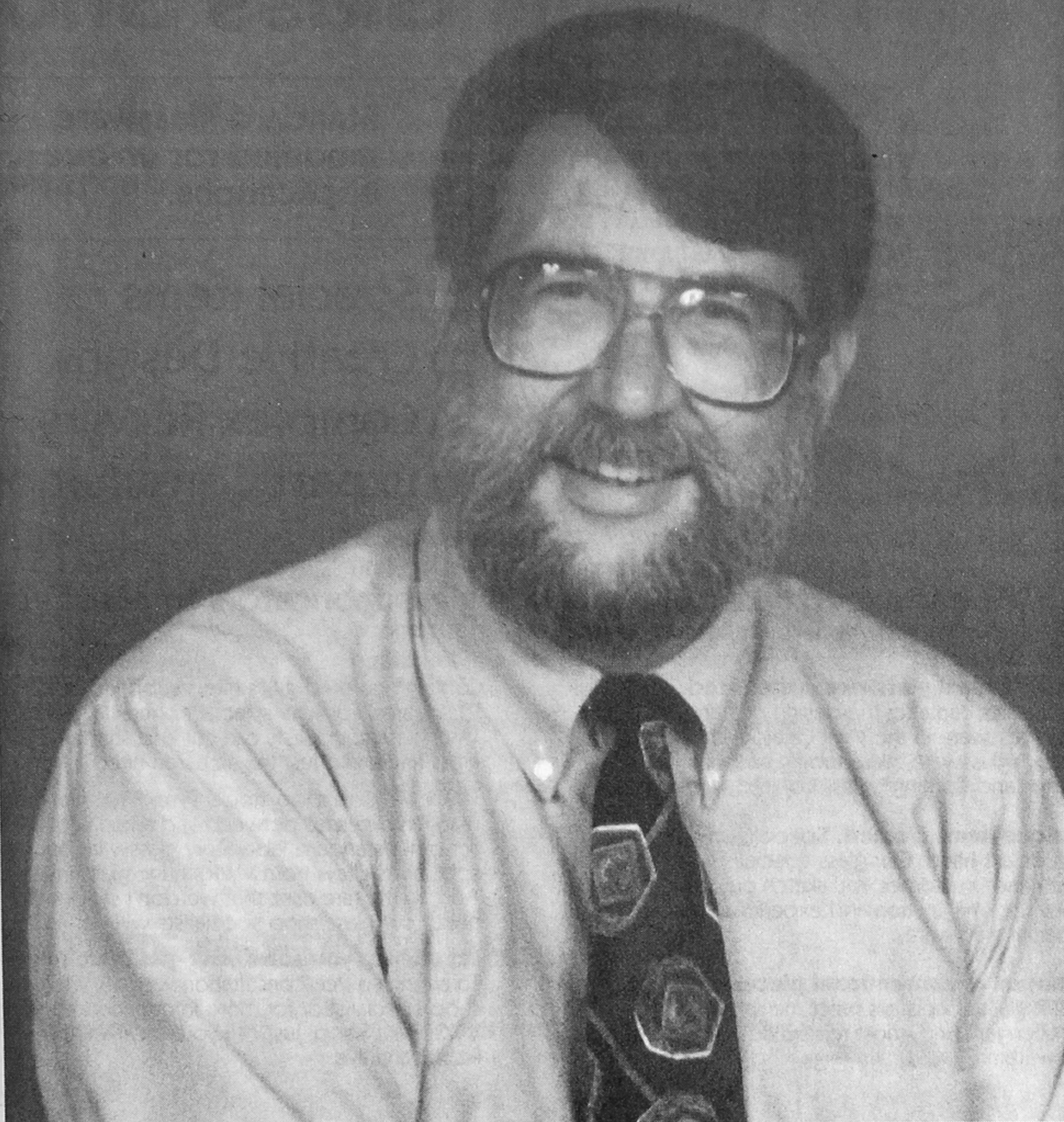


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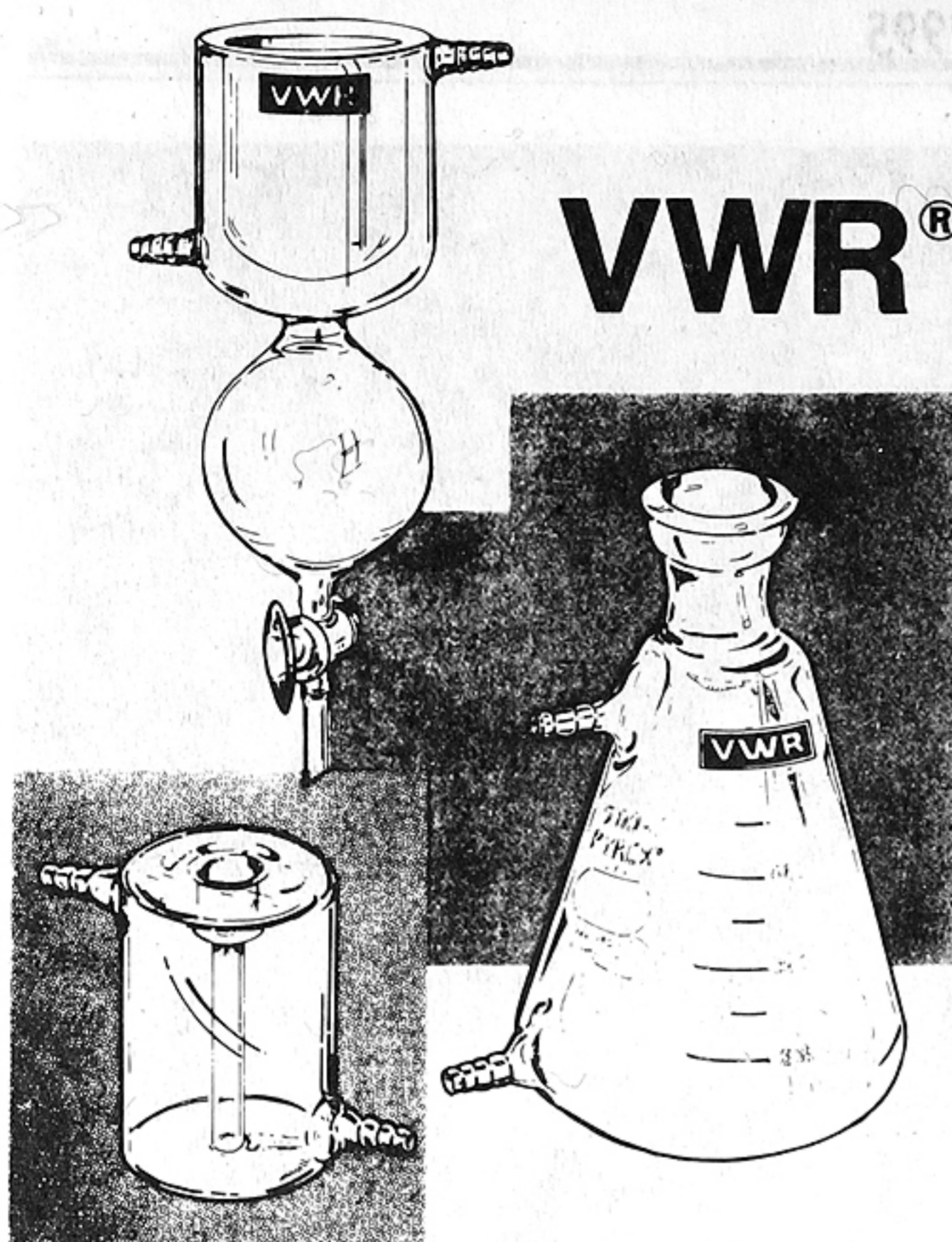
PUGET SOUND CHEMIST

