



Richland Section American Chemical Society

summer 2005



Glass Fiber Technology for Monitoring Radionuclides

The Richland Section's April membership meeting will feature Dr. Mary Bliss, who will speak on her groundbreaking work on fiber optics. The meeting will be April 21, 2005, in the auditorium of the WSU Tri-Cities Campus. A map of the campus is provided on this page, and can also be found online at <http://www.tricity.wsu.edu/images/wsudir.doc>.

About the Talk: Dr. Bliss' presentation will cover a revolutionary radiation monitoring system that uses glass fibers to detect the presence of radionuclides such as plutonium. This flexible, lightweight, low-power detection system offers a new method for monitoring the inventory of nuclear materials, detecting their transport, and preventing their diversion, contributing greatly to improving counter-terrorism and international nonproliferation efforts.

This technology offers significant flexibility and is both safer and less expensive than the helium-filled tubes conventionally used as neutron sensors. Glass fibers are also less sensitive to vibration, allowing for use in mobile and aerial measurement systems or in industrial environments.

The technology can be configured to monitor cargo, freight, passengers and luggage, and vehicles at airports, international ports of entry, and border crossings. It also has potential applications in reactor safety, medicine, the food industry and environmental cleanup and former defense production sites.

About the Speaker: Dr. Bliss earned a Ph.D. in solid state science in 1989 from The Pennsylvania State University. Since joining PNL in 1990, her primary technical responsibility has been management of DOE's only glass fiber drawing facility. The principal focus of her work has been neutron sensitive scintillating glass, but Dr. Bliss has also initiated work to develop fiber optic chemical sensors and fiber optic sensors for physical properties.

Info

If you have questions concerning the meeting,
please contact Bill Samuels at 375-3857, or email at

bill.samuels@pnl.gov.

WHO:

Dr. Mary Bliss

WHAT:

Glass Fiber Technology for
Monitoring Radionuclides

WHEN:

April 21, 5:00 pm

WHERE:

Washington
State
University,
Tri-Cities
Campus
East Building Auditorium



A portal monitoring system
using the glass fiber
technology invented by
Dr. Bliss and coworkers
in use at the Vienna
International Airport to
monitor passengers
entering the country.



Section Treasurer Jeff Woodford

State of the Section's Finances



At the March meeting of the Executive Board, your officers held a discussion on the state of the Richland Section's finances.

We face some

challenging financial times ahead, but with your helpful advice, we believe we will be able to navigate our current difficulties and place the Section on a secure financial footing for many years to come.

Currently, the Section's long-term assets are held in a Certificate of Deposit, held by Yakima Federal Savings & Loan. The CD was established many years ago to generate revenue for the Section through its quarterly interest payments. Back when the CD was first established, interest rates were relatively high, and the Section could count on a reliable stream of revenue from the CD's interest. Furthermore, successful regional conferences hosted by the Section generated more

revenue which was then added to the CD's principal. Just a few short years ago, the Section held over \$30,000 in assets contained in CDs.

However, with recent reductions in interest rates to record lows, the CDs were not able to produce the interest revenue they once were. This, coupled with stagnant Section membership and rising expenses, have begun to chip away at the Section's once solid financial position. As of this writing, the CD balance has fallen to approximately \$24,000. We believe the current course of action is unsustainable, and the Board has decided to consider alternative means for investment of the Section's long-term assets.

One possible course of action is to invest some portion of the CD in the ACS Investment Pool. The purpose of the investment pool is to provide a balanced portfolio in which local sections, divisions, and the Society itself may invest its long-term assets. The primary investment objective of the pool is to earn a

real annual return of 5.5%, which is substantially higher than current interest rates. More information on the ACS Investment Pool may be found on the ACS website at <http://www.chemistry.org/portal/a/c/s/1/acsdisplay.html?DOC=%5Ctreasurer%5Cinvestment.html>.

The Board is committed to finding the best possible way to manage the Section's finances, consistent with its members' needs and desires. I especially encourage you to contact our chair, Tom Jones, at Thomas_E_Tom_Jones@rl.gov with any comments, questions, or concerns you may have. Furthermore, the Board has decided to devote the May Executive Board meeting to discussion of the Section's finances, specifically with respect to the CD. I encourage you to attend. Hope to see you there!

If you have any general questions, feel free to contact me at jeff.woodford@eou.edu. It is a privilege to serve as your treasurer!

Science Fair Judging



The Richland Section participated in judging the recent Science Fair at the Columbia Center Mall. The Section awarded CRC Handbooks to chemistry winners in the senior and junior divisions. The judges, led by Bruce McNamara, were Megan Lerchen, Jeff Serne, Steve Lambert, Jim Jewett, and Tom Jones.

