



NEWSLETTER

Oklahoma Section American Chemical Society

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May 2013

Annual Awards Banquet
Thursday 02 May 2013

GRADUATE EDUCATION IN THE FORENSIC SCIENCES AT OKLAHOMA STATE UNIVERSITY

Jarrad R. Wagner

*OSU Forensic Toxicology and Trace Laboratory
Oklahoma State University-Tulsa*



Dr. Wagner will provide an overview of the programs at the School of Forensic Sciences at the Oklahoma State University Center for Health Sciences in Tulsa, OK. The mission of the School of Forensic Sciences is to provide high quality education and training in the field of Forensic Science. In accomplishing this mission, education and training of qualified undergraduates and practicing forensic scientists to the master's degree level--and possibly beyond--will provide an ongoing supply of individuals who represent the next generation of forensic practitioners and also advance the field of forensic science through knowledge gained from research.

continued on page 2 with the speaker's biographic sketch. →

Schedule of Events

6:00 pm	Social Half Hour
6:30 pm	Dinner
7:15 pm	Awards
7:30 pm	Presentation



OSU-OKC map
QR code

Oklahoma State University – Oklahoma City
Student Center 3rd Floor, Conference North
900 N. Portland Ave, Oklahoma City, OK 73107
map: <http://www.osuokc.edu/map/>

Dinner Reservation Information

Italian Buffet Menu

Chicken Parmesan
Fettuccine Alfredo
Italian Salad
Italian Green Beans
Garlic Bread
Iced Tea or Coffee

Cost

\$20 members
\$5 students

RSVP Deadline

Monday 29 Apr noon
Contact: Dyanne Rutledge
405-945-9112

cdr@osuokc.edu

RSVP is NOT required to attend the presentation.

Annual Awards Banquet Honorees

- Members with 50 & 60 years of service in 2013.
- Chemistry Olympiad finalists and their teachers.

2013 Service Milestones

50 Years of Service

- David H. Bohlen, Alva
- J. R. Smiley Irelan, Shawnee
- William A. Yuill, Jr., Edmond

60 years of Service

- Don Beaver, Bethany
- Elliot R. Hale, OKC
- Ronald G. Menzel, Durant
- Donald R. Moore, OKC
- Wilbert J. Robertson, Warr Acres
- John H. Sikes, Edmond

2013 Chemistry Olympiad Finalists

- Joseph Ahn (OSSM—Fazlur Rahman)
- Robert Chancellor (Moore—Valerie Ferguson)
- Andrew Graham (Midwest City—Leann Robertson)
- Sean Lesley (Midwest City—Leann Robertson)
- Kevin Rysted (Moore—Valerie Ferguson)
- Jimmy Wu (OSSM, Fazlur Rahman)
- Spencer Yue (Norman North—Chris Yohn)
- Julie Zhu (Norman North—Chris Yohn)

!! MARK YOUR CALENDARS !! Oklahoma ACS Family Night Friday 20 Sep at OBU

James L. Marshall
and Virginia R. Marshall
University of North Texas, Denton, Texas

REDISCOVERY
OF THE ELEMENTS
A Travelogue:
Rediscovering the Original
Elemental Discovery Sites

see the full story on page 3

*Rediscovery of the Elements:
Background and Scope*



Visit the section's website for the Newsletter archive

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Councilor Report (19 Apr 2013)

Allen W. Apblett (Oklahoma Section Councilor)

At the ACS Council Meeting in New Orleans on April 10, the Council selected G. Bryan Balazs and Charles E. Kolb, Jr. as candidates for 2014 President-Elect. These two candidates, along with any candidates put forward via the petition process, will stand for election in the 2013 Fall National Election. The Committee on Nominations and Elections announced the selection of the following candidates for Directors-at-Large for a 2014-2016 term: Susan B. Butts, Thom H. Dunning, Jr., Dorothy J. Phillips, and Kathleen M. Schulz. The election of two Directors-at-Large from among these candidates (and any selected via petition) will be conducted in the fall. As councilor, I will be voting on behalf of the section so I encourage all of our members to inform me of any preference you might have for any of these candidates (allen.apblett@okstate.edu). Since we are currently in District V, we will not be electing a District Director this year.

At the 2012 fall meeting, Councilors called for a broader and long-lasting solution to requirements that Board electoral districts have parity in member populations. At this meeting, the Committee on Nominations and Elections presented a redistricting proposal that brings all six of the election districts within 400-1,000 members of the mid-point of the permissible range. This proposed action is designed to eliminate the need for frequent small changes for some time to come. In the proposed redistricting the Oklahoma Section will move from District V to District IV. The proposal will be up for vote at the fall Council meeting in Indianapolis.

