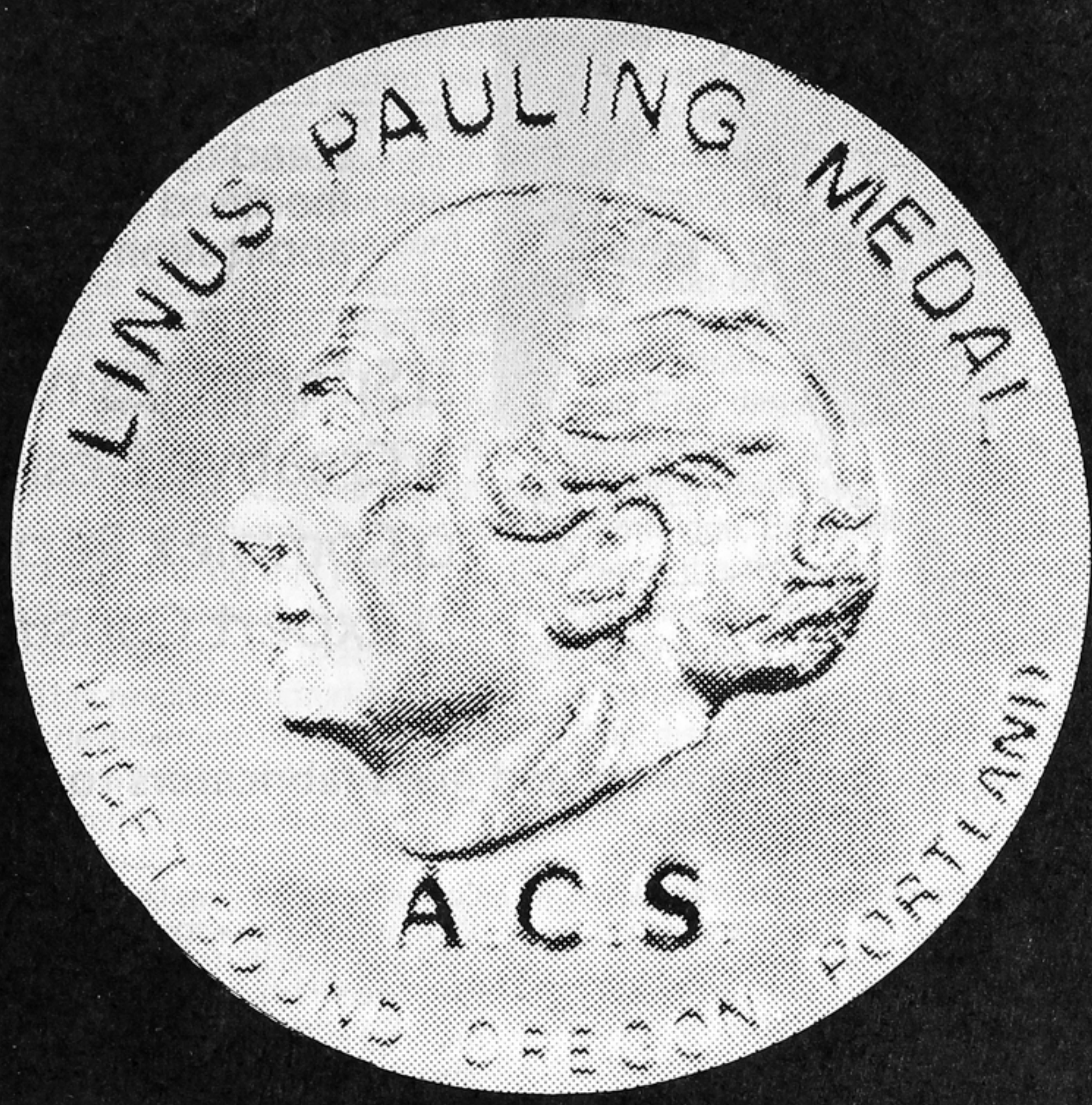


540.5  
2u  
6(6)

