

THE Central Arkansas



CHEMIST

The Newsletter of the Central Arkansas Local Section of the American Chemical Society

March 2009

Meeting

Wednesday, March 11, 2009

Location: Fribourgh Hall
Room 102
UALR
Little Rock, AR

6:00 pm Dinner - Senor Tequila
10300 N Rodney Parham Rd
Little Rock, AR
(501) 224-5505

<http://www.senortequilaonline.com/>

Please RSVP to rlasey@atu.edu
or 479-968-0391

7:30 pm Program
Dr. Jay S. Huebner
*"Astronomy Matters for
Chemistry Teachers"*

*To obtain driving directions, visit
membership.acs.org/c/centralarkansas*



Rocket for General Dynamics Corporation. During this time he took courses part and full time, earning a masters's degree in physics from San Diego State University and a Ph.D. in physics from the University of California, Riverside. He then worked in the electronic component industry for Bourns, Inc., before moving to East Lansing, MI where he did research in membrane biophysics at Michigan State University. Dr. Huebner moved to Jacksonville, FL in 1972, becoming one of the founding faculty at the University of North Florida (UNF), where he remains today as professor of natural sciences. He is also director of the Center for Membrane Physics and technical director of the Police Traffic Radar and Lidar Calibration Laboratory at UNF. During summers and sabbaticals Dr. Huebner has also studied photo- and

About the Speaker:

Jay Huebner went to Kansas State University (Manhattan, KS), where he received a bachelor's degree in electrical engineering. He worked for Phillips Petroleum Company in Oklahoma before moving to southern California to work on the Atlas

biochemistry at the National Naval Medical Center (Bethesda, MD); the School of Chemistry, Georgia Institute of Technology (Atlanta, GA); and the biophysics department, Osnabrueck University (Osnabrueck, Germany), as a senior Fulbright scholar. He also studied observational astronomy at the Keck Observatory, (Waimea Kamuela, HI). Dr. Huebner teaches astronomy, engineering, and physics courses at UNF; has published over 60 papers; and co-authored a book, *Basic Astronomy Labs*, published by Prentice Hall. He is a member of the American Association of Physics Teachers, the American Chemical Society, the Institute of Electrical and Electronic Engineers, and the National Space Society. His research has been supported by the Apple Education Foundation, Eastman Kodak Company, the National Institutes of Health, the Petroleum Research Fund administered by the ACS, the Office of Naval Research, Research Corporation, and the U.S. Department of Transportation.

Abstract

Many students in introductory chemistry gain the impression that matter made of elements and compounds constitutes everything in the universe except energy. Astronomy provides a perspective that is useful for avoiding such misconceptions. The origin of elements in the Big Bang and their evolution in stars and on Earth are reviewed. The review provides a straightforward and natural explanation for the presence of radioactive materials and the absence of technetium and promethium (elements 43 and 61) in the minerals of Earth, Moon, and meteorites. These ideas from astronomy connect chemistry to the origin of the Universe and formation of the solar system and Earth. Many students come to feel that these ideas help complete the grand story that chemistry has to tell about the natural world. Practical ideas for presenting these and related topics in chemistry classes are discussed. Some of these ideas may be reviewed in a recent paper.

Audience Level: Chemists, Students, General (nontechnical)

Categories: Astrochemistry, Chemical Education, General Public, General Science, History of Chemistry

Arkansas Legislative Action Network Activities.

ACS Office of Legislative and Governmental Affairs (OLGA) gave presentations at the Southwest Regional Meeting in October to encourage Arkansan Chemists to participate in contacting their federal and state legislators with regard to supporting STEM education and chemistry research funding. Brad Smith and James Brown from OLGA gave talks and promoted joining the Legislative Action Network. OLGA has a new website called the ACT for Chemistry site (ACT 4 CHEM) that can be found at <http://www.act4chemistry.org/register/> You can register at this site for activities and it also shows the work on going in Arkansas and some of the other states being currently supported under OLGA activities. Dr. Jeff Gaffney is acting as the Arkansas ACS chair for the OLGA efforts. Dr. Gaffney is currently member of the Committee on Chemistry and Public Affairs (CCPA) and chairs the sub-committee on Policy at the national level. For CCPA, Dr. Gaffney joined two other members of CCPA and a number of members of the Council for Chemical Research in December to visit federal science agencies and also talk to members of the Obama Transition Team in support of chemistry and science education. If you are interested in working on ACS Arkansas Legislative Action please contact Dr. Gaffney at jsgaffney@ualr.edu.

