CE. It was so cold that the Thames and Danube froze solid enough that people walked on it safely.

Looking at weather maps on TV makes it very clear that there are temperature and moisture gradients. But these systems shift and move over days and are not constant for centuries like the Medieval Warm Period and the Little Ice Age. Warm fronts move toward cooler areas and cold fronts move toward warmer areas. Wind is a pretty efficient climate equalizer. The Climatologists' view is that the Medieval Warm Period and the Little Ice age are illusions in that elsewhere in the world, there were compensating cold and warm areas. How can you reconcile unmixed warm and cold areas enduring for centuries and the Second Law of Thermodynamics?

Water vapor is a stronger greenhouse gas than CO2. Stratospheric water vapor seems to have tracked global temperature trends better than CO2 levels. Stratospheric water vapor levels increased during the first part of the 20th century and have remained unchanged since about 1998- just like global average temperatures. IPPC5 states "stratospheric water vapor has an important role in Earth's radiative balance and in stratospheric chemistry." IPCC5 states "Clouds and aerosols continue to contribute the largest uncertainty to estimates and interpretations of the earth's energy budget." An aerosol is a suspended solid particle or vapor molecule. IPCC5 claims progress in understanding and that the accuracy and reliability of the multiple climate models has improved.

It is evident that I am a sceptic. Since I am retired, I can afford to be a sceptic. I worked for an environmental consulting firm that was heavily dependent on EPA contracts. I would not have dared to air these opinions when I was working there. Retirees are a major source of announced sceptics along with the professionally secure. The reception received by sceptics; ridicule, no research funding, professional discrediting and even job loss, very much reminds me of my experiences with the California mathematical modelers.

The opinions expressed in this paper are mine. They Are **NOT** the opinions of EPA, Sigma Xi, or ACS.



to send your articles, news items, and opinion pieces to the Southwest RETORT!

retort@acsdfw.org

47th ACS DFW

Meeting in Miniature
Texas Wesleyan University
McFadden Science Center

Fort Worth, Texas
Saturday, April 26, 2014

Tentative Schedule:

7:45 - 8:30	Check In
8:30 - 9:45	Oral Presentations
9:45 - 10:00	Break
10:00 - 11:30	Oral Presentations
11:30 - 1:00	Lunch on your own
1:00 - 4:00	Oral Presentations
4:00 - 4:30	Break
4:30 - 5:00	Awards

All students are invited to present their research. Presentations should be 10-15 minutes with questions.

Abstract Submission:
All abstracts can be emailed to Dr. Phillip Pelphrey ppelphrey@txwes.edu with the subject line: *Meeting in Miniature Abstract Submission*
Abstracts should be submitted as a Word Document.

Deadline for submissions Wednesday April 9th, 2014

Abstract Format:
Title of Presentation
Authors (Underline presenting author and put a * next to advisor)
Affiliation (Department, University, etc.)
Division (Analytical, Organic, Biochemistry, etc)
Email Address of presenting author
Category: Undergraduate or Graduate
Abstract (up to 200 words)

Host the Local Section Booth

Want to know more about Dallas?

Stop by the DFW host local section booth!

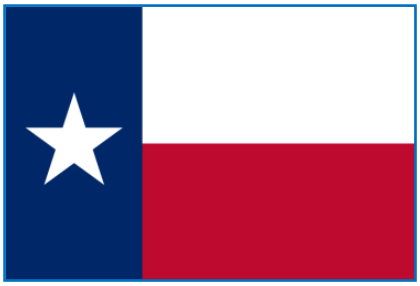
Dallas Convention Center, Lobby A/B

Ask questions about food, entertainment, & travel in the DFW area

Learn about exciting activities and awards in the DFW Local Section

Get info on SWRM 2014 in Fort Worth

FREE Cowboy Boot key chains for the first 200 people!



Daily giveaways for restaurants in the DFW area!

Saturday 3 – 6PM
Sunday to Wednesday 7:30AM – 6PM
Thursday 7:30AM – 1PM

Novel compound keeps Parkinson's symptoms at bay in mice

Discovery of Vinyl Sulfones as a Novel Class of Neuroprotective Agents toward Parkinson's Disease Therapy
Journal of Medicinal Chemistry

Scientists report that they have developed a novel compound that appears to protect mice against developing movement problems associated with Parkinson's disease (PD). The research, which could one day in the future translate into a therapy that could halt the progression of PD and thereby prevent the symptoms of the disease, appears in ACS' *Journal of Medicinal Chemistry*.