1995 PAULING MEDAL AWARD  
UNIVERSITY OF OREGON  
CHEMISTRY  
LIBRARY



DISPLAY  
OCT 13 1995

# **PUGET SOUND CHEMIST**

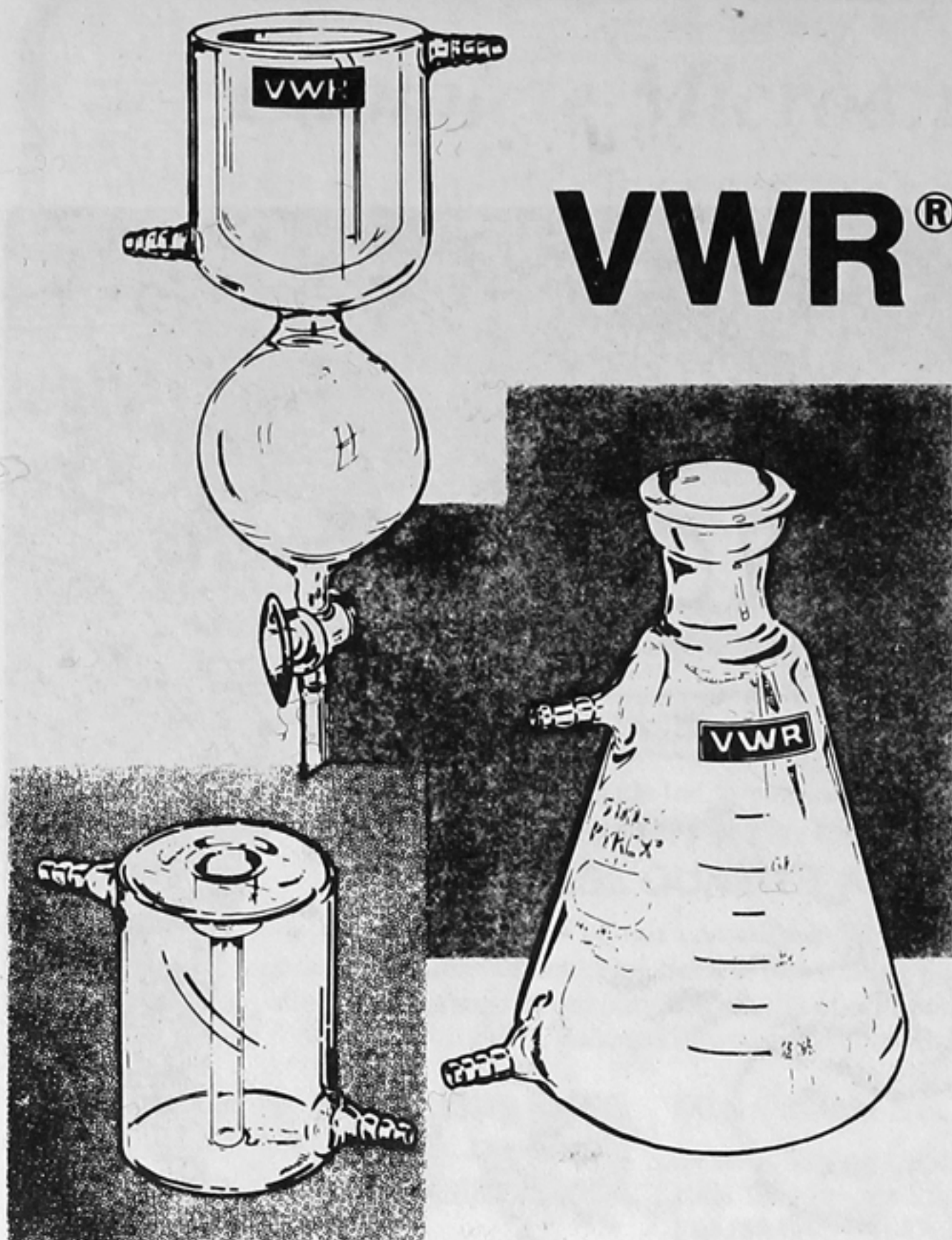
BULLETIN OF THE PUGET SOUND SECTION OF THE AMERICAN CHEMICAL SOCIETY

Volume 56, Number 6



October 1995





# VWR® Scientific Glass Shop

Standard glassware modified for unique applications.

- ❑ Special Items
- ❑ Creative Designs
- ❑ Complex Repairs
- ❑ Expert Consultation

**VWR has expert glass blowers and glass fabricators to assist you**

**Conventional glassware customized.** VWR glass specialists can alter the design of standard laboratory glassware in the VWR Catalog. They modify Pyrex® glassware, glass tubing and bell jars, glass plates and Corning® glass colored filters.

**Unique items created.** Specialized glassware needs are filled. Our glass specialists work directly with each customer. You sketch out your needs and they use imagination and experience to create your special glassware.

**Unusual or conventional pieces repaired.** VWR glass specialists meet the toughest repair challenges. And, most repairs cost less than the new items!

Corning® colored glass filters supplied in standard 2" squares. For your special or unusual needs, the VWR glass specialists can cut and shape larger glass filters into just the size you need.

The VWR glass shop stocks Pyrex® flat glass in many thicknesses between 1/16" and 1 1/4" sheets. For other standard laboratory glassware our glass specialists draw from VWR's huge glass inventory. And, in the rare case that we don't stock what you need, our glass shop specialists will get it for you.

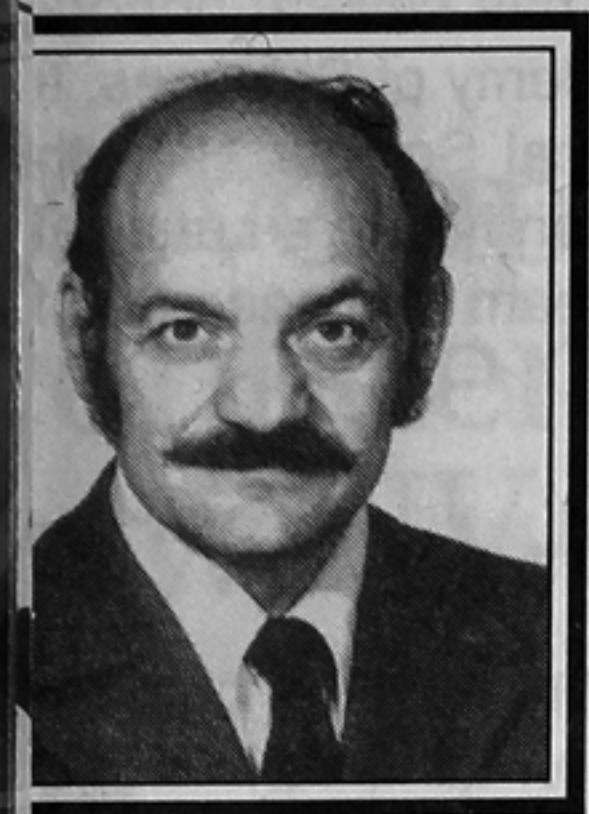
**Let us help you solve your glassware needs.** To arrange a free consultation with a VWR glass shop specialist or for more information about the VWR Glass Shop, just call your local VWR Sales Representative.

**VWR Scientific**  
**P.O. Box 3551**  
**Seattle, WA 98124**  
**(206) 575-1500**  
**1-800-333-6336**

**VWR Scientific**  
 A VWR COMPANY

On the cover: The Pauling Award Medal (see related articles in this issue).





## **1995 PAULING MEDAL AWARD UNIVERSITY OF OREGON , EUGENE, OREGON**

**OCTOBER 28, 1995**

### **Professor Alexander Rich - 1995 Pauling Medalist**

Professor Alexander Rich, of the Massachusetts Institute of Technology, has been selected to be the recipient of the 1995 Linus Pauling Award, jointly sponsored by the Oregon, Portland and Puget Sound Sections of the American Chemical Society and made in recognition of outstanding achievement in chemistry. The award will be presented on the University of Oregon campus in Eugene, Oregon, on Saturday, October 28, 1995.

Alexander Rich was born in Hartford, Connecticut and educated at Harvard University. His undergraduate studies at Harvard College centered on physics, chemistry and biochemical sciences and he received an M.D. degree at Harvard Medical School in 1949. He then went to the Chemistry Department at Caltech to do postdoctoral work with Linus Pauling for the next five years. During that period he initiated x-ray diffraction studies on both small molecules and polymeric nucleic acids. From 1954 to 1958 he was head of the Section on Physical Chemistry at the National Institutes of Health in Bethesda, Maryland, and was a Visiting Scientist at the Cavendish Laboratory in Cambridge, England in 1955, working with various colleagues. During this period he discovered the three-dimensional structure of collagen, the fibrous molecule of skin and connective tissue. He discovered the first hybridization reaction in which two unstructured polynucleotides combined together to form a stable helix. This reaction, reproduced in various forms, became one of the major analytical tools in the development of molecular biology. This discovery also demonstrated that the RNA molecule, like DNA, could exist as a stable double helix. A year later he and his colleagues discovered the nucleic acid triple helix which has now become an important tool in biotechnology.

In 1958 Rich moved to the Biology Department at M.I.T., where he is now the Sedgwick Professor of Biophysics. Some of his major discoveries at M.I.T. include the formation of a hybrid helix containing a DNA strand and an RNA strand (1960). This provided the mechanism for understanding information transfer from DNA to RNA. Working with students, he discovered and characterized polyribosomal structures involved in protein synthesis (polymes) and also discovered DNA in chloroplasts. Moving into single-crystal x-ray diffraction work, he was the first to solve, at atomic resolution, the structure of a double helix. His group was the first to obtain high resolution crystals of transfer RNA (1971), an important component of the protein synthesis system. He then proceeded to find its three-dimensional folding and uncover the fine details of its molecular structure. Further work in this field led to the discovery of a novel left-handed form of the DNA double helix (1979), and he characterized those factors that influence its formation, both in solution and in cells.

