



NEWSLETTER

Oklahoma Section American Chemical Society

Volume 17 Number 2

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

May 2011

Annual Awards Banquet
Tuesday 24 May 2011

FORENSIC TOXICOLOGY

THE GOOD, THE BAD, THE UGLY



Kacey Cliburn

Oklahoma State Bureau of Investigation

The popularity of TV shows, such as CSI and Law & Order has aroused much interest from students and the public about the field of forensic science. The interesting cases coupled with the fascinating ways to solve these cases is great entertainment, but in reality, it is simple chemistry principles that are used every day in forensic laboratories to help investigate crimes. Forensic toxicology is one area of forensic science that relies heavily on the applications of chemistry to identify alcohol, drugs, and other poisons in biological specimens. In Oklahoma, there are two state-wide forensic toxicology laboratories that handle thousands of cases each year. The laboratory at the Office of the Chief Medical Examiner is

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

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 South
900 N. Portland Ave, Oklahoma City, OK 73107
map: <http://www.osuokc.edu/map/default.aspx>

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 16 May 5 pm
Contact: Dyanne Rutledge
405-945-9112
cdr@osuokc.edu

RSVP is NOT required to attend the presentation.



Oklahoma Section Wins Hospitality Award

Congratulations to our section and to Nick Materer for the 2010 speaker program.

2011 Service Milestones

Our section is pleased to honor five members for 50 years of service and one member for 60 years of service.

50 Years of Service

- Petar Alaupovic, OKC
- John Brand, Mustang
- Richard Grunder, Norman
- Earl Mitchell, Stillwater
- Thomas Wardall, Edmond

60 years of Service

- Charles Crane, Moore

2011 Chemistry Olympiad Winners

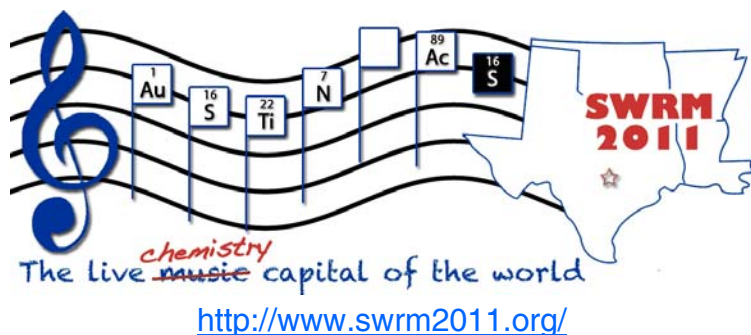
- Madison Bower (Edmond North—Debby Greear)
- Ben Browning (Moore—Valerie Ferguson)
- Jessica Oehrlein (OSSM—Fazlur Rahman)
- Qisi Sun (OSSM—Fazlur Rahman)
- Jaclyn Vanhook (Moore—Valerie Ferguson)

SWRM 2011

67th Southwest Regional Meeting

9–12 November 2011

Hosted by The Central Texas Section (Austin, TX)



Does ACS have your current email address?

Quick facts

- The Oklahoma section of the ACS membership is 511
- Only 476 of you have submitted email addresses to the ACS.
- Of the 476, approximately 25 addresses are undeliverable.

Vermiculite

Vermiculite, an expandable mica, finds a variety of uses in the home. Vermiculite is a sheet silicate mineral with water molecules between its layers. Upon heating, the interplanar water boils to a vapor and puffs up the vermiculite crystals in much the same manner as popcorn pops.

In many old houses, expanded vermiculite has been used as a thermal insulation material. Typically, single crystal flakes about 0.25 inches across are expanded and the puffed up granules are poured or blown into spaces between the walls. Expanded vermiculite is inexpensive, nonconductive, and fireproof – an ideal insulating material. Unfortunately, vermiculite insulation got a bad rep when it was discovered that vermiculite from a major producer – W. R. Grace's mine in Libby, Montana – contained very unhealthy levels of asbestos. Although many homes have been remediated, houses still have asbestos-containing Libby vermiculite hidden in their walls. It is important to recognize that vermiculite itself isn't a health hazard.

