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# PUGET SOUND CHEMIST

BULLETIN OF THE PUGET SOUND SECTION OF THE AMERICAN CHEMICAL SOCIETY

Volume 57, Number 1



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# PUGET SOUND CHEMIST



## BULLETIN OF THE PUGET SOUND SECTION AMERICAN CHEMICAL SOCIETY

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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 1996

Meetings are open to all members and are held on the second Wednesday of each month. **Please note the change** in the location for the meeting. The executive committee will be holding their meetings in room 2430C at **North Seattle Community College** instead of Seattle University as in the past. Room 2430C is on the second floor above the book store.

**February 14, March 13, April 10, May 8, June 12**

**Place: North Seattle Community College**

**Meeting: 6:30 PM in 2430C**

On the cover: Dr. Alexander Shedrinsky, our featured speaker at the March Meeting

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## MARCH MEETING

DATE:	Monday, March 4, 1996
FEATURED SPEAKER:	Dr. Alexander M. Shedrinsky Associate Professor of Chemistry Long Island University
PROGRAM:	"Application of Pyrolysis Gas Chromatography to the Materials of Art and Archeology"
LOCATION:	North Star Dining Room, North Seattle Community College, 9600 College Way N., Seattle, WA
DIRECTIONS:	Take Northgate exit from I-5 and go west on Northgate Way N.E. (which runs East/West north of the Northgate Mall) to Meridian N. Turn left going South on Meridian, which becomes College Way N; and continue to the college on your left. Drivers: Please leave your car license number with the security to avoid being ticketed!
SCHEDULE:	6:00 p.m. - Social 6:30 p.m. - Dinner, North Star Dining Room 7:30 p.m. - Speaker and program  Please join us for the program even if you are unable to join us for the dinner.
COST:	\$18 per person for dinner
NOTE:	When you make reservation for dinner, you have an obligation to pay. Once the food is ordered, the section is billed even if you do not show up.
RESERVATIONS:	All reservations must be made by noon, <b>Wednesday, February 28</b> . Please call: Seattle: 543-1610, Bellingham: 650-3070; Tacoma: 535-7530
OFFER TO STUDENTS	The section will pay half the cost of dinner for the first ten students (high school, undergraduate, or graduate) who call 543-1610.

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## FUTURE MEETINGS, 1996

March 4:	Alexander Shedrinsky: "Application of Pyrolysis Gas Chromatography to the Materials of Art and Archeology"
April 8:	A. Truman Schwartz: "The Father of Us All: Lavoisier and the Revolution of 1789"

# **ALEXANDER M. SHEDRINSKY WILL BE THE FEATURED SPEAKER AT THE MARCH MEETING OF PUGET SOUND SECTION**

Alexander M. Shedrinsky was born in 1943 and graduated from the Chemistry Department of Leningrad State University in 1965. He continued his studies there and completed his postgraduate study in Polymer Chemistry in 1970. He was a lecturer in Organic and General Chemistry at Leningrad North-West Polytechnical Institute, First Leningrad Medical Institute and Leningrad Pharmaceutical College.

Dr. Shedrinsky immigrated to the U.S. in 1980 and continued his graduate studies at New York University, completing his M.S. in 1982, and his Ph.D. in 1986 in Synthetic Organic Chemistry. He was Charles and Francis Atkins Fellow at the Paintings Conservation Department of the Metropolitan Museum of Art from 1985 to 1986, and a Postdoctoral Fellow at the Conservation Center of the Institute of Fine Arts of New York University from 1987 to 1988. He was Andrew Mellon Fellow at the Objects Conservation Department of the Metropolitan Museum of Art (1988-1990) while continuing as an Assistant Professor of Chemistry at the Brooklyn Campus of Long Island University and a Kevorkian Fellow at the Conservation Center of the Institute of Fine Arts of New York University (1988-1992). Dr. Shedrinsky has been an Associate Professor of Chemistry at Long Island University and a Research Associate at the Conservation Center of IFA (NYU).

Dr. Shedrinsky was a Fulbright Professor during the Spring semester of 1995 at the Academy of Arts, St. Petersburg, Russia, teaching a course of "Organic Chemistry of Museum Objects".

## **ABSTRACT**

### **Application of Pyrolysis Chromatography to the Materials of Art and Archeology**

Knowledge of the precise nature of materials used by artists in creating works of art is essential for the scientific conservation of cultural property. Attempts to answer materials questions are usually severely limited due to the compositional complexity of the many art media employed by artists and the extremely limited sample size of the specimens presented for examination.

