

## Astrochemistry: The Evolution of Organic Molecules in Interstellar Clouds



October meeting featuring Dr. Yorke Rhodes to be held at Bookwalter Winery

At the dawn of the space age in the 1960s, a handful of molecules were known to exist off Earth. Since those days of early robotic exploration of the Moon and Mars, fly-bys with spectroscopy of the outer planets, and radio astronomy of distant areas of our own galaxy and parts of the universe have brought forth a burst of molecular information. About 120 molecules, some new and some known, have been identified to date. What types and kinds of molecules exist? What varieties of molecular species have been found? How did they form, where do they occur, and what mechanisms exist for molecular formation? Can we model and predict what other molecules may occur? How has interstellar organic chemistry evolved? Dr. Rhodes will cover these and other questions.

**Speaker:** Dr. Yorke Rhodes

**Topic:**

Astrochemistry:  
The Evolution of Organic  
Molecules in Interstellar Clouds

**Date/Time:**

October 8, 2003

Wine & Cheese Social 6:30 p.m.

Talk 7:00 p.m.

**Place:** Bookwalter Winery

Yorke Rhodes received a B. S. in soil chemistry from the University of Delaware in 1957, and then earned an M.S. in organic chemistry in 1959 with William A. Mosher and Darrel Lynch. After completing his Ph.D. at the University of Illinois in 1964 with Prof. James C. Martin, he was a National Institutes of Health Postdoctoral Fellow with Kenneth B. Wiberg at Yale University. He joined the faculty of New York University at the University Heights campus in 1965 and developed research areas in SO<sub>2</sub> solvent chemistry, electrocyclic reactions, small ring chemistry, and carbocations, especially neighboring group cyclopropane-assisted cation rearrangements. He moved to the Washington Square campus in 1973 after a sabbatical leave with Horst Prinzbach at the Universität Freiburg in West Germany. Work at the Square continued in carbocations, led to alkyl group migratory aptitude studies and to synthetic studies in silyl ketene acetal chemistry for synthesis of quaternary neopentyls. He was a State Department exchange visitor to Prague, Czechoslovakia, and

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### Richland Section Elections

Enclosed in this newsletter are an election ballot and a sheet providing some background information on the candidates. Please return the ballot to Sam Bryan by November 11, 2003.

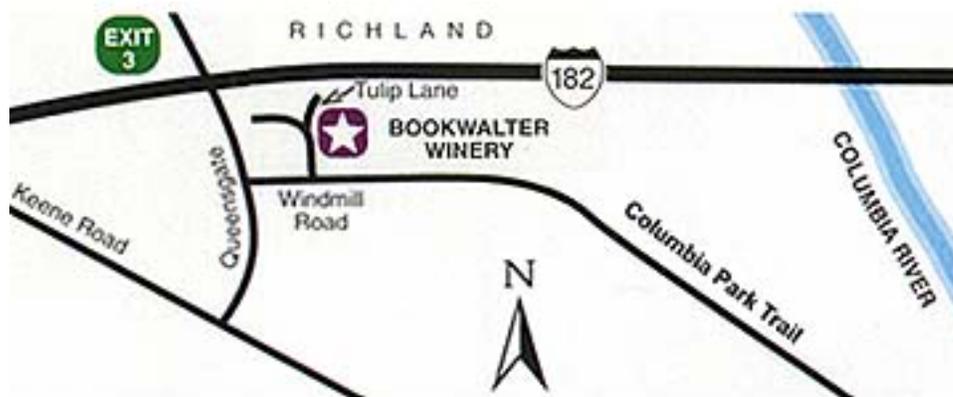
## October Speaker from page one

Zagreb, Yugoslavia, in 1977 and was also Gastprofessor with Ivar Ugi at the Technische Universität Munchen (TUM) in 1977, followed by a stay in 1978 as Alexander von Humboldt U.S. Senior Scientist Awardee at the TUM with Ugi. NASA/IEEE Summer Fellowships were held at the Jet Propulsion Laboratories at Cal Tech in Pasadena with Wes Huntress in 1980 and 1981 (astrochemistry). In 1987, he was professor associate at the Centre d'Astrophysique, Université de Grenoble, France, with Alain Omont (astro-polycyclic aromatic hydrocarbon chemistry). Rhodes was awarded the Golden Dozen Award for Teaching Excellence in the College of Arts and Science in 1991, and again in 1996.