BULLETIN OF THE PUGET SOUND SECTION OF THE AMERICAN CHEMICAL SOCIETY

Volume 56, Number 1



March 1995



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On the Cover: Dr. James B. Callis, professor of chemistry, University of Washington, our featured speaker at the March meeting.

MARCH MEETING

- DATE:** March 30, 1995
- FEATURED SPEAKER:** Dr. James B. Callis
University of Washington, Seattle, WA
- PROGRAM:** The Potential of Modern Spreadsheets in Teaching Chemistry
- LOCATION:** Room 336, Bagley Hall
University of Washington, Seattle, WA
- DIRECTIONS:** From I-5, take the NE 45th Street Exit and proceed East to 15th Avenue NE. Turn South and proceed South to the UW underground Visitor Parking on the left. The entrance to the underground parking is across from the NE 41st Street. From the parking garage, walk to Bagley Hall across from the Drumheller Fountain
- SCHEDULE:** 6:00 p.m. - Program
- NOTE:** The program can take only 24 registrants on a first-come-first-served basis; so, please call in your reservations early. Dr. Callis has promised to conduct another seminar sometime in the future if sufficient interest exists.
- RESERVATIONS:** All reservations must be made by noon, Monday, March 27. Please call: Seattle: 543-1610; Bellingham: 650-3070; Tacoma: 535-7530.

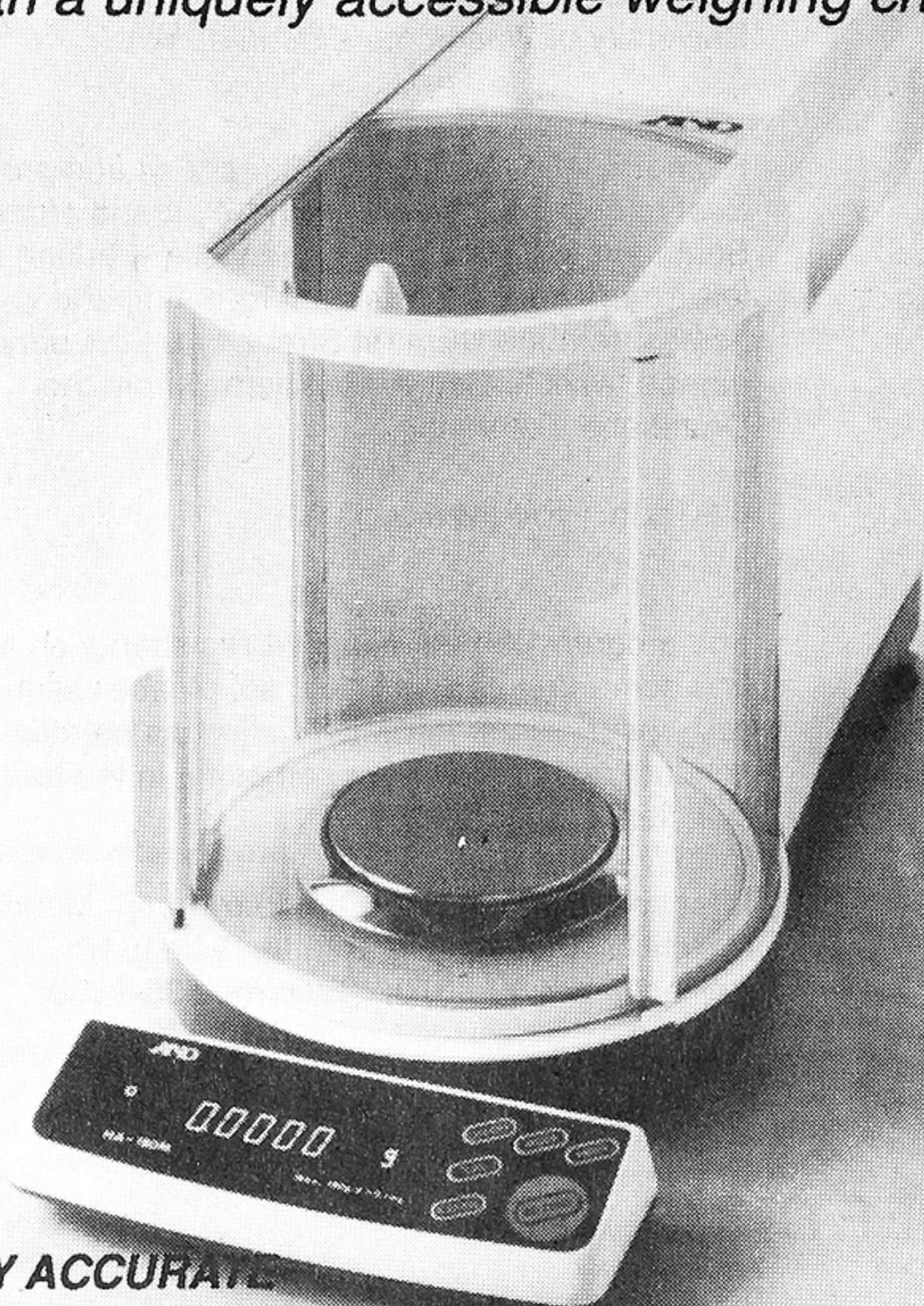
FUTURE MEETINGS, 1995

- Friday, April 28** Dr. John Fortman, Wright State University
- June** Tour
- Thursday, September 28** Mr. Al Krisciunas, Argonne National Laboratory
- Thursday, November 9** Dr. Natalie Foster, Lehigh University

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DR. JAMES B. CALLIS WILL BE THE FEATURED SPEAKER AT THE MARCH MEETING OF PUGET SOUND SECTION

Dr. Callis is Professor of Chemistry and Adjunct Professor of Bioengineering at the University of Washington. His major research interest is in the development of scientific instruments. The flash calorimeter, the video fluorometer, lap-top chemistry modules, an octane number determining device and pressure-measuring paint are examples of instruments he and his graduate students and collaborators have produced over the years. He has published over one hundred papers on these topics.