Rich has been a major contributor to our understanding of the structure and function of the nucleic acids. He is the author of 500 publications and has received many honors and awards, including the National Medal of Science. He has been elected to membership in a number of learned societies, including the National Academy of Sciences, the Philosophical

---

## **FUTURE MEETINGS, 1995**

Thursday, November 9

Dr. Natalie Foster, Lehigh University:  
"Strong Poison: Chemistry in the Mysteries  
of Dorothy L. Sayers"



Society and the American Academy of Arts and Sciences. He has several honorary degrees and has been elected a Foreign Member of the French Academy of Sciences, the Russian Academy of Sciences, as well as the Japanese Biochemical Society. His other scientific activities include an interest in the origin of life. He served on NASA's Lunar and Planetary Missions Board and was a member of the Viking mission team that searched for active biology on the surface of Mars.

## 1995 PAULING AWARD SYMPOSIUM

The Pauling Award Symposium will be held on Saturday, October 28, 1995, beginning at 1:30 p.m. in Willamette Hall, Room 100 on the University of Oregon campus in Eugene, Oregon. Speakers will include Jack D. Dunitz of the Swiss Federal Institute of Technology (ETH), Switzerland, Peter H. von Hippel of the University of Oregon, and Leslie E. Orgel of the Salk Institute of Biological Studies, La Jolla, California, as well as the Pauling Award winner, Alexander Rich of the Massachusetts Institute of Technology. The symposium will be followed by a social hour scheduled at 5:30 p.m. Both the symposium and social hour are free and open to the public.

The Pauling Award Banquet will follow the social hour, with service beginning at 7:00 p.m. The meal will include a choice of hazelnut chicken, salmon, or pasta primavera, as well as salad, side dishes, dessert, and wine. Following the dinner will be the presentation of the 1995 Pauling Medal and Professor Rich's Award Address.

The charge for the banquet is \$30.00. Tickets for the banquet may be obtained by sending a check for \$30.00 per person, payable to University of Oregon, to Dr. James Long, Department of Chemistry, University of Oregon, Eugene, OR 97403. Please specify the desired main course with your payment. Deadline for receipt of payment is October 20, 1995. Tickets may be picked up at the social hour prior to the banquet.

**Getting to the University of Oregon:** Approaching Eugene from the north on I-5, exit at the I-105 (#194B) interchange. Follow the Eugene/UO signs to Franklin Boulevard. Enter the west end of campus by turning right on Alder Street, just before the Phoenix Inn. Enter the east end of campus by turning right on Agate Street (marked by a stop light), across from the Burger King.

Approaching Eugene from the south on I-5, exit at the UO (#192) interchange. Proceed west on Franklin Boulevard until you reach Agate Street (third traffic light after you leave the freeway). Turn left on Agate Street.

**Parking:** The best bet for parking will be the Agate Hall lot (by Hayward Field, further south on Agate Street-at 15th and Agate) and the education/music lots which are accessible from Alder Street at about 16th. Alder Street is a one way south from Franklin Street and is one block west of Kincaid, which shows up on the map found at: <http://www.uoregon.edu/3dcampus-map/index.html>. A third likely site is the Kincaid and 14th Street lot. We encourage car-pooling as much as possible!

**Lodging:** Lodging will unfortunately be rather tight, as the symposium coincides with the annual Parent's Weekend on the University of Oregon campus. Rooms are still available at the following motels (those marked with stars are within easy walking distance of the symposium venue), but reservations should be made as soon as possible.

\*Angus Inn, 2121 Franklin Blvd., 503-342-1243

\*Barron's Motor Inn, 1859 Franklin Blvd., 503-342-6383

\*Best Western Greentree Inn, 1759 Franklin Blvd., 503-485-2727

Red Lion Inn Springfield, 3280 Gateway Blvd., 503-726-8181

Red Lion Inn Eugene, 205 Coburg Road, 503-342-5201

Rodeway Inn Springfield, 3480 Hutton Street, 503-746-8471

A more comprehensive list of motels around Eugene/Springfield is available by calling the editor at 206-745-9550.