Vermiculite can be spotted around the home in plant potting mixes (as those silvery or golden flakes), in kitty litter, and in gasoline spill clean-up kits.

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(continued from front page)

responsible for helping answer questions pertaining to the cause and manner of death of an individual, while the laboratory at the Oklahoma State Bureau of Investigation deals primarily with human performance toxicology in driving under the influence cases. Despite the great leaps in technology and growing knowledge over the last several decades, forensic toxicologists still face challenges that arise because of drug use and abuse. A recent problem facing many labs is the need to detect and evaluate new designer drugs and synthetic cannabinoids. As evident by national surveys each year, alcohol and drug use is prevalent in the United States, and therefore, the help of the forensic toxicologist will continue to be a vital part of the forensic science community.

Kacey Cliburn Biographical Sketch

Kacey Cliburn is a Senior Criminalist in the Toxicology Unit with the Oklahoma State Bureau of Investigation. She received her BS in Chemistry from Oklahoma Christian University in 2002 and her Masters in Forensic Science from the University of Central Oklahoma in 2007. Kacey has been in the field of forensic toxicology for more than eight years starting in the laboratory at Oklahoma's Office of the Chief Medical Examiner. She enjoys researching and developing new methods for the identification of drugs and working with practicum students. She is married to Chad and has a son, Grant.

Did you know we also distribute the newsletter and information on section activities by email?

The Oklahoma Section communicates with its membership through several channels, including: email, this printed newsletter, and our web page. If you haven't been getting notifications of upcoming meetings and other section activities by email, perhaps we do not have your current email address.

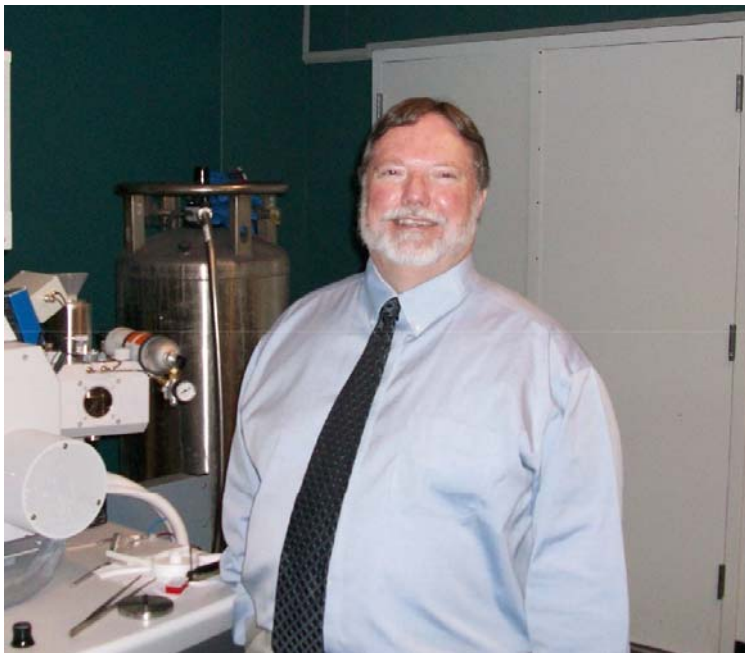
We use the email address list obtained from and maintained by the ACS. There are 3 different ways you can update your information.

- 1) Login to the ACS website (www.acs.org) and edit your profile
—via the *Edit My Profile* link located under the welcome banner after you login. If you cannot see this, click on *show account details*.
- 2) Phone the ACS Customer Service team (1-800-333-9511).
- 3) Send an email to the ACS Customer Service team (service@acs.org).

Help us keep in touch!

—The Oklahoma Section of the ACS Executive Committee

2011 Oklahoma Chemist of the Year



Professor Dale Teeters
The University of Tulsa

Dale Teeters was born and raised in the area near Thomas in Western Oklahoma. After graduating from Thomas High School, he attended Southwestern Oklahoma State University where he completed a degree in chemistry in 1975. He benefitted from the very strong chemistry program at Southwestern and was a student of well known chemists like Donald Hamm, Dan Dill, Stuart Burchett and Don Hertzler. Following graduation, he became a graduate student of Roger Frech at OU where he studied Raman spectroscopy of lithium salt complexes. The work resulted in several publications on fast ion conductors, and Dale received his Ph.D. degree in 1981. He then joined Dow Chemical in Freeport, Texas as part of a new fundamentals group exploring ion conduction in urethanes and oxide polymers where his interest in ion conduction was linked to polymeric properties.