Born in Riverside, California, Professor Callis did his undergraduate work at the University of California at Davis and his graduate work at the University of Washington. He received his Ph.D. in Physical Chemistry in 1970 under the direction of Professor Martin Gouterman. He did postdoctoral work in photosynthesis with Gouterman and Professor Bill Parson at the University of Washington, and then studied membrane biophysics with Professor Britton Chance at the University of Washington.

He returned to the University of Washington in 1972 and held various research faculty positions in the Medical School and the Chemistry Department. From 1983 to 1992, with Professor Bruce Kowalski, he served as Co-Director of the Center for Process Analytical Chemistry. He was promoted to Professor in 1986. He was made a fellow of the John Simon Guggenheim Memorial Foundation in 1992 and was the recipient of a Fulbright award to study in England.

ABSTRACT

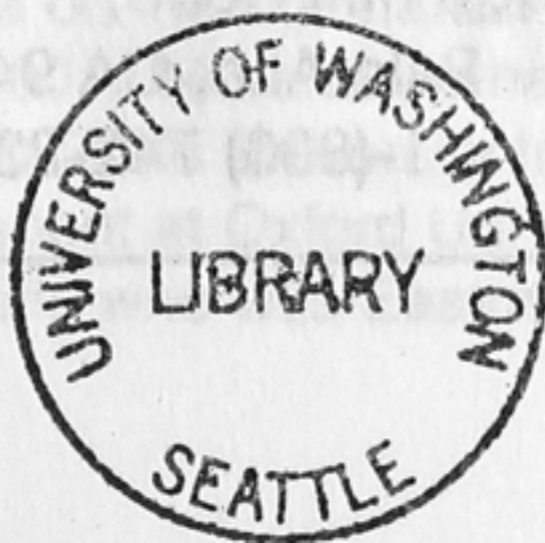
The Potential of Modern Spreadsheets in Teaching Chemistry

The purpose of this talk is to acquaint the audience with the features of the new generation of spreadsheets that qualify them for serious consideration as aids in lecturing, in generating computer-based homework assignments, and in acquiring and analyzing laboratory data.

Perhaps the most appealing aspect of spreadsheets is the efficiency with which one can carry out mathematical manipulations. Essentially, they are a powerful, non-procedural programming language that permits rapid and intuitive construction of sophisticated simulations. Moreover, the results are immediately available in graphical format, thereby inviting exploration of alternative representations of ideas.

This seminar will be given entirely from the computer keyboard, using Excel to illustrate the application of spreadsheets to understanding such diverse concepts as the numerical integration of differential equations, the 3-D drawing of molecules, the representation of atomic and molecular orbitals, and the treatment of the periodic table as a data base.

Our attempts to integrate computers more fully into the honors general chemistry curriculum will then be described. We follow the learning path: theory -> simulation -> experiment. Theory is delivered in the traditional lecture format. This is followed by a three hour simulation lab designed to refine student understanding of the concepts discussed in lecture and to prepare them for an experiment. Finally, the students do a laboratory experiment and analyze their data using spreadsheet templates they developed in the simulation lab.



RESULTS OF THE ELECTION FOR 1995 PUGET SOUND SECTION OFFICERS

Local section officers for 1995 were elected by mail-in ballot. The slate of candidates were all elected as presented: Arden Forrey, Department of Restorative Dentistry at University of Washington, was chosen Chair-Elect; Diane Davis of Metro Laboratories, Seattle, was reelected Secretary; David Munch, Seattle Central Community College, was reelected as Treasurer. In addition, Herb Bryce was reelected as Councilor (1997), and Tim Hoyt was reelected as Alternate Councilor (1997). Our congratulations to all.

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ABOUT OUR 50 YEAR MEMBERS:

Vincent F. Felicetta

I was born and raised in Seattle. After graduation from the University of Washington in Chemistry, I began employment in 1942 with the United States Rubber Co. in Detroit, Michigan, as an analytical and process chemist.

In 1945 I returned to Seattle and joined the Pulp Mills Research Project at the University of Washington under the direction of Dr. Joseph L. McCarthy. This proved to be an excellent learning experience as well as to further my education and obtain a Masters Degree in Chemistry. The Pulp Mills Research Project was primarily concerned with lignin chemistry and the characterization of the spent sulfite liquor from the wood pulping process. A number of publications resulted from this research.

I began employment at the former Puget Sound Pulp and Timber Co. in Bellingham, WA, in 1959 (Georgia-Pacific Corporation acquired the Puget Sound Pulp and Timber Co. in 1965). I was involved in Research and Product Development on lignosulfonates and spent sulfite liquor utilization. At the time, this laboratory was noted worldwide for its success in development of by-products for oil-well drilling fluids, cement and plaster additives and other uses. In 1978, I became associate director of Product Development until retirement in 1983.

Gilbert Pierce Haight, Jr. (The oldest living freshman Chemist?)

I was born in 1922 in Seattle - the only kid on the block with both parents born in the Northwest! Depression caused a move to Bainbridge Island in 1932 and I graduated from Bainbridge High School in 1939. In high school, I took a year of chemistry in 2nd Semester of Junior year and produced Cl_2 in my parents living room with a 'Gilbert Chemical Set'. My first real chemistry experiment was distinguishing between a mixture of Fe and S and FeS. Beginning with my high school math and science teachers, I have had the extraordinary good fortune to encounter extraordinary people in extraordinary circumstances all through the 55 years of my higher education and career in Chemistry.

I left home in 1939 with \$50 in my pocket to enter either University of California, Berkeley, where no tuition was required, or Stanford, where the tuition was \$115 a quarter! I chose Stanford on a dare without scholarship and chose Chemistry over Math as a major so I would **not have to teach** in later life. I proceeded to earn my way with hashing jobs and tutoring fellow students - sometimes in courses I was taking. Pearl Harbor led to departure of graduate TA's giving me opportunities to be a lab assistant, at \$200 per quarter, in first year Chemistry and Physical Science courses for both of which I wrote textbooks some 20 to 30 years later. I also got hooked on teaching for which I suffered strong criticism from Lockhart (Buck) Rogers for neglecting my course work and undergraduate research. I obtained my A.B. in December 1942 and continued my graduate studies for two quarters in 1943.

From 1943 to 1946 I was a Research Associate (\$2500 pa) doing analysis for the Manhattan Project in the lab of Howell Furman, the author of the last edition of Scotts Standard Methods of Analysis. During the course of my work, in 1944, I found 1 ppm of Cd in UF_4 from the metallurgical production line for Uranium metal. General Groves called me in for a personal report which stopped the production line until the Cd was found to be in a knife blade on the sampling device and not in the bulk UF_4 . I obtained my Ph.D. in 1946 for Procedures Developed for Use on the Manhattan Project.

