



NEWSLETTER

Oklahoma Section American Chemical Society

Volume 14 Number 1

February 1, 2008

Nuclear Forensics

Monday – February 25, 2008
Cherokee Room
University Center Room 213
University of Central Oklahoma
Edmond OK 73034

Dr. Thomas H. Jourdan

Assistant Director – Forensic Science Institute
Associate Professor of Chemistry
The University of Central Oklahoma
Edmond OK 73034

The presentation will begin by touching on the recent death of Soviet dissident Alexander Litvinenko, attributed by UK authorities to the unintentional ingestion of polonium-210, as an introduction to ionizing α , β and γ radiation and its effects. Up next will be a discussion of nuclides and natural decay chains, the concept of half-life, and field of health physics, which will open the door to a dialogue on the terrorism-related misuse of radiological materials. In particular, the topics of the diversion of fissile materials, as well as industrial and medical radioactive sources, and their subsequent incorporation into radiological dispersal devices and/or nuclear explosive devices will be visited. The discussion will then turn to an overview of the collection and processing of evidence [radiologically-contaminated traditional trace and bulk evidence as well as the radiological material itself] in such cases, and close with the revisiting of the Litvinenko case, this time in detail. 

[Reservation Information on Page 2] 

Schedule:

6:00 PM Social Hour: Home of Dr. and Mrs. Robert Bost
501 Park Place
Edmond OK 73034

7:00 PM Dinner: Cherokee Room
Student Union Ballroom
University of Central Oklahoma

8:00 PM Speaker: Cherokee Room
Dr. Thomas H. Jourdan

Dinner Menu: Marinated black beans and corn salad; Cheese enchiladas and beef fajitas; Spanish rice and sauteed squash; assortment of desserts; coffee and tea..

Cost: \$18.00-ACS Member; \$5.00-ACS Student Affiliate.

Deadline: Wednesday, 02/20/08; 12 noon Carla Supon: 405.974.5732 csupon@ucok.edu

Directions To Bost Home:

Exit either I-35 or Broadway at 2nd Street [US 77].

Turn south on Rankin Street, which is just West of the new OSBI building.

The Bost home is on the corner of Rankin and Park Place.

Phone: 405.664.2386

Dr. Thomas H. Jourdan

At the close of 2006, Dr. Jourdan retired from his position as a Supervisory Special Agent of the FBI to assume two roles at UCO, those positions being Assistant Director, Forensic Science Institute [FSI] and Associate Professor of Chemistry. His primary responsibility at the FSI is the extra-territorial program, which is coordinated with the United Nations' International Atomic Energy Agency [IAEA]. Since coming to UCO, he has participated in IAEA training courses in Pakistan, Brazil, China, India, Singapore, and South Africa. Dr. Jourdan's leisure interests include clay bird shooting and classic cars.

Valerie Ferguson – 2007 Recipient Southwest Region High School Teaching Award

Valerie Ferguson is a chemistry teacher at Moore High School. For 20 years, Ferguson has toiled countless hours to find ways to teach the often complex subject in a way that is easy for the students to grasp.

Her efforts to make chemistry palatable recently garnered her two awards from the American Chemical Society. She received the society's 2007 Southwestern Regional High School Teaching Award and the Southwest Region's Excellence in Teaching Award.

Ferguson competed against teachers from Arkansas, Louisiana, Oklahoma and Texas. For Ferguson, being nominated for one award, much less two was more than she expected.

Ferguson's interest in chemistry began while she was in college at the University of Central Oklahoma. Her college professors made the subject fun and with her interest piqued, she decided to become a science teacher upon

graduating in 1986. After spending her first teaching job at Highland West Junior High School, she began teaching chemistry and over time the interest grew into a love.

Besides receiving two plaques for her awards, Ferguson also garnered a \$2,000 cash prize.

Although she appreciated the prizes, Ferguson said the real payoff for her is seeing what her students go on to after they graduate.