Onyou Hwang, Ki Duk Park and colleagues explain that PD, which affects an estimated 4 million to 10 million people worldwide, is a progressive movement disorder with no known cure. It often starts with slight tremors and gets worse over time. Muscles go stiff. Walking becomes difficult. Speech is slurred. No one knows for certain what causes the disease, but research has shown that it's linked with the loss of nerve cells in the brain that secrete dopamine, a chemical that is involved in movement and emotion. To find a potential new therapy for PD, the research team searched for a way to shield these brain cells.

They made 56 compounds and tested them to see which ones boosted the production of proteins that protect dopamine-releasing neurons from damage. Of those, one, which they call "12g," proved to be the most active. Interestingly, it protected mice from developing PD-like symptoms in one laboratory test. "Taken together, 12g was found to effectively prevent the motor deficits that are associated with PD," they say.

The authors acknowledge funding from the Korea Institute of Science and Technology, the Korea Health Technology R&D Project, the Ministry of Health and Welfare, the Korea Research Council of Fundamental Science and Technology and the National Research Foundation of Korea.

Call for Nominations
2014 ACS Fellows

The DFW Section invites nominations for 2014 ACS Fellows. ACS Fellows must be current members in good standing and display excellence and leadership in both of two areas:
1. Science, the profession, education, and/or management
2. Volunteer service in the ACS community.

More info about the ACS Fellows Program:
http://www.acs.org/content/acs/en/funding-and-awards/fellows.html

Local Section Deadline March 14
The Local Section will choose 3 potential nominees to nominate to the National ACS

National Deadline April 1
Note: Nominators and nominees will have 2 weeks to complete application material to submit to national ACS.

Email Katie Walker (kawalker@austincollege.edu) for questions or nominations.

National Chemistry Olympiad

The DFW section of the American Chemical Society will be conducting its local qualifying exam for the 2014 National Chemistry Olympiad on Saturday, March 22, 2014, at 8:30 am, at

The University of North Texas: Chemistry Building, Room 109

The University of Texas at Arlington: Baker Hall, Room 114

PRINTING: ***In order to print the information or pre-registration documents, click on the link, hit Share (below the document) and then Download as pdf. You will then be able to print the form.***

GENERAL INFORMATION

Parking information and maps are available at

http://www.unt.edu/transit/pdf/parkingmap.pdf

http://www.uta.edu/maps/

UNT **UTA**

PLEASE NOTE: There is no cost to students or teachers for this or the national exams. Copies of previous years' exams are available for practice: http://www.acs.org/content/acs/en/education/students/highschool/olympiad/pastexams.html

PRACTICE EXAMS

While 'walk-ins' are welcome, to help the coordinators anticipate how many exams to have available at each testing facility it is encouraged to pre-register for the local qualifying exam. Please Email or FAX the completed pre-registration form to Brad Pierce (bspierce@uta.edu) or FAX to 817.272.3808.

PREREGISTRATION

DFW SECTION OF THE ACS
Call for Nominations
Doherty and Schulz Awards

Nominations are invited for the 2014 Wilfred T. Doherty and Werner Schulz awards. Nomination forms are available online at acsdfw.org. This year's chair is Dr. Mihaela C. Stefan at UTD (972-883-6581; send nomination files to **mci071000@utdallas.edu**). Nominations are due by April 15. Each nomination should contain a cover letter highlighting the nominee's accomplishments; seconding letters may accompany nominations. Nominations remain active for five years but should be updated annually.

The Doherty Award is given for excellence in chemical research or chemistry teaching, meritorious service to ACS, establishment of a new chemical industry, solution of pollution problems, and advances in curative or preventive chemotherapy. Nominees may come from industry, academia, government, or small business. The nominee should be a resident member in the area served by the DFW Section, and the work should have been done here. The award is $1500 and an engraved plaque. A photo of the Doherty Award winner will be displayed permanently in the Gallery of Doherty Award winners, Berkner Hall, UT-Dallas.