Professor Rhodes is director of the Dual Degree Program in Science and Engineering at New York University and Stevens Institute of Technology, resides as Professor in a Residence in a University residence hall, and is very active in the New York Academy of Sciences and American Chemical Society local section activities, sponsoring a variety of symposia, poster sessions and other activities for students. He was recently elected chair-elect for 1997 and chair of the ACS New York Section for 1998. As an ACS Concilor he is also a member of the Local Section Activities Committee and welcomes discussions about local sections. He has served on Department of Education review panels and is an educational consultant/evaluator for several undergraduate and high school research mentoring programs.

A wine and cheese social at the Bookwalter Winery will start at 6:30 p.m. Dr. Rhodes' talk will follow at 7:00 p.m. The winery is located at 894 Tulip Lane in Richland. A map showing the location of the winery is provided on this page and also on the section's website, [www.pnl.gov/acs](http://www.pnl.gov/acs). If you have any questions, or would like to have dinner with Dr. Rhodes before the wine and cheese social, please contact Sam Bryan; (509) 376-6949 or [sam.bryan@pnl.gov](mailto:sam.bryan@pnl.gov).

## Bookwalter Winery Map



## Chemist of the Year Celebration



Last June, our Section honored our Chemist of the Year, John Swanson, with a reception at the CREHST museum in Richland. The event also featured research posters presented by students from Eastern Oregon University. If you would like to view pictures from that event such as the one here, they may be found at the on-line album:

<http://imageevent.com/pnwalumnaeconnection/2002richlandchemistoftheyear>

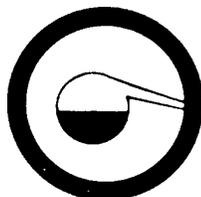
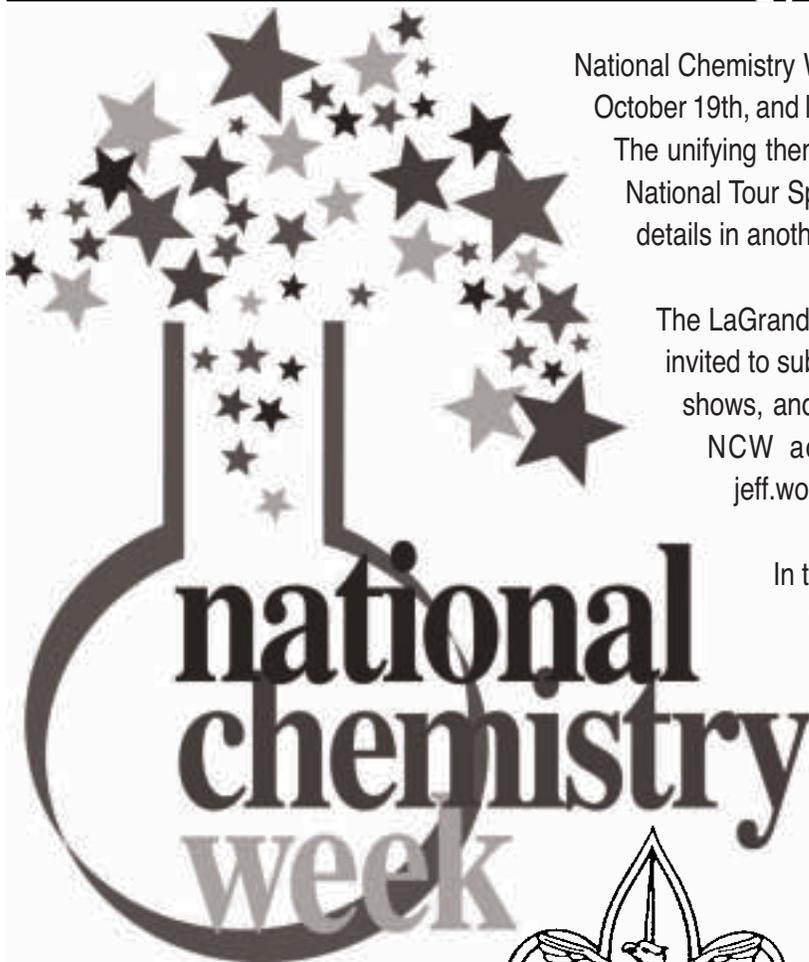
## Events National Chemistry Week

National Chemistry Week (NCW) will be celebrated nationally during the week of October 19th, and locally throughout the Fall with a number of outreach activities. The unifying theme this year is "Earth's Atmosphere and Beyond," hence our National Tour Speaker's talk on the formation of molecules in space (see the details in another article in this newsletter).