Best Regards,
Robin

Looking Ahead:

Put these dates on your calendar

Tuesday, Apr. 28
Awards Banquet
Location: University of Arkansas at Little Rock
See next page for additional details.

Tuesday, Sept. 8
Speaker: Dr. George Bodner, *The Difference Between What We Do and What We Tell People We Do* Location: TBD

Thursday, Oct. 15
Speaker: Mr. Robert Blackledge, *The Floyd Landis Sports Doping Case as Evaluated by a Forensic Analytical Chemist*
Location: TBD

Get Involved:

The following are some possible committees in which you can get involved. Please contact Robin Lasey, rlasey@atu.edu or the contact name listed next to the committee.

National Chemistry Week – This committee helps to organize the National Chemistry Week activities that take place at the Museum of Discovery.

Legislative Action Network – The Legislative Action Network (LAN) is the Society's electronic grassroots program for updating members on federal legislation and facilitating contact with members of Congress. The network focuses primarily on federal science education and R&D policy, but also addresses environment, workplace, and competitiveness issues. Jeff Gaffney, jsgaffney@ualr.edu

Younger Chemists Committee – This committee will work to form a support network for younger chemists throughout the state. Burt Hollandsworth, bhollan1@harding.edu

By-laws Committee – This committee will work to update the bylaws which includes, but is not limited to, changes in the voting procedures (electronic voting).

Industry Connections – This committee will create a list of chemical industries and employers that hire chemists in the state of Arkansas to be publicized on the website that members can use as a reference.

There is also the opportunity to become website manager if you have the ability and interest.

Ever at a loss as to what's going on in the section? Simply visit the section's website:

<http://membership.acs.org/c/centralarkansas>

You'll find the section's meeting schedule, announcements, and information about services provided by the section, along with other useful links.

Local Section News

ATTENTION FACULTY MEMBERS! The Central Arkansas Local Section Annual Awards Banquet will be held in Rooms A & B of the Donaghey Student Center, UALR, on Tuesday, April 28, 2009, at 6:30 p.m. As is our tradition, we will present certificates of recognition to outstanding chemistry students from each of the colleges and universities within the Central Arkansas

local section. The dinner will cost approximately \$15 per person, and we are asking the college/university chemistry departments to cover the cost for the students they wish to honor. Faculty members should submit the names of students for recognition to Robin Lasey (rlasey@atu.edu) by Tuesday, April 14, so that certificates and programs can be printed in a timely fashion. In addition, Marian Douglas (msdouglas@ualr.edu) needs an accurate count of the number of people planning to attend the banquet before Friday, April 24 so that the caterers will know how much food to prepare (last year we ended up paying for food that was not eaten because we did not have an accurate head count).

Nominations Requested for Central AR Section Professor of the Year

The Central Arkansas Section of the American Chemical Society is hosting its annual Awards Banquet at the University of Arkansas at Little Rock on Tuesday, April 28, 2009. At this event, we typically present an award to an outstanding high school chemistry teacher. For the fourth consecutive year, we will also honor a college chemistry professor.

We are inviting each Student Affiliate chapter or chemistry club to nominate a faculty member from their college or university for this award. As a chapter, you can decide whom to nominate and assemble supporting material for your nomination. The supporting material should include a cover letter explaining why you are nominating your chosen faculty member and supporting letters of recommendation (three to five) from current and former students. In addition, you can include one or more letters of support from other faculty members. The cover letter should highlight the faculty member's accomplishments at your academic institution – for example, you can discuss items such as teaching awards, participation in research with undergraduates, and involvement with your ACS Student Affiliates chapter.

Please submit three copies of your completed nomination to Robin Lasey, Arkansas Tech University, 1701 N. Boulder Ave., Russellville, AR 72801, by Friday, April 3, 2009. The local section officers will judge the nominations (unless there is a conflict of interest), and the winner of the award will be announced at the Awards Banquet.

If you have an article or job posting that you would like to have considered for publication in our newsletter, send it to odonej@hsu.edu for review.

The *Central Arkansas Chemist* is published as needed by the Central Arkansas Local Section of the American Chemical Society. Section Chair, Robin Lasey, Arkansas Tech University, Russellville, AR 72801, rlasey@atu.edu 479-968-0391 Address all correspondence to the Section Secretary, Janice O'Donnell, Henderson State University, 870-230-5118, odonej@hsu.edu. Newsletter contributions should be sent directly to the Section Secretary in electronic form. The Central Arkansas Local Section Web site is <http://membership.acs.org/c/centralarkansas>