The Schulz Award is given to high school chemistry teachers, who, like the late Dr. Werner Schulz, bring that something extra to the teaching of chemistry. The nominee and/or nominator need not be ACS members. Nominees should show excellence in chemistry teaching as demonstrated by testimonials from students and fellow teachers, results in student competitions, and diligence in updating and expanding scientific/teaching credentials. A photo of the Schulz Award winner will be displayed for one year at the Perot Museum of Nature and Science in Dallas, and then displayed permanently in the Gallery of Schulz Award winners, Science Bldg., Tarleton State University. A traveling plaque stays at the winner's high school for the year of the award. Winners will normally receive their awards and give their lectures at a fall meeting of the section.

Remember, a continuous flow of nominations is needed to maintain the quality of awards!

From the ACS Press Room

How to tell when bubbly goes bad before popping the cork

Kinetics of Browning, Phenolics, and 5-Hydroxymethylfurfural in Commercial Sparkling Wines
Journal of Agricultural and Food Chemistry

In the rare case that New Year's revelers have a bottle of leftover bubbly, they have no way to tell if it'll stay good until they pop the cork and taste it at the next celebration. But now scientists are reporting a precise new way for wineries — and their customers — to predict how long their sparkling wines will last. The study appears in ACS' *Journal of Agricultural and Food Chemistry*.

Montserrat Riu-Aumatell and colleagues explain that the shelf life of various sparkling wines, from champagne to prosecco, depends on environmental factors such as temperature. Currently, wineries detect the so-called browning of bubbly by measuring its "absorbance," or its absorption of light at a particular wavelength. It's a fast and easy technique but not very sensitive. Researchers exploring the chemistry of sparkling wine are turning to the food industry for alternatives. Food manufacturers can measure a compound called 5-HMF, which builds up in food as it goes bad, to tell when to toss a product out. Riu-Aumatell's team decided to see if they could use the compound, which is also found in bubbly, to predict the shelf life of sparkling wines.

They tested levels of this browning compound in several bottles stored over two years at different temperatures: room, cellar (61 degrees Fahrenheit) and refrigerator (39 degrees Fahrenheit). Their study found that 5-HMF is a good indicator of freshness, and also that refrigerating sparkling wines almost completely prevented browning. To make their results more practical for wineries, the researchers came up with a mathematical model that predicts how long products will stay drinkable at varying storage temperatures.

The authors acknowledge funding from the Spanish Comisión Interministerial de Ciencia y Tecnología, the ACC1Ó EVALX-ARTA2010 and the Generalitat de Catalunya.

DFW Officers Page

Letter from the Chair

Dear colleagues,

We had a great turnout at our February meeting in both numbers of attendees and diversity. It was an evening of food, socializing, and discussion about women in science with a mixture of chemists from high schools, universities, government, and companies in industry!

Thanks to all of the volunteers who are helping out with the National Meeting this month! We had a huge response—so much so that we had to turn away volunteers. If you are excited about volunteering, make sure you keep an eye out for opportunities with the Southwest Regional Meeting in Fort Worth in the Fall. If you are attending the National Meeting, make sure you stop by our Host Local Section Booth to check out all the great things the local section has been up to and to win door prizes!

The local section invites nominations for 2014 ACS Fellows. Please see the ad in this issue for details. Send any suggested nominee names to Katie Walker (kawalker@austincollege.edu) by March 14.

Also, all students are invited by the local section to submit abstracts to present at the 47th Meeting in Miniature on Saturday, April 26 at Texas Wesleyan University in Fort Worth. Please see the ad in this issue for details—abstract submission deadline is April 9.

See you at the National Meeting!
-Katie Walker
2014 Chair

SAVING and PRINTING the SOUTHWEST RETORT

When you receive the email announcing the RETORT, access it from the link or directly on ISSUU.COM. Once you have it on your screen, in order to print the RETORT or a linked document, hit Share (below the document) and then Download. This will download the magazine as a pdf. You will then be able to save and print. (You cannot print directly from the issue unless you are registered with issuu.com.)