The Council voted to set the member dues for 2014 at the fully escalated rate of \$154. This rate is established pursuant to an inflation-adjustment formula in the ACS Constitution and Bylaws.

A petition to amend the national election procedures failed (85% against, 15% in favor). The petition sought to shorten the campaign period for candidates for President-Elect and to charge the Committee on Nominations and Elections (N&E) with proposing two candidates for President-Elect. Currently, N&E proposes four nominees from which Council selects two candidates. Under the petition, Council would no longer vote on a list of nominees, effectively removing our Section's representation in making such an important decision. The reduction of the election process by a few months when the Presidential succession is 3 years at the cost of democratic representation does not make sense to this councilor.

In another measure that affects our section, the Council voted to approve a new formula for the distribution of allocations to individual Local Sections beginning in 2014. The new allocation will be divided as follows: base allotment (49%); per member allotment (43%), and Committee on Local Section Activities (LSAC) program funds (8%). The change was necessary because the previous non-percentage based formula was exceeding the funds available and was squeezing out the funds required for programs. We will probably see a small reduction in the allocation to the Oklahoma Section in 2014.

In a highly contested request, the Division of Colloid and Surface Chemistry wishes to change its name to the Division of Colloids, Surfaces and Nanomaterials. Six divisions have registered opposition to the proposed name, mainly due to the use of the term 'nanomaterials'. The Council will vote on this change at the fall meeting. I welcome input from members of our section on this matter.

I am pleased to announce a new benefit for ACS members that

(Speaker—continued from front page)

Jarrad R. Wagner Biographical Sketch

Dr. Jarrad Wagner is an Associate Professor of Forensic Sciences at Oklahoma State University Center for Health Sciences (OSU CHS) where he specializes in research and instruction in Forensic Toxicology and Trace Analytical Chemistry. The Master of Science in Forensic Sciences degree offered at OSU CHS is fully accredited by the American Academy of Forensic Sciences Forensic Science Education Programs Accreditation Commission (FEPAC).

Dr. Wagner's laboratory includes two liquid chromatograph tandem mass spectrometers (LC/MS/MS), a two gas chromatograph mass spectrometers (GC/MS), a headspace gas chromatograph with flame ionization detection (HS GC/FID), a matrix-assisted laser desorption ionization time of flight mass spectrometer (MALDI/TOF MS), a liquid robotic handler, an ion chromatography system, and capillary electrophoresis (CE) instrument. The laboratory is located in a building that is shared with the ASCLD/ISO accredited City of Tulsa Police Department Crime Laboratory.

Dr. Wagner formerly served as a Chemist for the FBI Laboratory, where he specialized in crime scene investigations involving hazardous materials. His prior law enforcement experience also includes his time as a Forensic Scientist in the Toxicology section of the Orange County (CA) Sheriff-Coroner's office and his service as a Reserve Police Officer in the City of Irvine, CA. He is a former Assistant Professor of Chemistry and Director of the Forensic Sciences program at California State University, Fresno.

Dr. Wagner holds a Ph.D. in Environmental Toxicology from the University of California at Irvine, as well as Bachelors of Science degrees in Chemistry and Biology. He is a member of the Society of Forensic Toxicologists, the Society of Toxicology, the International Association of Forensic Toxicologists, the American Academy of Forensic Sciences, the Clandestine Laboratory Investigating Chemists Association, and the International Association of Bomb Technicians and Investigators. He is a former member of the Scientific Working Group for the Forensic Analysis of Chemical Terrorism (SWGFACT) and the Scientific Working Group for Chemical, Biological, Radiological and Nuclear Materials (SWGCBRN). He is a current member of the Scientific Working Group for Forensic Toxicology (SWGTOX) and an Assistant Editor of the Journal of Analytical Toxicology. He has published several articles in scientific journals and has made presentations related to forensic science for professional institutes and trainings throughout the United States.

will provide are access to SciFinder for 25 free activities for personal use. SciFinder is a web-based tool that provides access to Chemical Abstracts, the most complete source for information on chemistry and the related sciences. Access will be offered by email invitation. This could be very useful to those members who don't have SciFinder access through their workplace.