EOU Students Attend National Meeting

Eleven students and four faculty advisors from Eastern Oregon University attended this spring's national ACS meeting in San Diego. The students presented research posters, received a commendable award for the activities the student affiliate club performed in 03-04, and participated in a variety of activities including the Chem Demo Exchange. The students paid for the trip through fundraisers, personal savings, and support from the Richland Section. The research posters will be shared with members of the Richland Section on May 20th (location not yet set).



EOU chemistry students used their knowledge in developing special effects for the school's production of "Dr. Jekyll and Mr. Hyde". Shown here is Margaret Auble performing one of the special effects.



EOU students (from left) Lauren Rathbone, Danielle Kelley, Calvin Davis, Justin Bechaver, Ashley Jones, Mandy Conrad and faculty advisor Anna Cavinato during the Chem Demo Exchange at the National meeting in San Diego.

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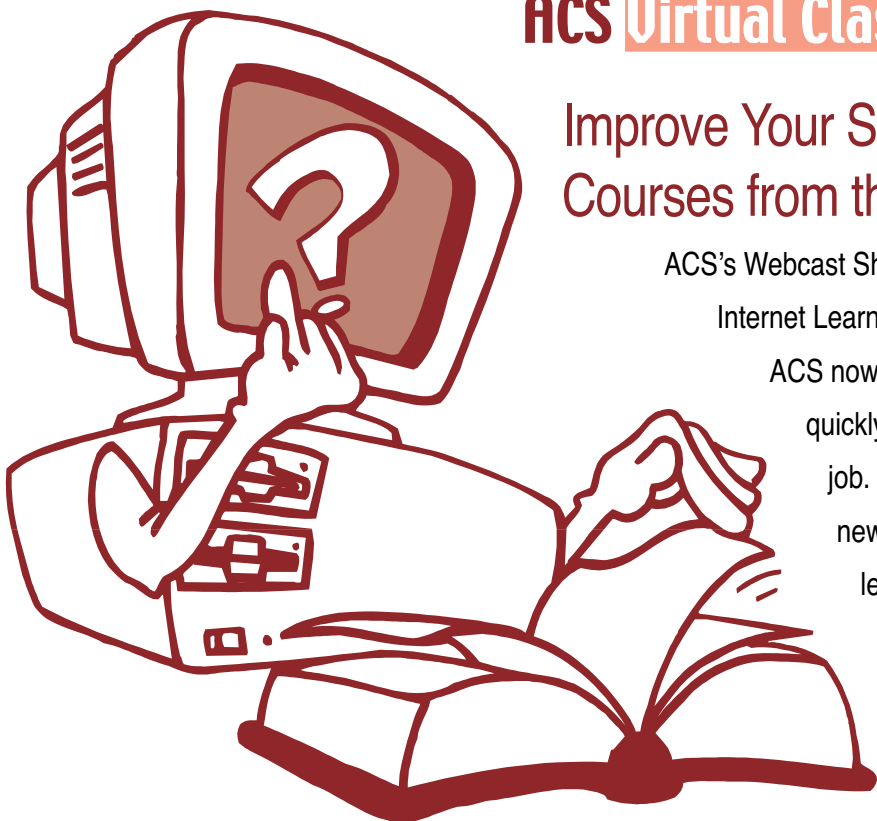
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Hail & Farewell

We would like to welcome the following new members to the Richland Section: **Vyacheslav Bryantsev, S. Mattigod, Kajal Nandy, Tamas Szailer, Marat Valiev, Haishi Cao, and Karol Kowalski**. We wish departing member **Lindsay Mohns** the best of luck in her future endeavors.

Chemists Trekking to the Northwest (Regional Meeting)

The Alaska Local Section plays host to this year's Northwest Regional Meeting (NORM) June 15- 18 in Fairbanks, Alaska. There will be joint programming with the Small Chemical Businesses Conference, symposia on the latest technology to address terrorism, and homeland security.

ACS President William Carroll will give a plenary address on second careers teaching high school chemistry. Dr. Oliver Sacks, neurologist and well-known author (Awakenings, The Man Who Mistook His Wife for a Hat) will speak June 16. For attendees who can stay a day or two after the meeting, NORM is offering a trip to the Arctic Circle during the Summer Solstice. Abstracts and registration are open. Visit their website at www.NORM-SCHB-2005.org for details.

Coming Events

April 21 Tour Speaker: **Mary Bliss, Topic: Glass Fiber Technology for Monitoring Radionuclides**

May 20 Member Recognition and EOU Student Poster Presentation

June Annual Picnic –Jointly with the American Institute of Chemical Engineers

September 21 Tour Speaker: **Mary Orna, Topic: Doing Chemistry at the Art/Archaeology Interface**

Oops!

The phone number provided in the last newsletter for our Section's Councilor, Richard Hermens, was incorrect. The correct number is (541) 963-6716.

–Editor

**Richland Section
Home Page**

www.pnl.gov/acs/



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Point To Ponder

Happiness depends upon ourselves. – Aristotle