Oklahoma Section Chair – 2008

Shawna S. York received her B.S. from Southern Nazarene University and her Ph.D. from the University of Oklahoma. Her doctoral research involved the characterization of polyethylene imine polymer electrolytes and model compounds. In 2001, she joined the faculty at Oklahoma Baptist University as an assistant professor of chemistry. She has been the coordinator of the National Chemistry Olympiad for the Oklahoma Sections since 2002.

Thanks To:

Dr. Cheryl Baldwin Frech for her years of dedicated service as Councilor for the Oklahoma Section, ACS. Cheryl served as Councilor from 2002-2007. Prior to her Councilor terms, she served as alternate Councilor. Cheryl has also held various Section offices since 1992. Currently, Cheryl attends to the Section PR

Cheryl attended almost every national ACS meeting during her terms as Councilor. This was in addition to her full time UCO chemistry department teaching and related duties. Her regular meeting attendance continued even after she became UCO Chemistry Department chair.

Cheryl always had a written report for the Section Newsletter for each meeting she attended. Often, the report gave more insight into what happened at the meeting vs that of the “official” C&E News report later on.

Dr. Barry K. Lavine Associate Professor of Chemistry at Oklahoma State University is the immediate past-chair Oklahoma Section ACS. Barry’s approach to Section duties belied his ability to get whatever job needed to be done at Executive Committee meetings or during other times. Barry’s enthusiasm and dedication served the Section well during his tenure. Thank you Barry for a job well done as 2007 Chair of the Oklahoma Section ACS. We appreciated your work and efforts in all you did!

2007 Section Election Results

Chair-elect: Will Serve 2009 Year

Lloyd A. Bumm – is an Associate Professor in the Department of Physics and Astronomy at the University of Oklahoma. He joined the department in 2001. Bumm received his B.S. in chemistry from Clarkson University (1982) and his PhD in Physical and Analytical Chemistry with R.P. Van Duyne at the Northwestern University (1991). He has held post doctoral positions at Pacific Northwest National Laboratory with James P. Cowin and at the Pennsylvania State University with Paul S. Weiss in the Chemistry Department. Bumm is an experimental physical chemist interested in single molecule measurements, single nanoparticle plasmonics, and novel instrumentation for combined scanned probe microscopy and optical spectroscopy. To date, he has 32 publications and one patent. His honors include the NSF Faculty Early Career Development Award and the OU Junior Faculty Research Award. He is the co-developer of NanoLab, a hands-on laboratory course in nanoscience, funded by an NSF Nanotechnology Undergraduate Education grant. He attends ACS, APS, AVS, and MRS meetings.

Councilor: Will Serve 2 year term starting 01/01/08

Allen Apblett is an Associate Professor of Chemistry at Oklahoma State University. He received a B.Sc.(Honors) degree from The University of New Brunswick in 1984. He then attended graduate school in Chemistry at The University of Calgary under the supervision of Dr. Tristram Chivers, receiving his Ph.D. in March 1989. Apblett was awarded a Natural Sciences and Engineering Research Council Postdoctoral Fellowship that he took up at Harvard University in Dr. Andrew Barron's research group. In 1991 Apblett became an assistant professor at Tulane University. He moved to Oklahoma State University in 1997. In addition to academic positions Professor Apblett has also worked as an analytical chemist for the Canadian Department of Fisheries and Oceans and for the International Olympic Committee as a member of the drug-testing team in the 1988 Winter Olympics. Apblett has published over 86 scientific papers or book chapters, made over 100 presentations in the past 7 years, and 12 Ph.D. and seven M.S. students have graduated from his research groups. Among the awards that Dr. Apblett has received are the ACS Environmental Division Certificate of Merit, nomination as a member of Project Kaleidoscope's Faculty for the 21st Century, a Mortar Board Award for Excellence in Teaching, the Governor General of Canada's Medal, and a Lilly Endowment Teaching Fellowship, and the OSU College of Arts and Science Junior Faculty Excellence in Research Award. Recently, the American Ceramic Society honored Apblett by selecting him for their "Profiles in Excellence" program. Apblett has served the local section of the ACS as Chair Elect and Chair and has served on the executive committee for several years. In other scientific organizations, he served as education chair for the Southern Alberta section of the Canadian Society for Chemistry, as a member of the scholarship committee for the Southwestern American Ceramic Society, and the Program Chair of the Nuclear and Environmental Technology Division of the American Ceramic Society. Currently, Apblett is the secretary of the latter organization.