REDISCOVERY OF THE ELEMENTS Background and Scope

Rediscovery of the Elements has been a team project of Jim and Jenny Marshall for the past 14 years. Because modern science evolved in Europe and the vast majority of the elements were discovered here, this project involved many summer-long trips to two dozen European countries. The timing of this work—starting at the end of the twentieth century—was fortunate. There were four reasons why this project could now be completed in a reasonable duration of time. First, the Iron Curtain had lifted; with the fall of the Berlin Wall in 1989 and the following opening of eastern Europe, easy access and travel was now possible to a major portion of Eastern Europe, including Russia. Second, internet communication now made possible facile communication; previously ordinary mail had necessitated weeks, months, and even years for queries and replies, but now efficient schedules and appointments could be set up for a profitable and full summer's study at many sites in Europe. Third, digital cameras had just arrived on the market; the first camera used by the authors was a Sony Mavica, with beautiful optics (but with 1-MByte floppy disks!) that allowed hundreds of photographs to be taken at reasonable cost. Fourth, GPS navigation allowed accurate measurement of geographic locations and map-making, and later Google Earth (appearing in 2005) could confirm earlier recordings made on the ground by rail, car, ship, or foot.

Although Europe was the main source of information for this project, much was also done in North and South America, and these geographical areas are included as well. Africa and Asia, which are just as rich in mineral resources, were not involved in this study, because the authors confined themselves to the actual sites where the elements were first identified and characterized in the historical chemical narrative.

This research is presented in a travelogue in *Rediscovery of the Elements*, a DVD including 6500 selected jpg images (from a base of 25,000 photographs taken by the authors) of the discovery sites, with a running narrative as one "rediscovers" each. These sites included the mines and quarries where the original minerals were procured; original sites of the universities and homes where the laboratories were located (sometimes still existing, sometimes not); modern museums which today house historic specimens, documents, laboratory equipment, and other exhibits. The authors additionally prepared, in collaboration with Garmin™, over 354 detailed maps (20-meter resolution) showing one precisely how to locate each site. A complete table was also assembled (65-page pdf file) for easy referral which specifies each important site, its significance, and its location (address and GPS coordinates). Two auxiliary tables have also been developed: (a) one table detailing statues, monuments, etc., associated with discovery sites (19-page pdf file); and (b) another table detailing recommended museums useful to study of the elements (13-page pdf file).

As this project progressed, the authors also wrote over 45 articles in various journals which detailed their travels. To fill out the final project, biographies of scientists have been written and a *Historical Sketch of the Discoveries* (103-page pdf file) was added, which was taken and updated from an earlier publication of the authors, *Discovery of the Elements*, published in 2002.

Finally, photographs are included of each element in the authors'



complete element collection in their home, as well as specimens of each mineral from which the elements were first characterized, from the geographical original sources (mines or quarries). This collection has been visited by Oliver Sacks, who made a special trip to Texas before his book *Uncle Tungsten* appeared.

As supplementary material, other instructional tools were developed by the authors are included, i.e., *History of the Periodic Table* (PowerPoint file). The final grand opus has been recorded on DVD as a dynamic learning tool, with links provided to allow the reader to navigate easily among scientists, elements, photographs of discovery sites, and maps.

The cost of presenting all these photographs and articles in a book would be prohibitively expensive, which would encompass many volumes—hence the reason *Rediscovery* was presented on a DVD, available to the scholar, teacher, student, virtual or real traveler, and layman at reasonable cost. However, in addition to the development of this DVD, several multi-volume sets have also been prepared, to be delivered to the Library of Congress and other selected world sites. Another 5-volume set will be stored, as well as the original notes and records of the authors, at the University of North Texas Library Archives, available to future researchers. All of the publications are also being digitized by the University of North Texas Digital Library, available to everyone.

2013 Oklahoma ACS Section Officers and Standing Committee Chairs

Dane W. Scott	Chair
Paul A. Sims	Chair Elect
Donna J. Nelson	Immediate Past Chair
Lloyd A. Bumm	Secretary + interim Newsletter ed.
Jason Wickham	Treasurer
Allen Apblett	Councilor + Nominations Com.
Nicholas F. Materer	Alternate Councilor
Charles V. Rice	Awards Com.
Nathan Malmberg	Chemistry Olympiad Com.
Valerie Ferguson	National Chemistry Week Com.
Cheryl Frech	Public Relations
Jim Dechter	Web Master



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Oklahoma ACS Calendar of Events.

Visit the Oklahoma ACS WWW site for the latest information.

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

CALENDAR OF EVENTS

2013 Dates & Speakers

May 02 (Thu) OSU-OKC, Jarrad R. Wagner, *Forensic Science, OSU Tulsa Graduate Education in the Forensic Sciences at Oklahoma State University*

Sep 20 (Fri) OBU, Dr. Jim and Jenny Marshall, *Univ. North Texas Rediscovery of the Elements:*

A Travelogue—Rediscovering the Original Elemental Discovery Sites

Oct TBA

Nov (17–20) SWRM 2013
Waco, TX

2019 Oklahoma Section Centennial