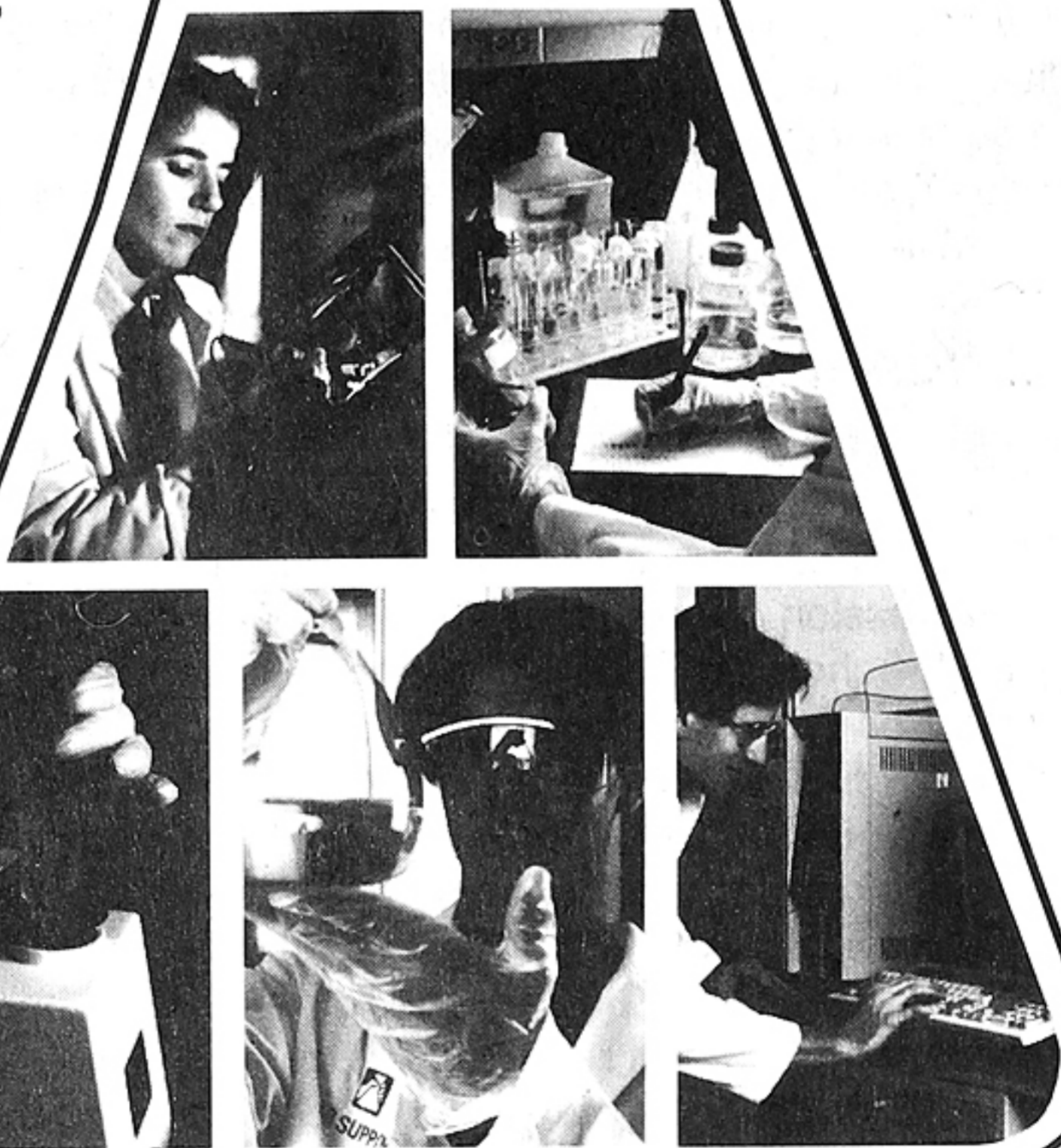
I married Shirley Grapek on June 30, 1946 and we had six children.

I was a post doctoral fellow at Ohio State University from 1946 to '47 studying H-D isotope separation. Another year was spent at Oxford University as a Rhodes Scholar with an opportunity to meet Linus Pauling who was Eastman Professor at the time. The

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next year I was Assistant Professor at University of Hawaii where I met Hubert Alyea who was a visitor and going public with his lecture demonstrations. I was the sorcerors apprentice and found my level teaching freshman courses.

I was Assistant Professor at George Washington University from 1949 to '52. During summers I worked at Naval Research Lab on the emission of Arsine from storage batteries in submarines. I was an Assistant Professor at University of Kansas from 1952 to '54 where I had my first encounter with textbook authors, Sisler, Vanderwerf, Davidson and Brewster. As I was trying to recruit graduate students from Swarthmore College in 1954, I found myself being hired by Swarthmore to teach freshman course that would recruit chemistry majors and "get us known in Inorganic". I stayed at Swarthmore till 1965 as Associate Professor teaching General, Quantitative, Inorganic, Physical Science and a share of Advanced Physical Chemistry. Students there had twice the CEEB scores I ever had and the only way I could have gotten in was by joining the faculty! During my tenure here, I became an ACS visiting scientist to small colleges and high schools. I also began giving public lectures and Christmas Lectures for students in the tradition of the Royal Society. In 1957 I was able to arrange a graduate program involving Swarthmore College, University of Pennsylvania, and OOR for Arpad Bergh, a refugee from the Hungarian Uprising in 1956. He finished in under two years and has just retired from Bell Laboratories. His first salary was double my salary at the time.

While at Swarthmore, I spent a sabbatical year as Visiting Professor in Jannik Bjerrum's laboratory in Copenhagen (1960-61) working on stepwise equilibria (Bjerrum's interest), and complicated redox kinetics (my interest). From Swarthmore I went to Texas A & M in 1965 as Professor and stayed there just 9 months and two days.

I moved to the University of Illinois in Champaign-Urbana in 1966 as full Professor and Director of the General Chemistry Program. Here I stayed until 1987 when I became Professor Emeritus. While at U of Illinois I have been on sabbaticals at various times. In 1975 I was with Paul Saltman at University of California, San Diego. From 1981 to 1982 I made eight visits to Australian National University in Canberra and University of Sidney. In 1986 I was with the MUCIA project in Shah Alam, Malaysia. The year was spent in organizing a two year Arts degree for Malay students who would then come to the USA for their last two years.

Since 1989 to the present I have been Affiliate Professor (without salary) at the University of Washington.