# Move up to higher levels of confidence, with HP's powerful new UV-Vis system.



**Comprehensive support for GLP**



**HP's diode-array technology**



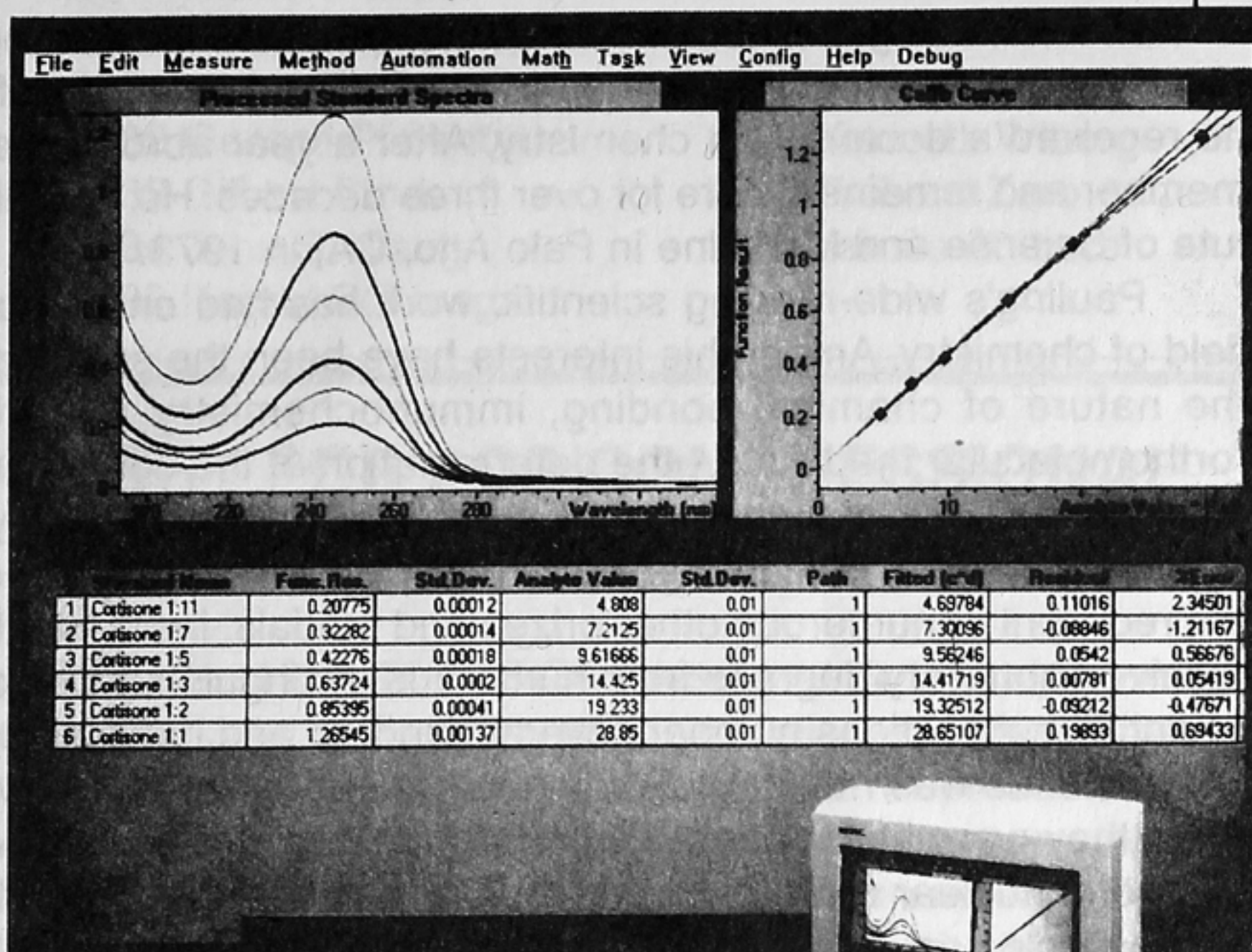
**Table-driven automation of analyses**



**Tools to help customize solutions.**



**Easy-to-use Microsoft® Windows interface**



## The HP 8452Win diode-array UV-Visible spectroscopy system helps you meet GLP.

sheer problem-solving power, which surpasses our new UV-Vis system's ChemStation capabilities.

meet GLP, the ChemStation offers a comprehensive set of tools to ensure hardware/software security, and that document data integrity. And HP's diode-array

technology further assures you of reliable, reproducible results.

Customizing is easy too. Using work lists and macros, you can quickly automate complex research or routine testing tasks. An easy-to-use Microsoft® Windows-based interface lets you smoothly exchange data between applications. And you can share information throughout your organization, with the HP Unified Lab strategy.

Our exclusive single-vendor solution includes HP's industry-standard diode-array spectrophotometer, PC, peripherals, software and accessories. All backed by HP's reputation for reliability and service.



**For More Information Call: Dave Randle at (503) 598-8283**



# **PAULING MEDAL AWARD SPONSORED BY OREGON, PORTLAND AND PUGET SOUND SECTIONS OF THE AMERICAN CHEMICAL SOCIETY RECOGNIZING OUTSTANDING ACHIEVEMENT IN CHEMISTRY**

## **LINUS PAULING 1901-1994**

Linus Pauling graduated from Oregon Agricultural College in 1922 with a degree in chemical engineering. He went on to the California Institute of Technology where, in 1925, he received a doctorate in chemistry. After a year abroad, he joined Caltech as a faculty member and remained there for over three decades. He established the Linus Pauling Institute of Science and Medicine in Palo Alto, CA, in 1973.

Pauling's wide-ranging scientific work has had enormous influence on almost every field of chemistry. Among his interests have been the structure of molecules and crystals, the nature of chemical bonding, immunochemistry and disease and, more recently, "orthomolecular medicine" - the determination of the optimal amounts of substances, such as vitamin C, for maintenance of good health. His discovery of the structure of several proteins, including the famous alpha-helix, led to his 1954 Nobel Prize in Chemistry. He was the recipient of numerous other prizes and medals, including the ACS Priestley Medal, and received honorary degrees from numerous distinguished universities around the world. His scientific publications number several hundred and include several books.

Science was not Linus Pauling's sole interest. With his wife Ava Helen, whom he met while they were students at Oregon Agricultural College, he was an implacable foe of the spread of nuclear weapons, and he campaigned tirelessly on behalf of this issue. Pauling's public disclosure of the danger to human life from fallout resulting from tests of nuclear

## **— BECKMAN —**

### **Products for the Life Sciences**

**Receptor Binding  
DNA Sequencing  
Pharmaceutical QA/QC**

**Molecular Biology  
Peptide Mapping  
Radiochromatography**

**System Gold HPLC  
Capillary Electrophoresis  
UV/VIS Spectrophotometers  
Liquid Scintillation Counters  
pH Meters**

**Centrifugation  
Robotics  
Lab Information Management Systems (LIMS)  
Supplies  
Field Service**

**Beckman Instruments, Inc., Western Sales**  
1050 Page Mill Road, P.O. Box 10015  
Palo Alto, CA 94303  
1-(800) 742-2345



weapons in the atmosphere played a major role in the subsequent international agreement banning such tests. For his efforts on behalf of peace, he was awarded the 1963 Nobel Peace Prize.

Linus Pauling was the most distinguished chemist from the northwest.

## Pauling Award Recipients

1966 Linus Pauling	1976 F. Albert Cotton	1986 Harry B. Gray
1967 Manfred Eigen	1977 John A. Pople	1987 Harden M. McConnell
1968 Herbert C. Brown	1978 Dudley Herschbach	1988 Keith Ingold
1969 Henry Eyring	1979 Daniel Koshland	1989 Neil Bartlett
1970 Harold C. Urey	1980 John D. Roberts	1990 James P. Collman
1971 Gerhard Herzberg	1981 Henry Taube	1991 Rudolf Marcus
1972 E. Bright Wilson	1982 George Pimental	1992 Kenneth Wiberg
1973 E. J. Corey	1983 Gilbert Stork	1993 Richard Zare
1974 Roald Hoffman	1984 John S. Waugh	1994 James A. Ibers
1975 Paul Bartlett	1985 Herold Scheraga	

## APPLICANTS SOUGHT FOR ACS CONGRESSIONAL FELLOWSHIP

Applicants are being sought for the 1996-97 ACS Congressional Fellowship term. Initiated in 1973, the Congressional Fellowship Program each year places a person with a background in science and public policy in the office of a U.S. Senator, Representative, or congressional committee. During a one-year term, ACS Congressional Fellows provide their offices with objective scientific advice to facilitate informed policy decision-making. Fellows also increase ACS visibility on Capitol Hill and provide the Society's membership with insights gained from the fellowship.