Above all, with ages ranging from millennia to less than a hundred years, organic materials of art and archeology often change so dramatically with time that identification of their original composition becomes a significant research problem. What makes it doubly difficult is the fact that through polymerization, oxidation and crosslinking, these materials become very difficult to handle by conventional analytical techniques.

In this respect pyrolysis gas chromatography (PyGC) has become a very powerful instrument for the characterization of non-volatile and non-soluble materials. It does not require any pre-treatment of the sample before examination and can be done on very small samples. Advances in pyrolysis instrumentation and development of thin-coated capillary columns have made PyGC reliable and reproducible.

Examples of the examinations of museum objects from the Metropolitan Museum of Art and American Museum of Natural History will be given together with analysis of artifacts from private collections. The presentation will be of interest to both scientific and archeological/art historical audiences.

# AMERICAN CHEMICAL SOCIETY OFFICERS FOR 1996

**PRESIDENT — DR. RONALD C. BRESLOW**

**BOARD CHAIRMAN — DR. JOAN E. SHIELDS**

**PRESIDENT ELECT — DR. PAUL S. ANDERSON**

The three principal officers of the American Chemical Society assumed one-year terms beginning January 1, 1996.

Dr. Ronald C. Breslow, Mitchell professor of chemistry and university professor at Columbia University, New York City, automatically became president after having served as president-elect for 1995. He was elected by the membership of the Society in its 1994 elections.

Dr. Joan E. Shields, professor of chemistry and department chairman at Long Island University, Brookville, N.Y., was designated to serve as chairman of the board of directors by the other board members. She had been previously elected to a three-year term on the 6-member board that began in January, 1995.

Dr. Paul S. Anderson, vice president for physical and chemical sciences at DuPont Merck Pharmaceutical Co., Wilmington, Del., was chosen 1996 president-elect in the most recent membership balloting held in November, 1995.

Meeting announcement and call for papers

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Tom Taylor (604) 687-5636

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**NORM '96**  
**The 51st Northwest Regional Meeting**  
**of the American Chemical Society**  
**June 19-22, 1996**  
**On the Campus of Oregon State University**  
**Corvallis, Oregon**

Corvallis is located in the heart of the Willamette River valley approximately 80 miles south of Portland and 40 miles north of Eugene. Some of Oregon's finest vineyards and wineries are located in the rolling foothills at the base of the coast range near Corvallis.

The weather in June can be expected to be mild with high temperatures in the 80s and nights can cool to the 50s or 60s. Although mid June is past the primary rainy season you can still expect to find occasional overcast or rainy day.

The city of Corvallis is a town of 50,000. The core of the old downtown is only a few minutes walk from campus. It is intact and prosperous with a variety of shopping, restaurants and coffee shops. The campus is lovely in June with an abundance of trees, flowering shrubs and plants. Western Oregon provides an enormous diversity of outdoor recreation opportunities. Hiking in the local area through McDonald State Forest or bird watching in the Finley National Wildlife Refuge are within minutes of the campus.

Peavy Arboretum, maintained by Oregon State University College of Forestry, includes two instructional hiking trails. Whitewater rafting in some of the local rivers can be readily arranged.

The rugged and scenic Oregon coast and Pacific Ocean are about an hour's drive to the west. Crabbing, clamming and simply walking on the beach are pastimes enjoyed by many. The Cascade Mountains are about two to three hours away to the east. There are many hiking trails and campgrounds readily available for outdoor enthusiasts.

### ***Special Programs***

#### **Undergraduate Activities**

(OSU SAACS, [saacs@ccmail.orst.edu](mailto:saacs@ccmail.orst.edu))

A diverse set of activities for undergraduates is planned. These include a kick-off social, career planning sessions, mealtime round-table discussions, and a trip to the Oregon coast. Participation in the Wednesday night poster session is especially encouraged for undergraduate research presentations.

#### **Symposium:**

Dioxins In the Environment

(Organizer: Prof. Max Deinzer. [deinzerm@ccmail.orst.edu](mailto:deinzerm@ccmail.orst.edu))

Dioxins in the environment remain a major concern because of the ubiquity and extreme toxicity of these compounds. This symposium will feature timely results on the chemistry, environmental distribution, innovative analytical approaches, and immunotoxicology of 2,3,7,8-TCDD and other dioxin congeners.

#### **Symposium:**

Analysis of Hazardous Wastes at DOE sites

(Organizer: Dr. Jim Campbell. [ja\\_campbell@ccmail.pnl.gov](mailto:ja_campbell@ccmail.pnl.gov))

This symposium will discuss methods for the analysis of hazardous wastes, including mixed hazardous wastes. Representatives from DOE locations will discuss methods available for the analysis of radioactive mixed hazardous wastes. In addition, analysis of other hazardous wastes, including explosives, will be presented.