Apblett is interested in being elected as the Councilor for the Oklahoma Section of the American Chemical Society so that he can provide a strong voice for the section at national meetings. He will work hard to reverse the trend of diminishing support for local sections by the ACS and will attempt to solve the problem of the poor assistance that the Oklahoma Section received from the ACS Speaker Service. Apblett will also work diligently to ensure that all members of the local section are kept informed about developments in the ACS regional and national governance meetings.

Treasurer: Will Serve 2 year term starting 01/01/08

Kenneth H. Brown Ken was a faculty member since 1973 at Northwestern Oklahoma State University. He taught the General Chemistry course for majors, Analytical Chemistry and Physical Chemistry. His research included the rheology of asphalt roofing materials and some environmental analytical projects. Ken has been a 44 year ACS member and has served as the Oklahoma Section Treasurer for the past 8 years. Ken retired from Northwestern at the end of the Spring 2004 semester. Ken resides in Alva.

Oklahoma Section Website:

Dr. James J. Dechter – is the Section webmaster. Jim is Professor of Chemistry at the University of Central Oklahoma. Jim served as UCO Chemistry Department Chair from 2000-2004. Jim was also Section Chair in 2001.

To post information on the website, contact Jim. 405.974.5435. e-mail: jdechter@ucok.edu

The Oklahoma Section web site: <http://membership.acs.org/O/Oklahoma/Index.htm>.

Student Awards

The Oklahoma Section offers awards for undergraduate students. The Terrill Smith Travel Award is for undergraduates to travel to a regional or national ACS meeting to present a paper or poster. Two awards of up to \$600 will be given each year, one for fall and one for spring travel. The award is in honor of Dr. Terrill [Terry] Smith, longtime Oklahoma Section officer/councilor. He retired from UCO in 1999. Terry was a strong supporter of undergraduate research and student affiliates at UCO and in the section.

The Roger Baldwin Graduate School Award is for undergraduate students who have been accepted to attend graduate school in the chemical sciences. One \$500 award will be presented each spring. This award honors Dr. Roger Baldwin, another longtime Oklahoma Section officer who is retired from Kerr McGee Corporation. The section is able to offer these new awards partially due to Roger's persistent fund-raising efforts associated with the Southwest Regional Meeting in 2003.

Applications are available on the website, <http://membership.acs.org/O/Oklahoma/Index.htm>. For more information, contact Gordon Eggleton, geggleton@sosu.edu.

Executive Compensation Information Available

Information from the American Chemical Society's 2006 Form 990 is now available to ACS members on www.acs.org. To access the information please have your ACS membership number handy and follow these instructions: Go to www.acs.org. In the upper right-hand corner, log in. If you are already a registered user, enter your user name and password. If you're a new user, follow the link and register [a process that requires your ACS membership number and takes less than a minute]. Once you have logged in, you will see a link titled "Member Information." Click on this link, go to the heading "Your Organization" at the bottom of the screen, and click on the link titled "Access the Compensation of ACS Officers and Key Employees." You will immediately go to the introductory text: the Form 990 is available by clicking on the link at the bottom of the page titled "2006 Compensation Schedules." If you have any problems, contact webmasher@acs.org.

Editor's Note: Members are encouraged to access this site. The information is most interesting!

Tentative 2008 Meetings:

Monday 14 April 2008
Speaker & location TBA

May 2008
Speaker , date & location TBA

Friday, 26 September 2008
Annual Family Night at OBU, Shawnee
Speaker TBA

October 2008
Speaker , date & location TBA

November 2008
Annual Oklahoma Chemist of The Year Speaker
Speaker , date & location TBA

February 2008 Section Meeting

Monday 25 February, 2008

**Cherokee Room
University Center Room 213
University of Central Oklahoma
Edmond OK 73034**

Speaker: Dr. Thomas H. Jourdan

Nuclear Forensics.



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