I have been a member of various scientific organizations: American Chemical Society with memberships in CHED, Analytical, Inorganic, and Physical Chemistry divisions; Officer in CHED and many committees; Editorial boards of Inorganic Chemistry, Chem Reviews, and *Journal of College Science Teaching*. Other memberships include: Royal Society of Chemistry, Illinois Association of Chemistry Teachers, and Fellow of AAAS. I have been an author or co-author of text books for General Chemistry and Physical Science and published over 100 articles in chemical journals.



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Horace H. Hopkins

I was raised in suburban Philadelphia where I acquired a typical easterner's point of view. This became more tolerant as I went to Oberlin College. Here, as a Chemistry major, I first ran into a clash of opinions on what life was all about, from arts majors, religion majors, atheists, anti-science advocates, etc. Some of my professors were poor, some excellent - such as the one who taught Quantitative Analysis. I'll never forget my first iron analysis, for which I had great precision, but terrible accuracy. Professor Bromund straightened me out in a hurry, a needed lesson in humility. I graduated in 1943.

During the war, I was at the nuclear development project in Chicago, under the Manhattan Engineering Corps, first as a civilian, then in uniform as a very lowly T-3. From today's point of view, conditions were horrible. But at the time we were all unimpressed with the rigor of safety standards, and were eager to work. Safety awareness and monitoring gradually improved with time. Initially we actually worked on plutonium(IV) reactions with peroxide on the open benchtop. That lasted only a few days, then work shifted into open-faced hoods, then into glove boxes fitted with stacks of lead bricks.

Despite the hubub of frightened anti-nukes today, I still live and am reasonably healthy. —Another memory, when we got contaminated hands which wouldn't clean up, the practice was to dip them into fresh cleaning solution (sulfuric acid and dichromate), for two seconds, and then wash quickly with running water.

It is hard to understand the clamor today of those who criticize us for developing the atom bomb. The national attitude was one of high patriotism, sacrifice, fear that the Germans would get the bomb first, fear we would be overrun by the axis powers, sadness at the daily lists of our men dying on the fronts, horror at the pictures of battle and the awful poses of torn bodies. There was a high commitment to work long hours, to do what we thought was necessary.

Safety was a consideration; but time and schedules were more important. Individual decisions could be made on the spot without review; sometimes chances were taken to get the job done. I remember doing liter-scale ether extractions of uranyl nitrate in a wooden attic in the open, something unthinkable today. We were lucky. When the bomb was dropped and the war ended, we believed without question that we had saved thousands of American lives and perhaps millions of the enemy.

I earned my Ph.D. from the University of California, Berkeley, in 1949. Conditions were far better due to all we had learned and the improved monitoring. I worked on spallation reactions of arsenic with 192 Mev deuterons, under Professors Cunningham and Seaborg. There was great camaraderie in the graduate school; many had known each other during the war. I purified arsenic by distillation, prepared a cyclotron target, and had it bombarded. Then the products would be separated and counted with energy measuring equipment. Yields were figured, and conclusions drawn. I joined the Hanford project under GE in 1949, where I remained for 38 years under many contractors, including ARCO and Westinghouse. My field was technology for nuclear materials production. Early work involved hands-on R&D for defense and power purposes. All this work was with high gamma field materials requiring shielding.

In 1953, I moved into management and mostly desk work. Most productive was the Plutonium Chemistry Laboratory. Here we dealt with many critical masses. Care was required; procedures were codified and enforced. Development highlights included: 1. A continuous countercurrent anion exchange apparatus; 2. A continuous critically safe hydrofluorinator; 3. Continuous molten salt electrolysis; 4. Ceramic casting crucibles for high purity metal; 5. Milligram scale concentration of fission product rhodium as nitrate (a beautiful deep red color); 6. Recovery of americium; and, 7. Isolation of gram quantities of plutonium-238 for space missions.

After ten years I moved into engineering studies. This concerned long range studies of production modes using all the nation's sites concerned with the steps from fuel preparation to product shipment. Then followed a period of safety analysis, facility compliance studies, and accident investigations. I learned that when a major accident

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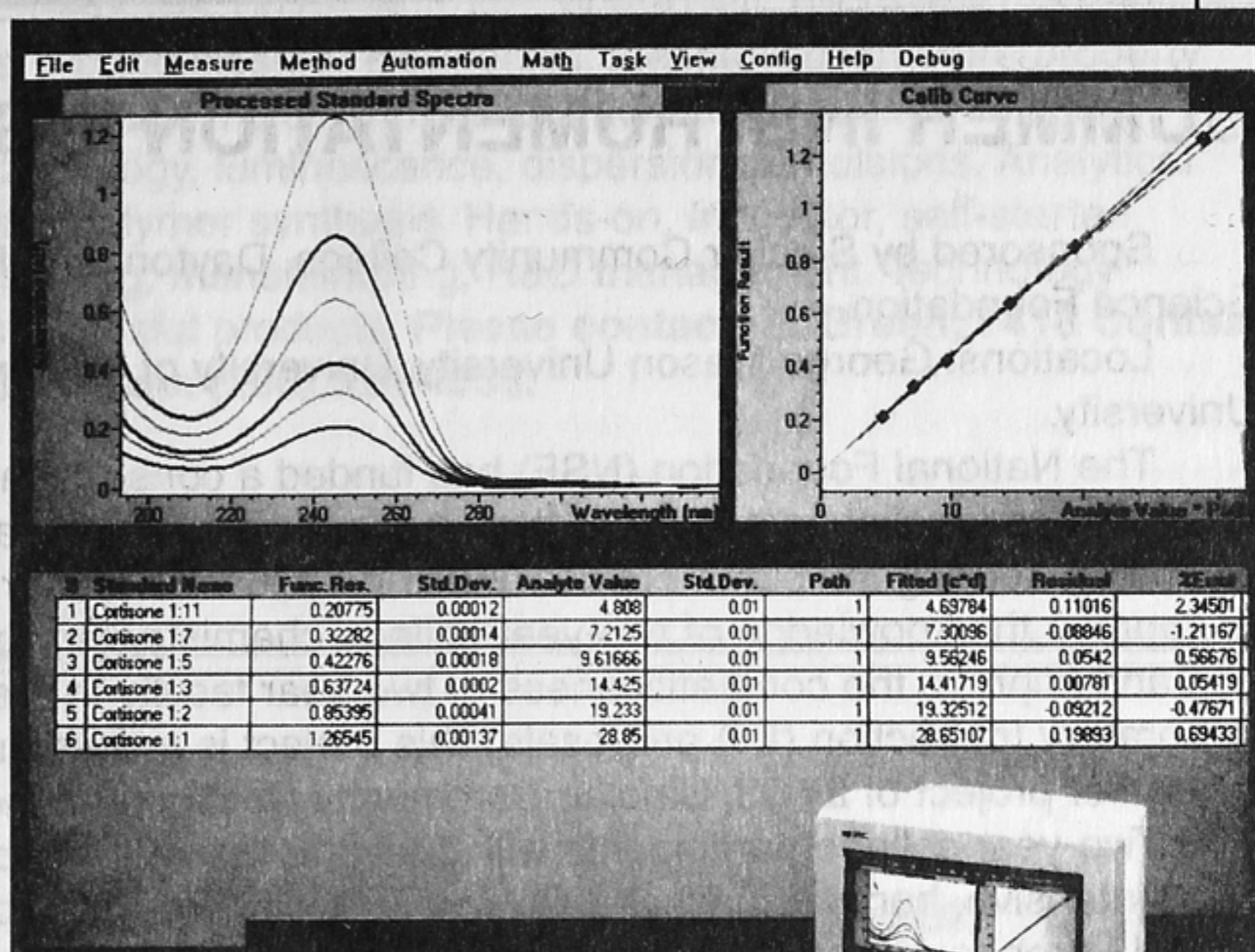
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occurs in a large organization there is never a single simple cause (case of a major facility fire involving a gasoline truck). Rather, there are multiple causes all combining into one unfortunate event. There are criteria inadequacies, inspection lapses, training deficiencies, personnel errors, management oversight lapses, procedure omissions, and management failure. I suspect this is true for most of the major accidents in the industrial world.