# AA SPECTROSCOPY

....*THAT'S ALL WE DO!*

## Atomic Absorption Spectrophotometers

● PROFESSIONAL SERVICE

● TECHNICAL SUPPORT

● PC INTERFACING

● RECONDITIONED INSTRUMENTATION

Everything from A to Z in AA Spectroscopy

We service what the manufacturers can't .....or won't support

**SPECTROSCOPY  
SPECIALTIES INC**  
*The Specialists in Atomic Absorption Spectroscopy*

**800-624-8922**

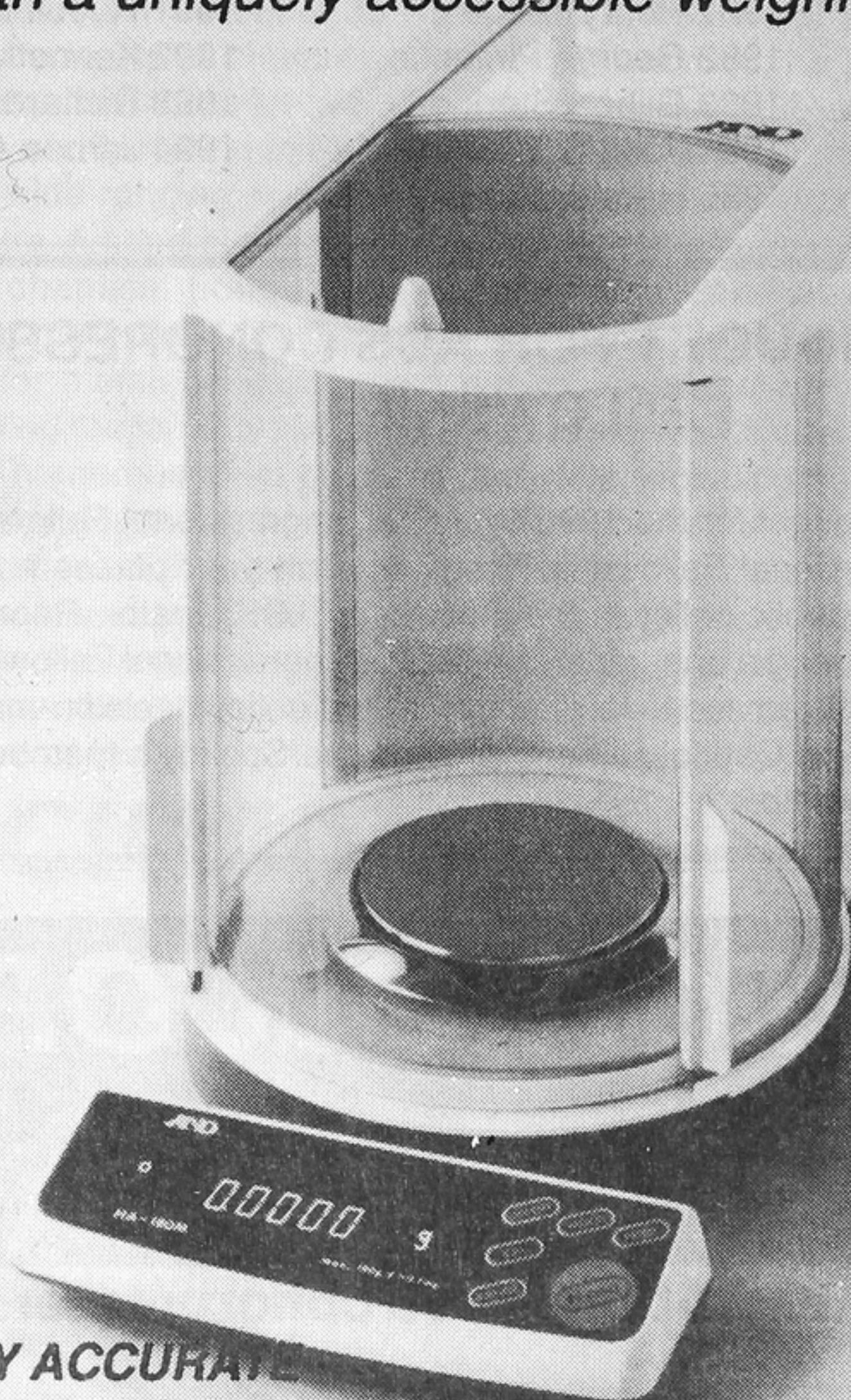
E 280 HIAWATHA BLVD, SHELTON, WA 98584 FAX 360-427-2409 ADMINISTRATIVE OFFICES 360-427-2453



# A&D

A&D WEIGHING DIVISION

*Featuring the new HA-M series analytical balances with a uniquely accessible weighing chamber.*



- HIGHLY ACCURATE
- EASY TO OPERATE
- WITH ADVANCED STABILIZATION SOFTWARE

All-World Scientific is your Puget Sound source for the full A&D line of toploading, analytical, and moisture balances, now with a 3 year warranty!

Call us to find out just how affordable a quality balance can be.



5515 - 186th Pl SW, Lynnwood, WA 98037  
(206) 672-4228 • FAX (206) 776-1530  
Toll Free 1-800-28WORLD (289-6753)



ACS fully funds a stipend for the Fellow, but other sources of funding may also be acceptable (e.g., the fellow's employer, or private foundations). The 1996-97 stipend is \$15,600. The next Fellow selected will begin work in September of 1996. Applicants must be ACS members, and preferably have either a Ph.D. or equivalent work experience.

The current Fellow, Daniel Horowitz, recently finished his term with the staff of the House Science Committee. Past Fellow Kathleen A. McGinty, who served in the office of then Senator Gore, is currently Director of the White House Office of Environmental Policy.

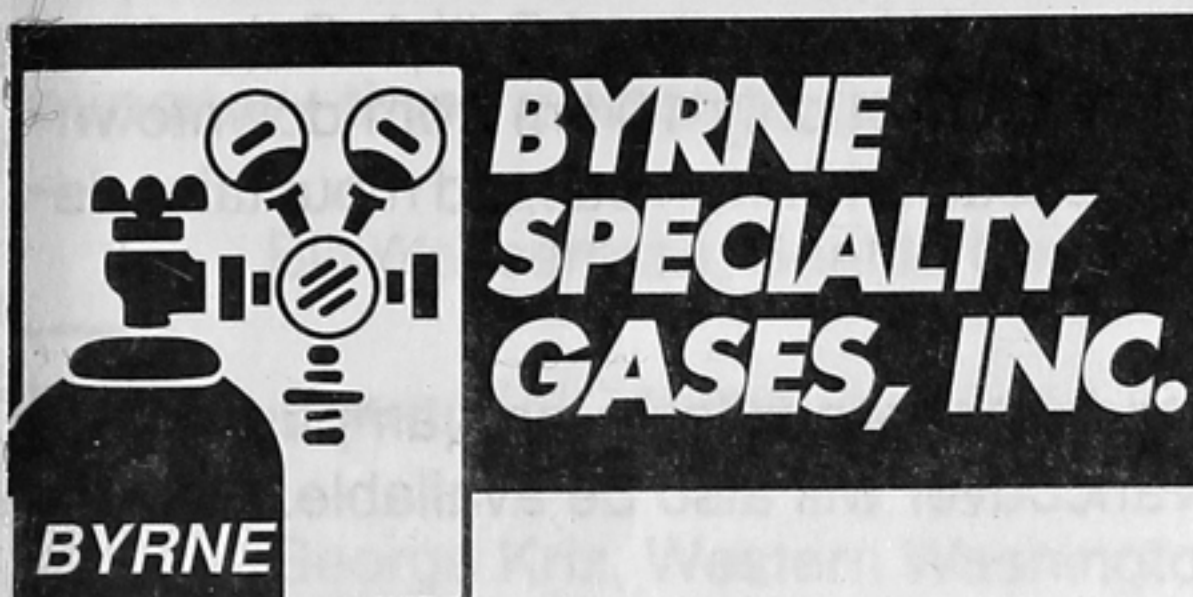
The application deadline for this Fellowship is January 1, 1996. For information contact Caroline Trupp Gil, Department of Government Relations and Science Policy, American Chemical Society, 1155 Sixteenth Street, N.W., Washington, DC 20036, 202/872-4467.