In 1983, he joined The University of Tulsa as an Assistant Professor of Chemistry. He continued to work with ion conduction in polymers, but his interests broadened to include surface phenomena. In 2003, he was issued the world's first nanobattery patent and in 2005 he published this investigation of lithium battery nanoelectrode arrays with his graduate student, Frida Vullum-Bruer, now an Associate Professor at the Norwegian University of Science and Technology. This work has progressed and recently focused on fabrication and characterization of electrolyte systems in nanoporous membranes, including the nanobasket structure which he has explored with his colleague, Paige Johnson. Dale has over fifty journal publications, seven patents, and has authored four book chapters. His external research funding totals \$10 million from federal agencies and private corporations.

Dale's dedication to teaching and his students has been a central part of his career. He teaches courses from General

Chemistry to Nanotechnology and has been recognized as the TU Mortar Board Outstanding Professor of the year twice. In 2000, he received a Camille and Henry Dreyfus Scholar Award for undergraduate teaching and research. Thirteen of his publications have undergraduate co-authors and over 130 presentations have been made by his students. He published the first description of the synthesis of Buckminsterfullerene for teaching laboratories in the *Journal of Chemical Education* and he has served as a member of the ACS General Chemistry Examination Committee.

Dale has been active in service to Oklahoma chemistry. He has served as a board member of the Oklahoma Nanotechnology Initiative, on the Steering Committee of the NSF Oklahoma NanoNet Center, and has organized the Five-State Undergraduate Nanotechnology Symposium. Beyond his service to chemistry, he has been active in Leadership Tulsa and was a founding member and member of the Executive Committee of Leadership Oklahoma.

Dale and his wife, Susan, live on acreage outside of Tulsa and enjoy the company of a squadron of cats, dogs and horses. When he is not involved in chemistry, Dale enjoys exploring history, particularly as it relates to his Western Oklahoma background. He has published three papers on the topic, including "The Fay Furies," a description of a Western Oklahoma baseball team at statehood. As his career progresses, he dreams of making cheese like he knew in Watonga and of producing paper from Oklahoma wheat.

57TH ANNUAL PENTASECTIONAL MEETING

Saturday 17 Mar 2012

Cameron University
Lawton, OK

date is tentative

Hosted by the Wichita-Falls Duncan Section

2010 Oklahoma ACS Section Officers and Standing Committee Chairs

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

Our Website has recently changed. Check out the new site!

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



L. A. Bumm
Oklahoma Section of the ACS
Homer L Dodge Dept of Physics & Astronomy
The University of Oklahoma
440 W Brooks St
Norman, OK 73019-2061

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Norman, OK
Permit No. 88

Oklahoma ACS 2011 Calendar of Events.

Visit the Oklahoma ACS WWW site for the latest information.

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



OK ACS web
QR code

May 24 (Tue) local section meeting and awards banquet

Oklahoma State University – Oklahoma City, OK

Speaker: Kacey Cilburn, *Oklahoma State Bureau of Investigation*

Forensic Toxicology: The Good, the Bad, the Ugly

Sep 16 (Fri) local section meeting and family night

Oklahoma Baptist University, Shawnee, OK

speaker: Bob Blackledge, *Naval Criminal Investigative Service (RFL-Retired)*
Forensics

Oct 18 (Tue) local section meeting

location TBA

speaker: Julia Brumaghim, *Clemson University*

Antioxidant Prevention of DNA Damage and Cell Death

Nov 08 (Tue) local section meeting

location TBA

speaker: Wayne Jones, *State University of New York at Binghamton*
Nanotechnology

Nov (9-12) SWRM 2011

Austin, TX

2019 Oklahoma Section Centennial