



Richland Section American Chemical Society

fall 2005

The Chemistry of

Archaeology



The Richland Section is pleased to be able to host a talk by Mary Virginia Orna, professor of chemistry at the College of New Rochelle, who will speak on the topic: **Doing Chemistry at the Art/Archaeology Interface**. The talk will be held at 7 PM, September 21, 2005 at the Battelle Auditorium in Richland.

About the Talk

The archaeological chemical rewards of spending a sabbatical year in Israel and Italy will be discussed along with modern methods used to examine both ancient and modern artifacts. The archaeological work in Israel involved analysis of ancient pigments and dyes found on excavated materials from caves in the Judean desert and the ancient fortress of Masada. Textiles from the "Cave of the Warrior" were examined from their pigment content. The work in Italy involved examination of medieval artists' manuals for recipes for blue pigments, which were then carried out and characterized, with some surprising results. Additional applications of the methods of archaeological chemistry to such famous artifacts as the forgeries of Han van Meegeran and the Shroud of Turin will be discussed, including some evidence that the radiocarbon date of the shroud may not be valid because of fire damage it experienced by the Shroud in 1532. Pros and cons will be discussed.

About the Speaker

Sister Mary Virginia Orna, O.S.U. (Order of Saint Ursula) is professor of chemistry at the College of New Rochelle and Editor-at-Large, Chemical Heritage magazine. She has lectured and published widely in the areas of color chemistry and archaeological chemistry. She is active in several divisions of the American Chemical Society, having served as chair of the History and Chemical Education Divisions. She is a recipient of the following major awards: the 1984 CMA Catalyst Award for excellence in college chemistry teaching, the 1989 New York State Professor of the Year and National Gold Medalist, the 1989 Merck Innovation Award, the 1996 ACS Visiting Scientist Award, the 1996 James Flack Norris Award, the 1999 ACS George C. Pimentel Award in Chemical Education, and the 2001 New England Association of Chemistry Teachers J. A. Timm Award for excellence in chemistry teaching. She is presently president of ChemSource, Inc., a major effort in chemistry teacher preparation and enhancement funded by the National Science Foundation. She was a Fulbright Fellow in Israel (1994-95), where she lectured at The Hebrew University, The Weizmann Institute of Science, and Shenkar College of Textile Technology.

WHO:

Sister Mary Virginia Orna

WHAT:

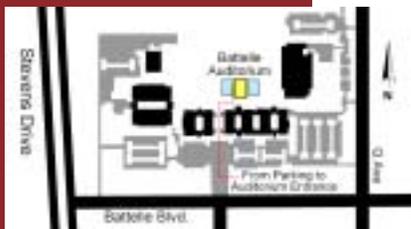
The Chemistry of Archaeology

WHEN:

September 21, 5:00 pm

WHERE:

Battelle
Auditorium,
Richland, WA



Section Councilor **Richard Hermens**

National Meeting Report - April 13, 2005

This is my report to you from the National ACS meeting held in San Diego.

First of all the dues escalator that is tied to the CPI will be \$126.00 for 2006. A new journal will be issued in 2006 with the name "Chemical Biology". There were 4362 students attending and 900 undergraduate posters were presented. This is the largest number of student attendees and undergraduate posters ever recorded at a national meeting.

The national ACS is working toward an election by electronic mail. This would save some on postage to the 158,127 members but additional costs would be incurred by contracting a firm to certify confidentiality of the voting. The details are now being worked of this matter. If the Richland Section plans to vote by electronic means, a change in the constitution must occur and be approved by the ACS Committee on Constitution and Bylaws.

The Committees on Committees, (yes there is a national committee with that name) recommended to the Council that an Ethics Committee be established. Three task forces studied this matter and found it was necessary and worthwhile.

(Editor's note: This report is from the Spring'05 national meeting. We hope to present more news from the Fall meeting in the next newsletter.)