## WASHINGTON COLLEGE CHEMISTRY TEACHERS ASSOCIATION

The Washington College Chemistry Teachers Association will hold their fourth annual conference on November 9, 10 and 11, 1995 at McMenamin's Edgefield Conference Facility Troutdale, Oregon. The conference will be hosted by Clark College, Vancouver, WA. John McMurry, author of several organic and general, organic and biochemistry text books, will be the keynote speaker. The program for the conference includes papers and presentations, and discussion time when the participants will break into groups to discuss trends, texts, etc. in courses. Major groups planned by the organizers are: General Chemistry, Organic Chemistry, Allied Health (nursing, etc.), Non-Majors/Liberal Arts Chemistry, with doors left open for suggestions by the membership.

Deadline for registration is October 20, 1995. Participants desiring reservations at McMenamin's Edgefield Bed & Breakfast Resort should do so before October 9. Reservations outside the resort can be made at motels near by. For information about registration

and reservations, please contact Robin Terjeson, Clark College, 360-992-2201, email: [terjrj@clark.edu](mailto:terjrj@clark.edu), Rob Johnson, Clark College, 360-992-2491, email: [johnrd@clark.edu](mailto:johnrd@clark.edu), or Nancy Barker, Pierce College, email: [nbarker@ctc.ctc.edu](mailto:nbarker@ctc.ctc.edu).



- Pure, Mixed & Rare Gases
- Gas Handling Equipment
- Engineered Systems
- Cryogenic Supplies
- Liquid N<sub>2</sub>, Ar

Express Gas &  
Emergency Delivery  
(206) 621-8400

601 South Andover Street  
Seattle, WA 98108

1 (800) 767-4601

FAX (206) 763-3753

### CHANGE OF ADDRESS?

Please note that the local section does not prepare its own labels, but gets them from the Local Section Activities Division of the National Office of the American Chemical Society in Washington, D. C. Therefore, notice of changes of address for ACS members should be sent to the national office so they can use the correct address for all their mailings. Please send your notice to:

**Manager, Member & Subscriber Services,  
ACS, P.O. Box 3337, Columbus, OH 43210;  
phone: (800) 333-9511 or (614) 447-3776.**

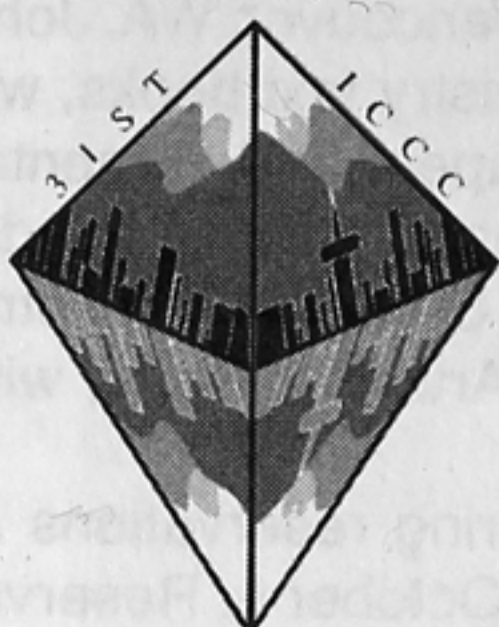
### POLYMER STANDARDS FOR GPC/SEC MOLECULAR WEIGHT ANALYSIS GPC/SEC COLUMN REPACKING

American Polymer Standards Corporation  
8680 Tyler Boulevard, Menor, OH 44060  
Phone: 216-255-2211 Fax: 216-255-8397



## POSITION OPEN

The Washington State Patrol has an entry level position open for a Forensic Scientist in their Crime Laboratory in Seattle. Duties will include: Perform laboratory analyses of physical evidence using accepted scientific methods, interpret results, prepare written reports and testify as an expert witness in courts of law. The required qualifications are B.S. in natural science which includes a minimum of 20 semester or 30 quarter hours of chemistry and 5 semester or 8 quarter hours of physics. The candidate must pass a background investigation. The position carries a salary range of \$2245-2865 per month. For a copy of the bulletin, application form and personal background evaluation form, please call (360) 438-5868.



### 31st INTERNATIONAL CONFERENCE ON COORDINATION CHEMISTRY

The University of British Columbia  
Vancouver, Canada

August 18-23, 1996

Chairman: Chris Orvig (University of British Columbia)

Secretary: Ross Hill (Simon Fraser University)

#### Venue

The conference will take place on the campus of University of British Columbia, situated on 450 hectares of woodland, a secluded haven only 10 km from downtown Vancouver. The University setting, with views of the ocean and snow capped mountains, is one of the most spectacular in the world.

#### Accommodation

Comfortable, reasonably priced accommodation is available on campus at the Walter Gage Complex. Some hotel rooms in Vancouver will also be available.

#### Social Program

A wide range of social events, emphasizing the attractions of the campus and Vancouver, has been planned for both delegates and accompanying persons.

#### Scientific Scope

The Conference will treat all aspects of coordination chemistry, with special attention being paid to fields which are currently rapidly emerging and developing. There will be six plenary lectures chosen to cover themes of general interest, as well as session lectures and poster sessions.

#### Language

The official language of the Conference will be English. No facilities for translation or interpretation will be available.

#### Special Student Registration

Reduced fees will be available. We look forward to significant student participation at this Conference.

#### Further Information

The second circular, with call for abstracts, registration and accommodation forms, will be mailed in the fall. To receive the second circular, please contact the Conference Secretariat.

Deadline for submission of abstracts will be January 31, 1996.

#### Conference Secretariat

31st ICCS Secretariat, UBC Conference Center, 5961 Student Union Boulevard, Vancouver, BC, Canada V6T 2C9; Tele: 604-822-1050; Fax: 604-822-1069.



# PUGET SOUND SECTION OFFICIAL BALLOT FOR 1996 OFFICERS

Please complete the ballot, remove this page, fold and seal it, and mail to Ms. Diane Davis, Secretary, ACS Puget Sound Section, P. O. Box 24032, Seattle, WA 98124-0032. **The deadline for completed ballots is October 6, 1995.**

Although it may seem unnecessary to vote when candidates for the offices are unchallenged, it is important to show that you support the ballot. Besides, we need certain percentage of ballots returned to validate the election. Please show your support of the section by sending in your completed ballot today.