I enjoyed this career, never got bored, and never regretted not changing fields. Chemistry training fits one for many different jobs.

SUMMER INSTRUMENTATION INSTITUTE 1995

Sponsored by Sinclair Community College, Dayton, and Funded by the National Science Foundation.

Locations: George Mason University, University of Dayton, and Western Washington University.

The National Foundation (NSF) has funded a consortium of 2YC3, that includes three two-year colleges and three four-year colleges, to offer a series of instrumentation workshops during the summers of 1995 and 1996. The primary purposes of the grant are to improve the knowledge of two-year college chemistry faculty in modern instrumentation and improve the competitiveness of two-year faculty in preparing NSF Improvement Laboratory Instruction (ILI) proposals. This project is a continuation and an expansion of an earlier project of 2YC3, Sinclair Community College and the University of Dayton.

Two-year college participants will study the theory and applications of an instrument in an intensive, hands-on, week-long workshop. Included will be a workshop on writing NSF ILI proposals and a workshop on instrumentation maintenance. The workshops will be held at three sites: George Mason University in Virginia with northern Virginia Community College; University of Dayton in Ohio with Sinclair Community College; and Western Washington University in Bellingham, Washington, with Shoreline Community College. Each site will conduct the workshops at a different time and with unique instrumentation workshops.

The summer Instrument Institute is open to all two-year college chemistry teachers who:

- Have at least five years of teaching experience in two-year college chemistry instruction
- Are responsible for at least one of the freshman general chemistry courses or sophomore courses offered at their campus
- Agree to participate in the entire one-week workshop
- Hold at least a master's degree in chemistry or closely related field
- Have experience in using chemical instrumentation

An attempt will be made to include two-year faculty from each geographic region of the country. Women and minority faculty members are especially invited to apply. The tuition, room and board for two-year college chemistry faculty members is covered by the NSF grant while the institute participants are expected to pay their own travel expenses.

The deadline for returning the application forms is **Friday, March 31, 1995.**

For further information, please contact:

Richard Jones, Ph.D., Professor, Chairperson, Department of Chemistry
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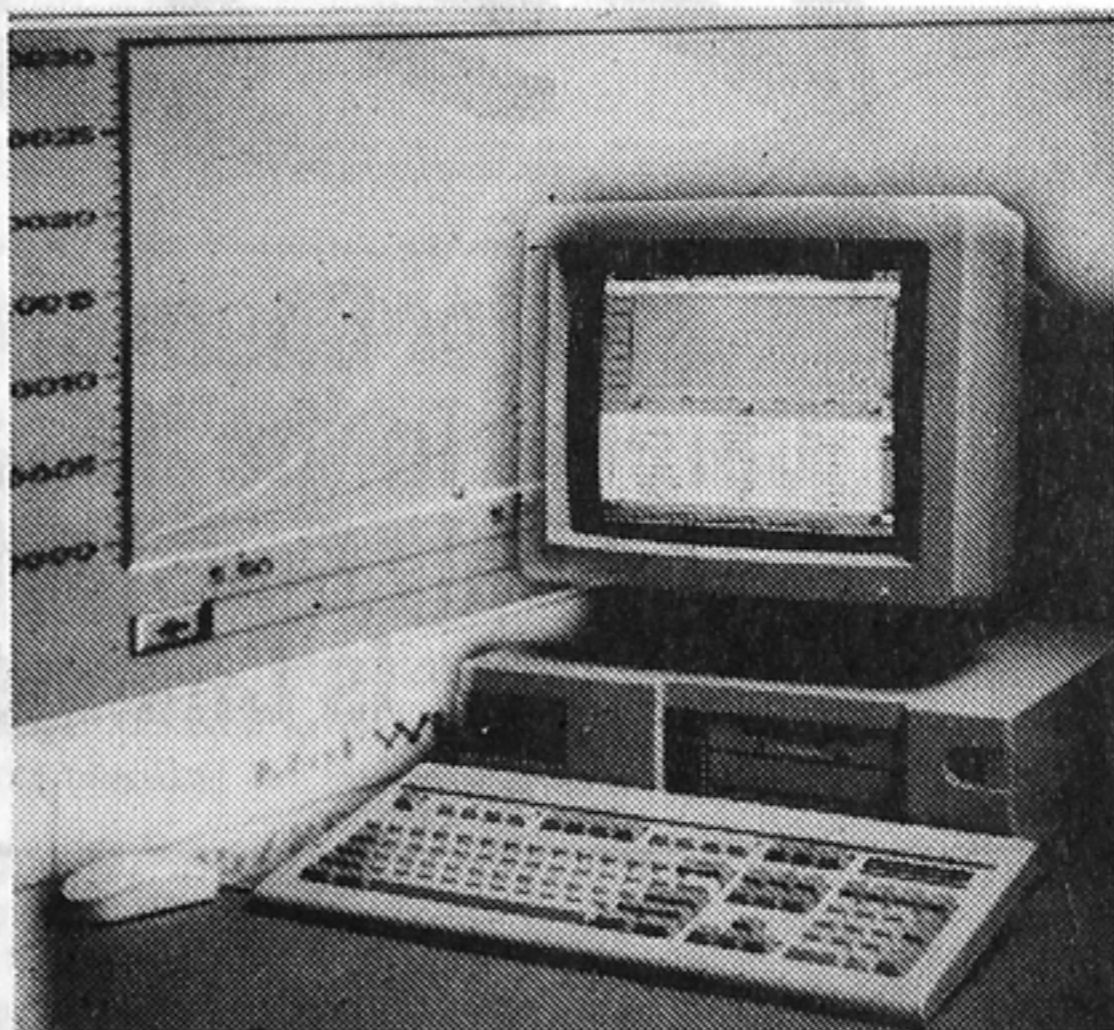
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By now most of you will have read the Chemical & Engineering News January 16 article about the recently approved Minority Scholars Program. To have a competitive selection process, the ACS needs to run an effective promotional campaign. We need your help to advertise the program. Because local section newsletters may be published close to the end of the promotional campaign for the school year 1995-96, we want to inform you also of our other need.

