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PUGET SOUND CHEMIST

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Volume 63, Number 3



April 2002

CHEMISTRY LIBRARY

Robert K. Lowry at University of Puget Sound

Who: Robert K. Lowry

Topic: "The Chemistry of Microelectronics"

When: Wednesday, April 24th

Where: University of Puget Sound, Tacoma
Murray Boardroom, Wheelock Student Center

Time: 7:30 pm; Dinner at 6 pm

Cost: \$13.95. Choice of salmon or prime rib.

See Inside for details

Also Inside

50-Year Member Awards

Undergraduate Research Symposium

Biennial Conference on Chemical Education

PUGET SOUND CHEMIST

Newsletter for the Puget Sound Section



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Executive committee meetings are open to all members and are held on the second Wednesday of each month (unless otherwise indicated) at 6:30 p.m. in room 2430C (above the bookstore) at North Seattle Community College, 9600 College Way North in Seattle. The next meetings are **Wednesday, April 17th, and Wednesday, May 15th.**

The Chemistry of Microelectronics

Do you ever think about chemistry when you use your computer? The next time you perform chemical computations, think about the chemistry required to make the semiconductor devices function inside the computer. Semiconductors are the engines driving the information age into the next millennium. Electrical engineering is required to conceive and design them and to connect them into working systems. But making the chips themselves is a unique, miniaturized chemical process industry, from growing single crystal sub states to doping for electrical conductivity, depositing ultra-thin films, patterning via photolithography, and packaging the finished chip. Chemistry is crucial. Building semiconductors relies on engineers with thorough backgrounds in chemistry and materials science. This talk focuses on chemistry in semiconductor manufacturing. It describes the wide range of materials it takes to build complex microchips. Chemistry of some basic chip manufacturing steps is discussed. The supporting role of analytical chemistry in sustaining manufacturing processes and assuring product quality is also described.

Robert K. Lowry received a B.S. in chemistry in 1966, and an M.S. in chemistry in 1969. He has 27 years experience at Harris Semiconductor. He is currently a senior scientist and manager of the Harris Analytical Service Laboratories. He leads the laboratory team in microbeam and analytical characterization of semiconductor materials, processes, and products. His areas of expertise include effects of trace contaminants in semiconductor process materials on device and package performance and trace microanalytical methods applied to thin films and devices. He holds 7 patents and has 50 publications in the area of semiconductor process materials, materials microanalysis, and contamination identification and control.

Mr. Lowry will speak at the University of Puget Sound Wednesday, April 24th at 7:30 pm, in the Murray Boardroom of the Wheelock Student Center. The dinner will be at 6pm, cost is \$13.95. Contact Dr. Curt Mehlhaff at 253-879-3799, (email: cmehlhaff@ups.edu) and specify file of salmon or prime rib.

17th Biennial Conference on Chemical Education by George Kriz

The 17th Biennial on Chemical Education will be held at Western Washington University in Bellingham from July 28th through August 1, 2002. The BCCE series of conferences are the largest gatherings of chemical educators in the world. The BCCE is a rich time for sharing teaching tips, learning new tricks, brushing up on your chemistry jokes, finding out what's hot on the technology front, learning new demonstrations, refreshing those neural pathways, renewing old acquaintances, and making new ones, and firing up your enthusiasm for this great profession of teaching. With the emphasis on increasing the effectiveness of teaching, student learning must benefit.

Besides symposia on such important topics as green chemistry, combinatorial chemistry, the role of undergraduate research as a component of a chemistry degree, articulation between community colleges and four-year institutions, and topics in high school chemistry teaching, there will also be an interesting special programs. The 17th BCCE will feature an environmental chemistry challenge and a "roast and toast" for Professor Gilbert Haight. Plenary speakers will include Prof. Ronald Breslow, Prof. Michael Doyle, WWU President Karen W. Morse, and Dr. George "Pinky" Nelson. This will be a marvelous opportunity to partake of the intellectual environment, while enjoying the scenic beauty of the Pacific Northwest.

A Registration Book is now available. If you wish to receive a copy, send your contact information to bcce@chem.wwu.edu (include BCCE in the subject line). The deadline for registration is June 15, 2002. The Registration Book may also be obtained from the web site: <http://chem.wwu.edu/acs/bcce>.

Contact the General Chair, George S. Kriz: bcce@chem.wwu.edu, or 360-650-3126 for further information, or to add your name to the mailing list, or for activity information. Please visit the web site for updates on the conference, the campus, and surrounding community.

Science Fair Judges Needed!

Contact Justine Furutani at 206-729-9428 if you wish to volunteer your time as a science fair judge.

Upcoming meetings

April 24th

Robert Lowry

May 8th

50 Year Member Awards

September 26th

R. Bruce King

October 11th

Bruce Jarvis



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Chemistry Instructors Needed

Shoreline Community College has immediate openings in the Chemistry Department for part-time Associate Faculty, to teach introductory courses in general and organic chemistry. Assignments may be daytime or evening.

Contact Dr. David Phippen at 206-546-4572, email dhippen@ctc.edu, for further information.

From the Editor:

Please submit information for publication in the upcoming issues no later than the **23rd** day of the month prior to the upcoming edition. This deadline allows time for publishing and bulk mailing. Ads and information may be edited to allow for spacing. Thank You!!

Please do not hesitate to contact the Editor if you have any questions or concerns.

Also, the current editor wishes to thank Wayland Wasserman for his assistance!!

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Undergraduate Research Symposium

Dear Faculty Members,

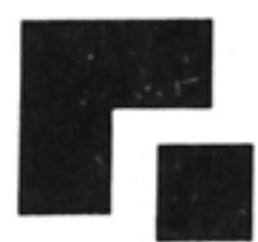
Please help us to spread the word to your students about the 2002 ACS Undergraduate Research Symposium, May 4th, 2002.

The symposium is a celebration of undergraduate accomplishments in research and creative expression across all academic subdisciplines in Chemistry. It provides a forum for students, faculty, and staff in the Puget Sound Region to explore undergraduate contributions and cutting-edge research and scholarship. Students may choose to participate in a poster session or give a 20-minute oral presentation in a larger group setting.

Students must submit an application by April 20th, 2002. If you would like a symposium poster, email us at: frank@chem.washington.edu. For further details, visit <http://depts.washington.edu/chmevent>.

Sincerely,

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FIFTY-YEAR MEMBER AWARDS

The Puget Sound Section will recognize its Fifty Year Members on Wednesday, May 8th at the E.B. Foote Winery in Burien, at 9:30 pm .Please make reservations with Justine at 206-729-9428, or with Kathy at 425-823-9210, no later than May 1st. The meeting will include wine tasting and a banquet. The event is free for the 50-year member awardees and \$10 for other members. Please watch for further updates on the topic in the May edition of the Chemist.

If you have a biography or story of your career in Chemistry, please send it to the Editor for publication in upcoming issues of the Chemist, phone # 425-823-9210 or 206-729-9428 or email: hohstadt@jps.net.

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