SOUTHWEST REGIONAL MEETING 2014

Fort Worth, TX | November 19-22, 2014

CONTACTS

Kirby Drake, General Chair: kirby.drake@kk-llp.com
Danny Dunn, Program Chair: dannyldunn@sbcglobal.net
Martha Gilchrist, Treasurer: Martha.Gilchrist@tccd.edu
Denise Merkle, Exhibits Chair: dmerkle@sciconsult.com
General SWRM mailbox: swrm@acsdfw.org

Now seeking potential SWRM '14 exhibitors and sponsors: Contact Exhibits Chair

To volunteer for the 2014 Southwest Regional ACS Meeting! SWRM 2014 will be held at the Fort Worth Renaissance Worthington Hotel, November 19-22, 2014.

Around the Area

University of Arkansas

On the Go

Ingrid Fritsch presented a poster entitled "Redox-Magnetohydrodynamic Microfluidics with Conducting Polymer-Modified Electrodes," at the Gordon Research Conference on Electrochemistry, Ventura, CA, January 5-10, 2014. It was co-authored by Christena K. Nash, Vishal Sahore, and Ingrid Fritsch. She also presented a talk "Electrochemically-Activated, Natural Convection Microfluidics" at the Society of Western Analytical Professors (SWAP) Meeting, Arizona State University, Tempe, AZ, January 9-10, 2014. It was co-authored by Adam Kreidermacher, Vishal Sahore, and Ingrid Fritsch.

Colin Heyes gave a talk at Whitman College, Walla Walla, WA on Jan. 24, 2014, entitled "How Coordination Geometry, Lability and Photocatalytic Crosslinking of Ligands Affects the Properties of Aqueous Quantum Dots for Biophysical and Biomedical Imaging Applications". He will also present a talk at Missouri State University Feb. 26 entitled "Interfacial Chemistry in Quantum Dots: Implications for Biophysical and Biomedical Imaging Applications."

Charles Wilkins gave a talk entitled "Matrix-Assisted Ionization in Vacuum for High Performance FT Mass Spectrometry" at the Society for Western Analytical Professors (SWAP) meeting January 10, 2014, Arizona State Univ. in Tempe, AZ.

Publications

"Stable Salt-water Cluster Structures Reflect the Delicate Competition Between Ion-water and Water-Water Interactions," Cheng-Wen Liu, Feng Wang, Lijiang Yang, Xin-Zheng Li, Wei-Jun Zheng, and Yi Qin Gao, ***J. Phys. Chem. B*, 118**, 743 (2014).

Sahore, V.; Fritsch, I. "Flat Flow Profiles Achieved with Micro-fluidics Generated by Redox- Magnetohydrodynamis (MHD)" ***Anal. Chem.*,** 2013, 11809-11816. (doi:10.1021/ac402476v).

In memoriam

Wally Cordes

1934-2014

Emeritus Professor

If it were possible, the periodic tables in the chemistry building would be at half-mast this week as a display of sadness for the passing of University Professor Wally Cordes. Professor Cordes started his career at the University of Arkansas in 1959 as an assistant professor. Through his 40 plus years of service he developed a reputation as one of the most outstanding teachers ever that called the U of A his home. University Chemistry II was his course of choice and he dedicated his life to the students in those classes, thousands of them through the years. He made the classes exciting with stunts that past students remember vividly.

He also had a knack for getting at the center of a difficult concept and developing ways that helped the students relate to the concepts. His enthusiasm for teaching was infectious. Many colleagues learned by his example and ultimately his leadership in this

area was recognized through the formation of the Wally Cordes Center for Teaching and Faculty Support, where successful faculty can go to share teaching practices with each other and with struggling new faculty.

Full obituary is available at
http://www.legacy.com/obituaries/journalstandard/obituary.aspx?pid=169386881

In memoriam

Jon Baker

1956-2014

Research Associate Professor

The Department of Chemistry and Biochemistry of the University of Arkansas-Fayetteville announces with deep regret the passing of its long-time member, Dr. Jon Baker, former Research Associate Professor, on January 16, 2014, just short of his 58th birthday. Jon was an unselfish friend and an excellent scientist. A native of England, he had a scientific career spanning three continents. He contributed significantly to several branches of theoretical chemistry; his main area of expertise was the calculation of molecular geometries and related quantities where he became a worldwide renowned expert and the author of several basic review papers and encyclopedia articles. Jon was very fond of chemistry and very knowledgeable about it. Jon became one of the founding members of Parallel Quantum Solutions, LLC in 1997 and from that time on he split his energy and time between the University and PQS. He had to withdraw from his university position for health reasons in 2006. However, as his health improved, he returned to do research, the last time between September 2011 and March 2012. His untimely departure is a sad loss for the Chemistry Department and the University of Arkansas.