By September 1995 we will need to identify mentors for the scholarship winners. Local sections are the ideal ACS organization unit to help give support to these students. We believe that many of the scholars will be close to the living areas of our members. It is our goal to assign more than one mentor to a student.

The volunteer members we seek are those who are willing to give both academic and emotional support. Being a mentor to these scholars does not require qualifying as minority yourself. It requires a willingness to help, to give support over an extended period of time (either over the phone, or in person), an ability to listen, good one-on-one communication skills, and an open-mind to explore other cultures. The reward of such a relationship are significant. We will offer a pilot training program for mentors in Chicago at the ACS National Meeting.

Please give us your support by volunteering to become a mentor.

To express your interest, you may call or send e-mail communication to Dorothy Rodman, Administrator of the Minority Scholars Program, at 202-872-6250 or 1-800-227-5558 (press 9, 3, 5), or e-mail: dpr94@acs.org.



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Contact: Peter Taylor, General Manager-Laboratories (as above)

or: Christopher Frie, Chief Chemist (as above)

Tom Taylor (604) 687-5636

ACSess Changes for the Better

You'll soon be seeing a new ACSess membership newsletter in your mailbox; starting in February, ACSess will be published more frequently in a smaller format.

To improve the utility of the newsletter to both its readers and its contributors, ACSess will now be published five times a year. To better fit ACSess into both your reading pile and your schedule, it'll be shrunk to 8 1/2 x 11 size, with more to-the-point briefs on the ACS services and products you want and less purple prose you don't.

You'll also find more references in ACSess to electronic means of obtaining

more information on the entire spectrum of ACS activities and programs, through fax-on-demand systems, electronic mail, and the new CAS and ACS World Wide Web servers.

Reader input provided the impetus for these changes to ACSess, and readers who returned the survey published in last November's issue deserve the thanks of the Society--member input is crucial to excellent communication!

Your questions and suggestions about ACS's new electronic communication initiatives, and the new format and schedule for ACSess, are welcome! Please send them to ACSess at the ACS headquarters address or to the ACSess e-mail box at acsess@acs.org. ♦



ACS Science Policy Fellowship

Immediate Opening

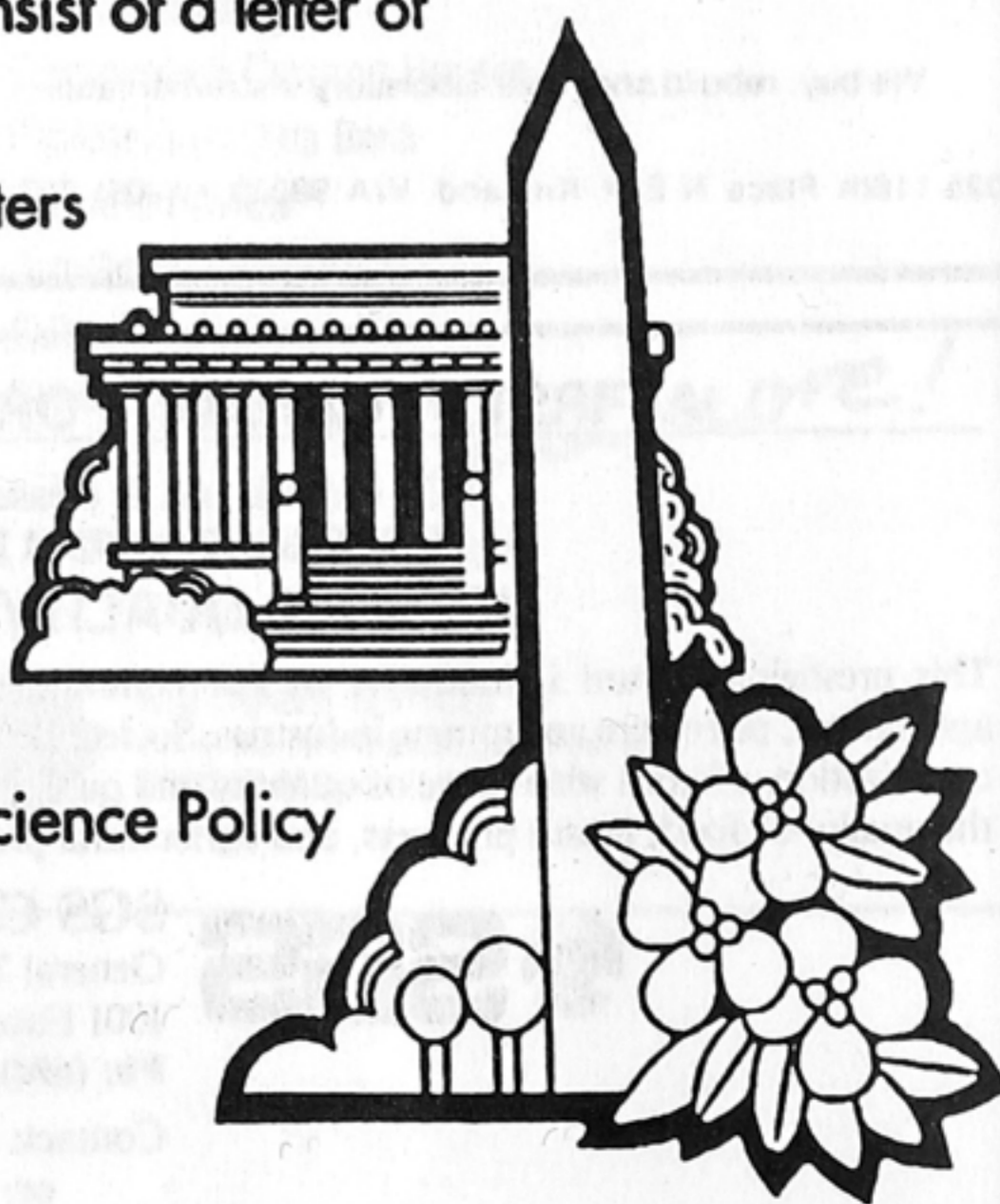
The Fellowship provides an opportunity for a scientist to join the ACS staff and

- Complete one or more selected science policy projects that contribute to the Society's discussions and recommendations in areas of importance to the science community;
- Assist in the development of official ACS policy statements and testimony for Congress; and
- Meet with Capitol Hill staff and federal agency officials.