The LaGrande, Oregon area will be very busy as usual, with local schools invited to submit posters about the atmosphere, several chemical "magic" shows, and an aviation-related talk at Eastern Oregon University. The NCW activity coordinator in LaGrande is Jeff Woodford at [jeff.woodford@eou.edu](mailto:jeff.woodford@eou.edu).

In the Tri-Cities area, several new and expanded NCW activities will be held. Training for Boy Scouts who wish to earn the chemistry merit badge will be held on the mornings of November 1 and 8. A similar activity for girl scouts is in the planning stage. **Anyone wishing to volunteer for either activity (help with the girl scouts is especially needed) should contact event coordinator Steve Krogsrud at [larry\\_s\\_steve\\_krogsrud@rl.gov](mailto:larry_s_steve_krogsrud@rl.gov) or (509) 372-2302.**

New activities in celebration of NCW are being planned as well. Though we won't host our historical Family-A-Fair exposition booth this year, the Richland Section is expanding its activities in celebration of National Mole Day, Industry, Legislative and Public Outreach. Our website, [www.pnl.gov/acs](http://www.pnl.gov/acs), will have all the exciting news and contacts for YOU to be involved in your favorite activity.



## Bylaw Changes

### Bylaw Change Passes

During the early summer, the ACS membership voted unanimously in favor of the new bylaw provision for distributing funds to local sections and divisions. Of the more than twenty three thousand members that voted, 20,430 were in favor of the change. The wording of the new bylaw was carefully formulated by governance over a period of several years and it is clear that those efforts reflected the goals of the membership.

Local sections will realize some small increases in allotment from this change, but the major impact will be for the divisions which, over the four year phase in period, will receive a significant increase in their allotments. However, these allotments will not come without governance oversight. Both Local Section Activities and Divisional Activities committees will monitor the distribution and use of funds and will even control a portion of these funds for special activity allocations.

Provisions of the new bylaw will take effect in 2004.

Stanley Pine ([www.stanleypine.org](http://www.stanleypine.org))

ACS Director – District VI

## Hail & Farewell

We would like to welcome the following new members to the Richland Section: **Kenneth Rappe, Linda Thomas, Jooho Kim, E. Rochette, and Joyce Takeyasu.**

We wish **Xinjin Zhang**, who is transferring out, the best for his move to Massachusetts.

## Member Benefit

Interested in chemical safety? The ACS Joint Board-Council Committee on Chemical Safety (CCS) has announced the availability of the seventh edition of Safety in Academic Chemistry Laboratories (SACL). This edition has two volumes: volume 1 for college and university students; and volume 2 for faculty, graduate teaching assistants, and administrators. With this latest edition of SACL, CCS has now produced new safety booklets within the last two years for all academic levels: Safety in the Elementary (K-6) Science Classroom; Chemical Safety for Teachers and Their Supervisors, Grades 7-12; and SACL. All of these publications may be ordered from ACS (single copies are free) and may be viewed in PDF on the website, <http://chemistry.org/committees/ccs>. The website also has a wealth of other chemical safety information.

## Coming Events

October 8

Tour Speaker: Yorke Rhodes, *Astrochemistry: The Evolution of Organic Molecules in Interstellar Clouds*

October 19-25

National Chemistry Week

November 1, 8

Boy Scout Chemistry Merit Badge Training

November 18

Tour Speaker: Lauren Heine, *Green Chemistry: Challenges & Opportunities for All Chemistry in the Twenty-first Century*

November

Reception for 50 Year Members

Richland Section  
Home Page

[www.pnl.gov/acs/](http://www.pnl.gov/acs/)



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## Point To Ponder

You have to think anyway, so why not think big?

—Donald Trump