Full obituary is available at
http://chemistry.uark.edu/MOLE-February-2014.pdf

East Texas Section

The East Texas Section of the American Chemical Society is offering a limited number of grants to High School Chemistry teachers in our area. We have two different grant programs:

1. High School Chemistry Program that will fund up to $500 for materials, chemicals or other resources for a chemistry-related project.

2. Chemistry Professional Meeting Support Program that will fund up to $500 for meeting registration or housing at a professional meeting sponsored by a chemical society, or by a science-related society.

To receive the support applications (electronic format only), please contact Dr. Bruce Hathaway (brucehathaway@letu.edu), the grants program committee chair.

From the ACS Press Room

Waste from age-old paper industry becomes new

Alternative Solid Fuel Production from Paper Sludge Employing Hydrothermal Treatment
Energy & Fuels

In today's search for renewable energy sources, researchers are turning to the hi-tech, from solar and hydrogen fuel cells, and the very low-tech. The latest example of a low-tech alternative comes from an age-old industry: paper. A new study, appearing in ACS' journal *Energy & Fuels,* reveals a sustainable way to turn the huge amounts of waste from paper production into solid fuel with the added bonus of diverting the sludge from overflowing landfills.

Chinnathan Areeprasert, Peitao Zhao and colleagues note that making paper, from debarking and chipping wood to the final steps of pulping and refining, creates a tremendous amount of wood fibers and other wastes. Sending this sludge to landfills can be problematic, because substances can leach out and pollute groundwater. But recently, researchers have been exploring ways to turn the planet's growing waste streams into useful products, such as fuel and fertilizer. One such process is called subcritical hydrothermal treatment (HTT), and it uses heat and pressure to break down and remove various components of a mixture. In one case, researchers used HTT to turn sewage into a clean, solid fuel. Early studies show it can transform paper sludge into fuel as well. Areeprasert's team decided to figure out the best HTT conditions for this process, and to test them in a pilot plant.

They tried different temperatures and defined the optimal conditions for converting paper waste into fuel using HTT. The resulting product had a composition similar to coal. Importantly, the amount of energy that can be recovered from the fuel is higher than the energy required to make it. The researchers conclude that this method for making fuel is both sustainable and lends itself to commercialization.

The authors acknowledge funding from the Siam Cement Public Company Limited.

From the editor

Quite a few years ago, I gave my first talk at a Southwest Regional Meeting... my very first professional talk ever. It was held in Baton Rouge at the Heidelberg Hotel. [The location is important because Louisiana natives are quite fond of the old Heidelberg; it was a favorite haunt of Huey P. Long, the legendary Louisiana governor and U.S. Senator known as "The Kingfish." Built in 1927 and listed on the National Register of Historic Places, the hotel once served as a makeshift Capitol during a dispute between Long and Lieutenant Governor Paul Cyr. A newly elected senator, Long refused to relinquish his duties as governor, prompting Cyr to set up operations in the hotel since Huey wouldn't let him do it in the Capitol.] Anyway, back to SWRM: as I rose (shaking, sweaty palms) to give my talk, three of my Louisiana Tech professors walked in: Drs. Smith, Moore, and Trisler. Eeep! I was prepared to make a fool of myself in front of a roomful of strangers, but this was not on my agenda. However, I was encouraged by the fact that the previous speaker had been feeding chromium or cadmium salts to rats and said that 75% of his rats "kicked off". How much worse than that could I do?!

That said, Meetings-in-Miniature are the ideal place for grad students and undergrads to get their first experience on their feet. That way you don't have to wait for a national or a regional meeting for your first time up.

I just want to mention that March 6 seems to me to be a uniquely American day. On that day in 1836, the Alamo fell. In 1912, Oreos were introduced. In 1964, Cassius Clay changed his name to Mohammed Ali. What gets more American than that? Courage in the face of unimaginable odds, the quintessential cookie, and sheer audacity. Hey. That's us.

Best regards,
Connie