Applications are due **May 1, 1995** and consist of a letter of intent, a resume, and two letters of reference.

Arrangements should be made to send the letters of reference directly to ACS. Candidates should contact ACS prior to submitting an application to determine the type of information needed in the letter of intent.

For more information contact:
Office of Science Policy Analysis
Department of Government Relations and Science Policy
American Chemical Society
1155 Sixteenth Street, N.W.
Washington, D.C. 20036
(202) 452-2127



ALREADY AN ACS MEMBER, BUT GOT AN INVITATION TO JOIN?

Occasionally the ACS Department of Membership Activities (DMA) gets a call from a current member reporting that he or she received an invitation to join the Society. The staff of DMA apologizes to members who may have received an invitation erroneously and is diligently striving to lower the odds that a current member will receive such invitations in the future. Here's why members sometimes get invitations to join:

As part of the recruiting process, ACS purchases scientific mailing lists. Before a mailing is sent to addresses on these lists, each list is compared to the ACS membership roster to eliminate names of current members. Sometimes, however, these merge/purge methods fail to identify a current member's name and address on a purchased list for a variety of reasons:

- ◆ The purchased list may show a work address and the ACS membership files will show a home address -- or vice versa.
- ◆ Variants may exist in the name or address, such as a name change by marriage, or transposition of letters or numbers in the name or address.
- ◆ Nonmember subscribers to *C&EN* sometimes mistakenly believe that they are ACS members; however, if they've never applied for membership, they remain prospects according to the merge/purge protocols.

As a current member, if you've received an invitation to join the ACS, please return the invitation (in the prepaid envelope provided) so that it can be put on a suppression tape which should eliminate any future mailings to that particular address. If you have questions about ACS programs or services, please contact DMA staff at 800/227-5558 (at the menu press 0-3-3) or 202/872-8737, or send electronic mail to meminfo@acs.org. ♦

CAS Info via the Internet

Last October, Chemical Abstracts Service (CAS) opened a World Wide Web server to provide Internet access to information about CAS's products and services. The server can be reached at URL <http://info.cas.org/welcome.html>, and apparently people have been reaching it -- in its first week of its public availability, with virtually no publicity, the server was accessed more than 9000 times!

Four headings are listed on the initial menu on the CAS server: "About CAS," "Products & Services," "Support & Training," and "What's New."

"About CAS" briefly describes CAS as an organization and provides general contact information. "Products & Services" describes CAS's collection of printed, on-line, micro-form, and CD-ROM scientific and technical information products, as well as some of the documentation that CAS offers uses of its services.

"Support & Training" provides information on how to reach CAS Customer Services for setting up accounts or ordering products and how to reach the STN Help Desks in the United States, Europe, or Japan for help with on-line search questions. The schedule for CAS workshops around the world can also be found in this section. Finally, "What's New" contains such late-breaking items as press releases from CAS and special offers on CAS products and files.

A similar server based at ACS headquarters and known as the "ACS Web" will soon be linked to the CAS server and will provide information under such headings as "About the CAS," "Education," "Member Benefits and Meeting Registration & Information," "Public Affairs," "Publications & Software," and "Symposia & Colloquia." The ACS Web will open to the public in early April. v

Treasurer's Report
 PUGET SOUND SECTION
 AMERICAN CHEMICAL SOCIETY
 31-Dec-94

	1994 BUDGET	1994 Year-to-Date
INCOME		
Annual ACS Allotment	\$9,021	\$9,021.0
New Member Commissions	15	50.0
Local Section Dues	4,300	4,317.0
Publications (advertising)	4,200	65.0
Directory (advertising)	500	0.0
Meals (total revenue)	2,000	2,249.0
Receipts (Chem Demo Wkshop, ACS pins, Safety Tapes, etc)	200	565.0
Interest, Dividends	1,000	1,003.4
Donations, Contributions (for minting PA medals)	1,500	0.0
Rebate from ACS for councilor travel expenses	1,000	983.2
Reimbursement for Pauling Award expenses	500.00	560.0
Other	0	0.0
TOTAL:	\$24,236	\$18,813.7
EXPENSES		
Administration	\$100	\$20.8
Education Committee	2,000	1217.9
(National Chemistry Week		0.0
(Donations: Wash College Chem Teachers Assn		0.0
(Expanding Your Horizons		200.0
(W Jr Sci-Hum Symp & W Sci Teachers		0.0
(Precollege Program		
(Chem Olympiad		44.0
(Chemistry for Kids		673.5
(Chem Workshops for students/teachers K-12		202.4
(Recognition awards for HS students		0.0
(Grants to HS groups for K-9 chem demos		0.0
(Matching grants to HS for publications		89.0
(Scholarships K-12 teachers / chem classes		0.0
(HS Chem teachers group		8.9
Public Affairs Committee	0	0.0
Professional Relations and Status Committee	100	0.0
Public Relations Committee	0	0.0
Safety Committee	100	0.0
Local Meetings (includes speakers' expenses)	1,500	945.0
Pauling Medal Symposium	2,500	2,174.9
Pauling Medal - minting	1,500	0.0
Meals (total expenses)	2,000	1,749.0
Publications (printing, mailing, etc.)	8,400	8,188.9
Directory	2,000	0.0
Awards Other (50yr member dinners)	50	0.0
Pauling Award (1993 - 1994)	1,500	1,007.3
High School Teacher Award	200	0.0
Student Affiliate Award	200	275.0
Travel Subsidies for Councilors	2,500	2,266.5
Travel Subsidy and Fee for LSO Conference	500	333.7
Other	500	0.0
TOTAL:	\$25,650	\$18,179.3
NET GAIN (LOSS)	(\$1,414)	\$634.3
ASSETS AND CAPITAL		
Washington State Employees Credit Union Checking account	\$783.14	
Account number 156176-0 Share account	7,117.54	
1 year WStECU CD No.58648 @ 4.25% due 06/26/95	2,000.00	
1 year WStECU CD No.63259 @ 4.75% due 11/19/95	7,500.00	
1 year WStECU CD No.64971 @ 4.25% due 03/19/95	7,500.00	
Pauling Award Medals 0 @ \$542	0.00	
A/V Equipment for Safety Talk (@ 20% of cost 10/90)	170.00	
BALANCE	\$25,070.68	

PUGET SOUND CHEMIST



**BULLETIN OF THE
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Puget Sound Section, ACS Executive Committee Future Meetings in 1995

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

March 8, April 12, May 10, June 14

Place: Seattle University
Dinner: 5:30 PM in Cafeteria (optional)
Meeting: 6:30 PM in Room 511
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