Central Texas ACS

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http://membership.acs.org/C/CentralTexas/index.html

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Newsletter of the Central Texas Section of the American Chemical Society

Tuesday, November 3rd, 6:30 PM-9:00 PM (Dinner 6:30-7:30, Talk 7:30-9:00)

Environmental Forensics, or, Who Was Responsible for the Spill?

Dr. R. Paul Philip

University of Oklahoma

The County Line on the Hill, 6500 Bee Caves Rd., Austin TX 78746

For directions and parking, see p. 3

$10 for members/adults, $5 for students, ***FREE*** *for 2009 volunteers*!

Please RSVP to malcolmdprouty@gmail.com or by calling (512) 968-4750

Biography

I received my Ph.D. in organic chemistry from the University of Sydney (Australia) in 1972 and more recently my D.Sc. degree from the same University in 1998. I then spent one and a half years as a post-doctoral fellow with Professor G. Eglinton at the University of Bristol (England) undertaking research in various aspects of organic geochemistry and the application of analytical techniques such as gas chromatography-mass spectrometry to this area of research. Following this, I spent four years at the University of California, Berkeley, as a research associate, directing the organic geochemistry research group of Professor Melvin Calvin. I returned to Sydney in 1977 to join the CSIRO, Fuel Geoscience Unit, now part of the Division of Fossil Fuels, where I was a principal research scientist studying various aspects of petroleum geochemistry. In June 1984, I joined the faculty at the University of Oklahoma. Recently a large amount of my research has been concerned with environmental studies and particularly investigating the use of stable carbon isotopes as a means of monitoring and tracking pollutants in the environment. Professional activities: associate editor of I. Environmental Forensics, and Chairman of the Geochemistry Division of the American Chemical Society, 1993-1995.

Talk Abstract

As soon as organic compounds are spilled into the environment, chances will start to occur to them as a result of weathering process. For example witth crude oils changes will range from evaporation and loss of light ends to extensive biodegradation and loss of many of the compounds typically used for correlating spilled oils with their original source. As a result of these weathering processes, it is often difficult to correlate the spilled oils with their suspected sources. It is essential that these correlations be made to determine who is responsible for the spill and who pays for the clean-up process. There are a number of sophisticated techniques available for this type of forensic geochemistry which can be used for correlating weathered samples with their respective source materials. In this talk specific emphasis will be directed towards the most recent technique for use in this area namely gas chromatography combined with isotope ratio mass spectrometry (GCIRMS). Examples will be presented to demonstrate that the isotopic composition of individual compounds in complex mixtures, such as crude oils, can be used to correlate them with their weathered counterparts. It is clear from the results that GCIRMS is a powerful new tool in forensic geochemistry particularly when combined with the more traditional techniques such as GC and GCMS. Other applications will be described to demonstrate that GCIRMS can also be used to determine the source of leaks from underground storage tanks and sources of gases from leaking pipelines. Variations in the isotopic composition of the MTBE added to gasolines also provides the opportunity of using GCIRMS as a means of monitoring, and determination of the source of, gasoline spills from underground storage tanks. Applications are many and varied but with this relatively new technique the ability to correlate heavily weathered samples with their unweathered counterparts has been elevated to a new level and provided forensic geochemistry with a new dimension.

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Chair's Page

National Chemistry Week 2009

National Chemistry Week 2009 at the Austin Children's Museum was a great success! Volunteers did a great job and will be honored at the November meeting with FREE admission! Special recognition is also given to Betsy Shelton, Dodie Wells, Jackie Padilla, and Malcolm Prouty for organizing the event.

Nominations Needed for Central Texas ACS Executive Committee Positions

Central Texas ACS is looking for qualified members to fill the positions of **2010 Chair-Elect** and **Assistant Webmaster**. We will have elections at the November 3rd meeting at the County Line (see front page for details).

To nominate individuals or for more information about the Central Texas ACS Executive Committee, contact Malcolm Prouty by email at malcolmdprouty@gmail.com or by calling (512) 968-4750.

Science Fair Judges Needed
Teravista Elementary School, Round Rock
Thursday, January 21, 2010

Judges must commit to judging that afternoon as well as attending a judges' meeting the week before in the evening. For more information or to volunteer, contact:

Amber Manzano, 704-0580
amber_manzano@roundrockisd.org
or
Stephanie Sheridan, 704-0530
stephanie_sheridan@roundrockisd.org

ACS Unveils New Employment Data Tool

The **Employment Dashboard** (found at http://webapps.acs.org/acsdash/) is a visual control panel that lets you examine results from ACS employment surveys. It provides an overview of salaries, demographics, and employment. It is not intended to assess your particular employment situation.

You can choose a region of interest (e.g. New England) and choose your category—Salary, Employment, or Demographics. You can view data by individual region or select "All Regions".

The data available run from 2000 to 2009 and are collected from the yearly Comprehensive Survey of Salary and Employment and the ChemCensus Survey, which is collected every five years.
Questions and comments may be emailed to research@acs.org.

Central Texas ACS: November 2009
Calendar of Events

Southwest Regional Meeting
November 4-7, 2009
El Paso, Texas

The complete program for this event is now available at http://www.swrm.info/

A Note from the Organizing Committee:

Colleagues:

The program for the 65th Southwest Regional Meeting of the American Chemical Society in El Paso, Texas, is now complete and available on the website at http://swrm.info. If you are presenting, you can find the time of your talk or poster here. Times for symposia, general sessions and plenary talks are also given.

This is an outstanding conference with over 400 abstracts, thirteen symposia and three plenary talks.

It is hosted by the Rio Grande Valley Section in the historic Camino Real Hotel on November 1 -7, 2009.

We hope to see you here.

-The organizing committee.

Directions to The County Line for Nov. 4th Meeting

- Take Loop 360 (S Capital of Texas Highway) to Bee Caves Road
- Head West on Bee Caves Road for approximately 0.5 miles
- The County Line on the Hill is on the right-hand side at 6500 Bee Caves Road

Job Opening in Austin: Software Tester with Thermo Fisher Scientific

A dynamic and self-motivated individual is required to perform software test on state-of-the-art mass spectrometry instrumentation. This individual will participate in the product development cycle of data systems software to control Thermo Fisher mass spectrometry instruments.

Capable of leading testing activities. Design, execute, and maintain test procedures for a variety of Windows OS based instrumentation software products. Develop test cases based on functional specifications and design documents. Organize and maintain defect-tracking and test case databases for multiple projects. Able to calibrate, troubleshoot and do preventative maintenance on instruments. BS/MS in Chemistry or equivalent. 2-4 years of experience testing software for commercial applications, preferably for instrument control software products. Must have experience with mass spectrometry, preferably in conjunction with GC, or less desired, LC or HPLC. Understanding of the software testing process, test script development and experience with software automation tools. Excellent analytical and problem solving skills. Must be a team leader with excellent verbal and written communication skills. A scientific background in chemistry, biochemistry or biology is highly desired. Industrial laboratory experience is a plus. Familiarity with Quality System Regulation and FDA Expectations for software verification and validation is a plus.

To apply, contact Recruiter Julie Malech at Thermo Fisher: 408.965.6375, julie.malech@thermofisher.com