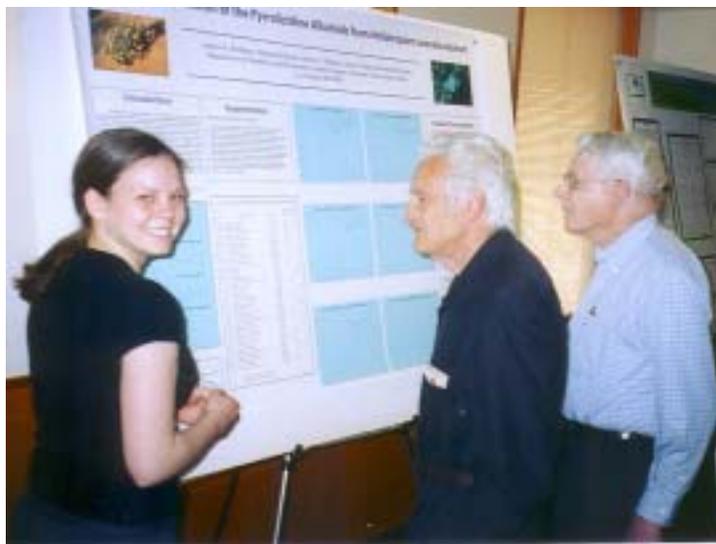
Job Opening

Job opening at LANL

There is an opening in Carlsbad, NM, for a Process Chemist. This position involves leadership of Acceptable Knowledge Experts at Los Alamos National Lab (LANL) to support waste shipments from across the DOE complex. The process chemistry background desired is very broad, involving knowledge of waste processes and history from around the DOE complex, understanding dangerous chemicals and knowledge of RCRA and TRU Waste regulations.

Application information may be found at <http://www.hr.lanl.gov/jps/SingleJobAd.asp?ReqNumber=211647&ReqScope=INT> and specifying job number 211647. Information is also available from Beverly Crawford at Crawford@lanl.gov.

ACS Happenings



Lauren Rathbone, an ACS student affiliate member at Eastern Oregon University, discusses her research project with Leland Burger and Norman Diebel.



Norman Diebel, left, is recognized by Section Chair Tom Jones for fifty years of ACS membership.

Linus Pauling Medal Award

The 2005 recipient of the Linus Pauling Medal Award is Professor George M. Whitesides, the Woodford L. and Ann A. Flowers Professor in Chemistry and Chemical Biology at Harvard University.

Professor Whitesides' research has had enormous impact in many areas of chemistry and related fields, including organometallic chemistry and catalysis, materials science, including the development of soft lithography, biochemistry, and tools and instrumental methods.

A scientific symposium focused on biophysical chemistry honoring Professor Whitesides, will be held at Pacific University in Forest Grove, Oregon (near Portland) on October 1, 2005 in the afternoon. The speakers, in addition to Professor Whitesides, will be Richard Zare of Stanford University, Carolyn Bertozzi of U.C. Berkeley and Kenneth Dill of U. C. San Francisco. The Medal presentation ceremony will occur at an evening banquet on that same day.

The Linus Pauling Medal has been awarded annually since 1966 by the Oregon, Portland, and Puget Sound Sections of the American Chemical Society in the Pacific Northwest. This Award

recognizes outstanding achievement in chemistry comparable to that of its namesake, and first winner, Linus Pauling, a Pacific Northwest native, Nobel Laureate in Chemistry, 1954.

For further information or banquet reservations, please log onto the Portland Section web site at <http://membership.acs.org/P/Portland> or contact one of the following: Jim Currie, Symposium Chair, (503) 352-2707, currie@pacificu.edu, or Jodi Paar, paar@pacificu.edu, both at Pacific University in Forest Grove, Oregon.

Science Merit Badge Help Needed



This fall the Richland Section will sponsor training for Boy and Girl Scouts in the Chemistry merit badge and Atomic Energy merit badge. Tentative plans are for the Chemistry merit badge to be offered in early November. The Atomic Energy merit badge dates are yet to be determined. If you would like to help with this outreach, or would like more information, please contact Steve Krogsrud for the Chemistry merit badge (372-2302, lary_s_steve_krogsrud@rl.gov) or Sandy Fiskum for the Atomic Energy one (376-7015, sandy.fiskum@pnl.gov).

ACS Happenings



Dr. Ned Heindel, center, answers questions after his talk on "Folk Medicine in the 19th Century" this past March.



The weather, food, and conversation were all great at this summer's Section picnic.

Hail & Farewell

We would like to welcome the following new members of the Richland Section: **Eddie Baker, Andrea Choiniere, Ruchuan Liu, Quanzhou Luo, Bernard McGrail, Abdullah Mostamandi, Melissa Tulio, Tom Waters, Paul Hinderliter, Yehia Ibrahimim, and Tykhon Zubkov.** We look forward to seeing each of you at future Richland Section functions!

We wish departing members **George Alkire, Daniel Chang, James Rogers, and Seema Sharma** the best of luck in their future endeavors.

Member Benefit

Chemistry.org is a weekly e-mail newsletter that alerts subscribers to new content on the ASC website and relevant promotions. The newsletter only goes to registered users who have designated in their personal preferences that they wish to receive communications from Chemistry.org.

If you would like to sign up to receive this newsletter, or wish to take a look at past issues, go to the ACS website (www.chemistry.org), and click on the hyperlink "recent issues" under the "News and Resources" heading at the bottom left of the page.

Coming Events

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

October 16–22 **National Chemistry Week (NCR)**

**Richland Section
Home Page**

www.pnl.gov/acs/



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Point To Ponder

To accomplish great things we must not only act, but also dream, not only plan but also believe – Anatole France (French author)