## Chair Elect (vote for one)

☐ Thomas W. Griffith, Ph.D., Associate Dean,  
Science and Mathematics Division,  
North Seattle Community College

## Secretary

We do not have a candidate, however, we are still looking for volunteers

## Treasurer (vote for one)

☐ David Munch, Seattle Central Community College

## Councilor - three year term (vote for one)

☐ Bill Wasserman, Seattle Central Community College

## Alternate Councilor - three year term (vote for one)

☐ George Kriz, Western Washington University

☐ Walter Volland, Bellevue Community College

**Thomas W. Griffith**, Ph.D., candidate for the position of **Chair-elect**, comes with an extensive background in academia. He has been Associate Dean, Science and Mathematics Division, North Seattle Community College, since 1994. He was Professor and Chemistry Department chairman at Seattle University from 1988 to 1994. He was Assistant Professor and then Professor at Northwestern State University of Louisiana from 1973 to 1988.

Dr. Griffith graduated from Iowa State University in 1965. He obtained his M.S. in Organic Chemistry from Idaho State University in 1968, and his Ph.D. in Biochemistry from Oklahoma State University in 1971.

Dr. Griffith has been a member of the American Chemical Society since 1966. His other affiliations include membership in the AAAS, Society of the Sigma Xi, Louisiana Academy of Sciences, and, since 1989, a member of the Westinghouse State Science Talent Search Committee.

**Diane Davis**, candidate for Secretary, is an analytical chemist at the Metro Environmental Laboratory in Seattle. She has been our secretary since 1993.

**David Munch**, candidate for the position of **Treasurer**, has been our treasurer for a number of years. He earned his Ph. D. in theoretical chemistry from the University of Washington and has been teaching at Seattle Central Community College.



**Bill Wasserman**, candidate for the position of **Councilor**, has been an active member of our section holding various positions and has been a councilor for a number of years. He has been teaching at Seattle Central Community College.

**George Kriz**, candidate for the position of **Alternate Councilor** is Professor of Chemistry at Western Washington University, Bellingham, where he has been since 1979. Actually, he joined the faculty at Western when it was known as Western State College. He graduated from University of California, Berkeley, CA with a B.S. in 1961 and obtained his Ph.D. in 1966 from Indiana University, Bloomington, IN. He is a member of the ACS, AAAS, The Royal Society of Chemistry, Sigma Xi, and a member of the Board of Directors of the Washington College Chemistry Teachers Association.

George is a coauthor of the following books in laboratory techniques: "Introduction to Organic Laboratory Techniques: A Microscale Approach", by D. L. Pavia, G. M. Lampman, G. S. Kriz, and R. G. Engel, Saunders College Publishing, Philadelphia, 1990; Second Edition, 1995; "Introduction to Spectroscopy: A Guide for Students of Organic Chemistry" by D. L. Pavia, G. M. Lampman, and G. S. Kriz, Second Edition, Saunders College Publishing, Philadelphia, in press

George has been singing in the Whatcom Chorale (bass section) since 1983. The Whatcom Chorale is a 75 - 100 member classical chorale ensemble, comprising singers from Whatcom, Skagit, Island, and Snohomish counties. In 1986 they joined the Seattle Symphony Chorale for a European concert tour, which included performances in England, Germany, and Yugoslavia.

**Dr. Walter Volland**, candidate for the position of **Alternate Councilor**, has been teaching chemistry at Bellevue Community College for a number of years.

PLACE  
STAMP  
HERE

American Chemical Society  
Puget Sound Chemist  
P.O. Box 24032  
Seattle, WA 98124-0032



## NEW AWARD HONORS SCIENTIST WHO IMPROVES THE PUBLIC'S APPRECIATION FOR THE CONTRIBUTIONS OF CHEMISTRY

The first winner of the American Chemical Society's (ACS) new Helen M. Free Award for Public Outreach is Dr. Helen Free herself. She is being recognized for her efforts to improve the public's awareness of chemistry's contributions to the quality of daily life — a goal she set when she served as the 1993 president of the Society. The \$1,000 award was presented in Chicago on Tuesday, August 22, during the ACS national meeting.

Free, a native of Poland, Ohio, and resident of Elkhart, Indiana, says, "Often the only items the general public remembers about science are the big stories about the occasional chemical pill, or about environmental pollution. In light of these media events, yesterday's introduction of a new antibiotic, or the discoveries leading to a Nobel prize, or just the everyday contributions of chemistry are forgotten. It is up to chemists to communicate to and through the media about the ways science makes our lives healthier, safer, longer, easier and more fun."

Free has done this in many different ways. She was instrumental in founding the ACS Volunteers in Public Outreach program, which now includes a national corps of more than 15,000 scientist-volunteers. She helped establish Kids & Chemistry, a program in which scientists do hands-on activities with fifth and sixth graders. As chairman of the National Chemistry Week task force, Free shepherded ACS's most successful public-outreach effort — in which chemists host public science events in their communities — through its formative years. She originated and now heads the movement toward worldwide International Chemistry Celebration slated for 1999. Overall, her public outreach efforts have reached an estimated 20 million people.

Currently a professional relations consultant with Bayer Diagnostics in Elkhart and a member of the adjunct faculty at Indiana University at South Bend, Free has had a 50-year career as a clinical chemist. She joined Bayer (formerly Miles) in 1944 and has been involved in research, product development and marketing. She served as 1990 president of the American Association of Clinical Chemistry. She holds seven patents covering convenient clinical laboratory tests on urine and blood. She is a fellow of the American Association for the Advancement of Science, the American Institute of Chemists, and the Royal Society of Chemistry. She has testified before the congressional committees on the need for science research and education funding. She served on the YWCA board of directors for two years. And Free has been a ruling elder and trustee of her community's First Presbyterian Church. She was born in 1923.

Free and her husband, Al, have nine children, 12 grandchildren, and one great-grandchild.

### Scientific Products Industrial & Life Sciences

**Your Super Source  
for Chemicals . . .**

**Burdick & Jackson    J.T. Baker  
Mallinckrodt            Ricca**

To Order, Call **1-800-234-5227**

**Baxter**

### PROTECT

**Your Expensive Lab Work with Research &  
Development Record Books**

#### STOCK RECORD BOOKS

B50D - Fifty pages and fifty duplicates, 1/4" sqs. on right pages

B100P - 100 right pages w/ 1/4" sqs.

100 left pages w/ 10 sqs./inch

B200P - 208 pages, w/ 1/4" sqs. right and left pages

B200PH - 208 pages with horizontal lines on left and right pages

Books have instructions and TOCs. Page size 11" x 8 1/2".

Hard extension brown cloth covers. Pages open flat.

**\$11.50 Each FOB Chicago**

**CUSTOM MADE BOOKS TO ORDER**

#### SCIENTIFIC BINDERY PRODUCTIONS

1255 S. Wabash Ave • Chicago, Illinois 60605

Phone: 312-939-3449      Fax: 312-939-3787

## HUFFMAN

**LABORATORIES, INC.**

*Quality Analytical Services Since 1936*

### Elemental Analysis

(C, H, O, N, S, P ■ Halogens ■ Ash ■ Metals)

TOC ■ TOX ■ BTU ■ Molecular Weights

ICP ■ Emission Spectroscopy

GC ■ IC

4630 Indiana Street ■ Golden, CO 80403

Phone: (303) 278-4455 ■ FAX: (303) 278-7012



## Puget Sound Chemist

The Puget Sound Chemist is published 8 times a year, September through June with average issue running about 16 to 20 pages.

**Circulation:** Approximately 1800

**Deadline:** First of the month preceding the month of insertion.

**Mechanical Requirements:** The advertisements may use space in the following sizes:

Full page	.....	4 1/2" wide	by	7 1/2" deep
Half page	.....	4 1/2"	by	3 3/4"
Half page (vertical)	.....	2 1/4"	by	7 1/2"
Quarter page	.....	4 1/2"	by	1 7/8"
Quarter page (vertical)	.....	2 1/4"	by	3 3/4"
Eighth page	.....	4 1/2"	by	1 5/16"
Eighth page (vertical)	.....	2 1/4"	by	1 7/8"
Business card	.....	2 1/4"	by	1 1/4"

**Advertising Rates Per issue:** Effective January, 1992.

<u>Space</u>	<u>8 issues</u>	<u>5 issues</u>	<u>1 issue</u>
Full page	\$92.00	\$98.00	\$190.00
Half page	55.00	58.00	127.00
Quarter page	33.00	36.00	95.00
Eighth page	20.00	22.00	63.00
Business Card	12.00	13.00	32.00

**Payments and Cancellations:** Prepayment is required if less than 8 issue advertisement. Cancellation only on 60 days notice and upon full payment of short-term rate for space used. Please make checks payable to: Treasurer, ACS Puget Sound Section.

**Advertising Copy:** Advertiser or his agent must furnish the copy, preferably, on a computer disk (3 1/2") in a TIFF file (\*.TIF) format together with a printed copy, camera ready glossy prints, or must request an estimate of charges for typesetting the copy. Copy subject to publisher's approval. Proofs sent upon request.

**Unemployed Members:** Unemployed members of the Puget Sound Section seeking employment are allowed publication of three 1/8 page ads per year without charge.

We shall look forward to publishing your advertisements in the Chemist. For additional information, please contact:

Business Manager  
Brad Burford  
Phone: 206-885-5010, Ext: 5377

Puget Sound Chemist  
P. O. Box 24032  
Seattle, WA 98124-0032

**Please note:** The previous issue of Puget Sound Chemist had some errors in the dimensions given for the various sizes. The corrected sizes are shown above. We regret the error!



# **PUGET SOUND CHEMIST**



## **BULLETIN OF THE PUGET SOUND SECTION AMERICAN CHEMICAL SOCIETY**

### **Editor**

V.K. Bhat 206-745-9550

### **Business Manager**

Brad Burford 206-885-5010  
Ext: 5377

### **Councilors**

William J. Wasserman(1995) 206- 587-5438

Mark Wicholas (1996) 360-650-3071

Herb Bryce (1997) 206-587-6921

### **Alternate Councilors**

John Westland (1995)

Deborah Wiegand (1996) 206-641-1553

Tim Hoyt (1997) 206-756-3833

### **Printing**

G & H Printing

2370 Eastlake Ave. E.

Seattle, WA 98102

206-329-9888 FAX206- 324-3705

## **EXECUTIVE COMMITTEE PUGET SOUND SECTION**

### **Chairperson**

Mark Buchli 206-524-8695

### **Chairperson-elect**

Arden Forrey H: 206-524-5158

W: 206-616-1875

### **Past Chairperson**

Randy Eatherton 206-924-6431

### **Secretary**

Diane Davis 206-684-2397

### **Treasurer**

David Munch 206-523-3763

### **Typesetting**

P.Horbett Graphic Design

2366 Eastlake Ave. E. #317

Seattle, WA 98102

206-328-6278 FAX 206-328-0243

**Puget Sound Chemist**, P.O. Box 24032, Seattle, WA 98124-0032

Published eight times during the September-June portion of the year by the Puget Sound Section of the American Chemical Society. Direct all copy to the Editor and advertising correspondence to the Business Manager. The Secretary of the Section handles other business. All copy shall be **typed** and **double-spaced**!!

## **Puget Sound Section, ACS, Executive Committee Future Meetings in 1995**

Meetings are open to all members and are held on the second Wednesday of each month

October 11, November 8, December 13

Place: Seattle University  
Meeting: 6:30 PM in Room 511  
Engineering Building



*Accuracy with speed*

## ***Complete Microanalysis Services***

Analysis for all elements • Trace analyses • Environmental Analyses • GLP • GMP

# **GALBRAITH LABORATORIES, INC.**



**Since  
1950**

**Tel: (615) 546-1335 • Fax: (615) 546-7209**

P.O. Box 51610      2323 Sycamore Drive  
Knoxville, TN 37950-1610      Knoxville, TN 37921-1750

*Call or write for our information packet.*

### **A FIRST IN CANADA FOR INDEPENDENT LABORATORIES**

SGS Canada Inc. is pleased to announce the certification of its  
**GENERAL TESTING LABORATORY DIVISION** to the:  
**ISO 9002 QUALITY MANAGEMENT SYSTEM**

This prestigious award is indicative of our commitment to provide customers with reliable analytical services in food, agriculture, petroleum and mining industries. Societe Generale de Surveillance (SGS), the world's largest control and inspection organization, offers a wide range of quantity and quality checks and related technical services. GTL offers services evaluating the quality of food, health products, and agricultural products with both chemical and bacteriological analysis.



**SGS Canada Inc.**

General Testing Laboratories Division  
1001 East Pender St., Vancouver, B.C., Canada V6A 1W2  
Ph: (604) 254-1647 FAX (604) 254-2148

Contact: Peter Taylor, General Manager-Laboratories (as above)  
or: Christopher Frie, Chief Chemist (as above)  
Tom Taylor (604) 687-5636

American Chemical Society  
Puget Sound Chemist  
P.O. Box 24032  
Seattle, WA 98124-0032

**Dated Meeting Notice  
Please Do Not Delay**

Non-profit Org  
U.S. POSTAGE  
PAID  
Seattle, Wash  
Permit No.  
12966

UNIV OF WASH LIBRARIES  
SERIALS DIVISION  
SEATTLE, WA 98195