## **Symposium:**

### **Materials Chemistry**

(Organizer: Prof. Art Sleight. sleighta@ccmail.orst.edu)

**New Materials:** This symposium will focus on the synthesis of new materials with potentially useful properties. Some of the materials to be represented include phosphors, nonlinear optical materials, thin films, materials for batteries, and materials which contract on heating.

## **Poster Session**

(Organizer: Prof. Kevin Gable. gablek@ccmail.orst.edu)

The poster session will kick off the meeting Wednesday evening, in conjunction with an introductory social hour. Posters from all areas of chemistry, including chemical education and undergraduate research, are solicited. This is an attractive forum for drawing an interdisciplinary audience: everyone will be there! Submit abstracts to the Program Chair as for General Sessions.

## **General Sessions**

Oral presentations in the fields listed below are encouraged. Abstracts (two copies, one on a standard ACS form) should be mailed to the Program Chair by March 15, 1996. Unsolicited presentations related to symposia should also be sent to the Program Chair.

Analytical Chemistry  
Biochemistry  
Inorganic Chemistry  
Organic Chemistry  
Physical Chemistry

## **Address for abstracts:**

**Prof. Kevin P. Gable**  
Department of Chemistry  
Gilbert Hall 153  
Oregon State University  
Corvallis, OR 97331-4003  
Phone: (541) 737-6744  
FAX: (541) 737-2062

## **Registration:**

A registration packet will be mailed to each ACS member in the Northwest Region in February, 1996. Further information will be published in Chemical and Engineering News in mid-April.

## **Housing:**

On-campus housing will be available; information will be included with registration materials. Off-campus accommodations are available at several local motels. Off-campus reservations should be made as soon as possible, because of high demand in Corvallis during June.

## **Off-site Recreation**

Corvallis is located near many excellent recreational opportunities. The Oregon Coast is a one-hour drive west; in the coastal town of Newport one can find beaches, shopping, the Oregon Coast Aquarium and a variety of other activities. Hiking opportunities abound in the Coast Range to the west, and in the Cascades two hours' drive to the east. Local operators run whitewater rafting trips on the MacKenzie River, two hours' drive to the south. The

### More Off-site Recreation

Willamette Valley has extensive opportunities for bicycling, and there are numerous local wineries that are open during the summer. Formal activities associated with the meeting will be limited, but the numbers listed below may be of interest to attendees.

Corvallis Area Chamber of Commerce  
(Convention and Visitors' Bureau):  
Phone: (541) 757-1544

Whitewater Warehouse  
(river rafting; rentals; guide services):  
(541) 758-3150

Northwest Wine Tours  
(nwwinetours@delphi.com)  
(503) 288-5030

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<http://www.chem.orst.edu/acs/norm96.htm>

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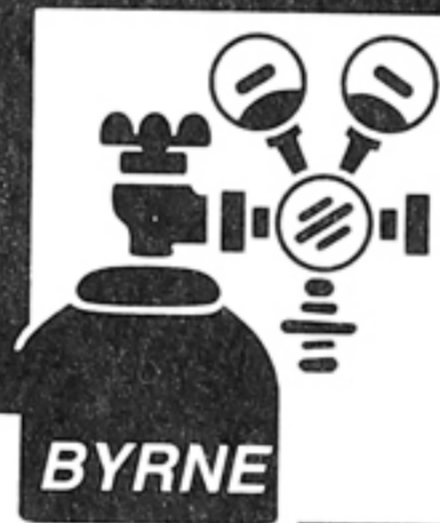
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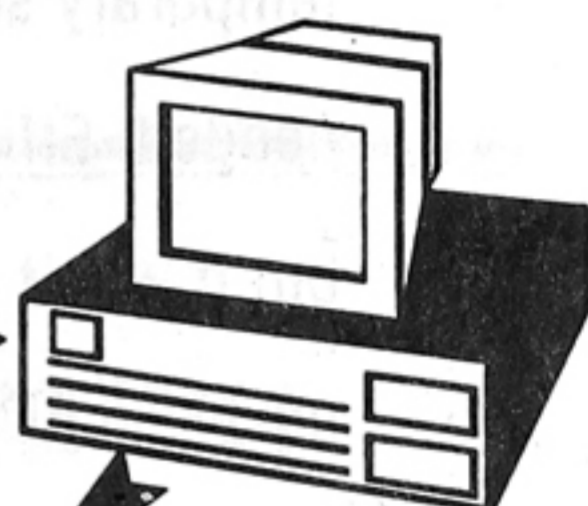
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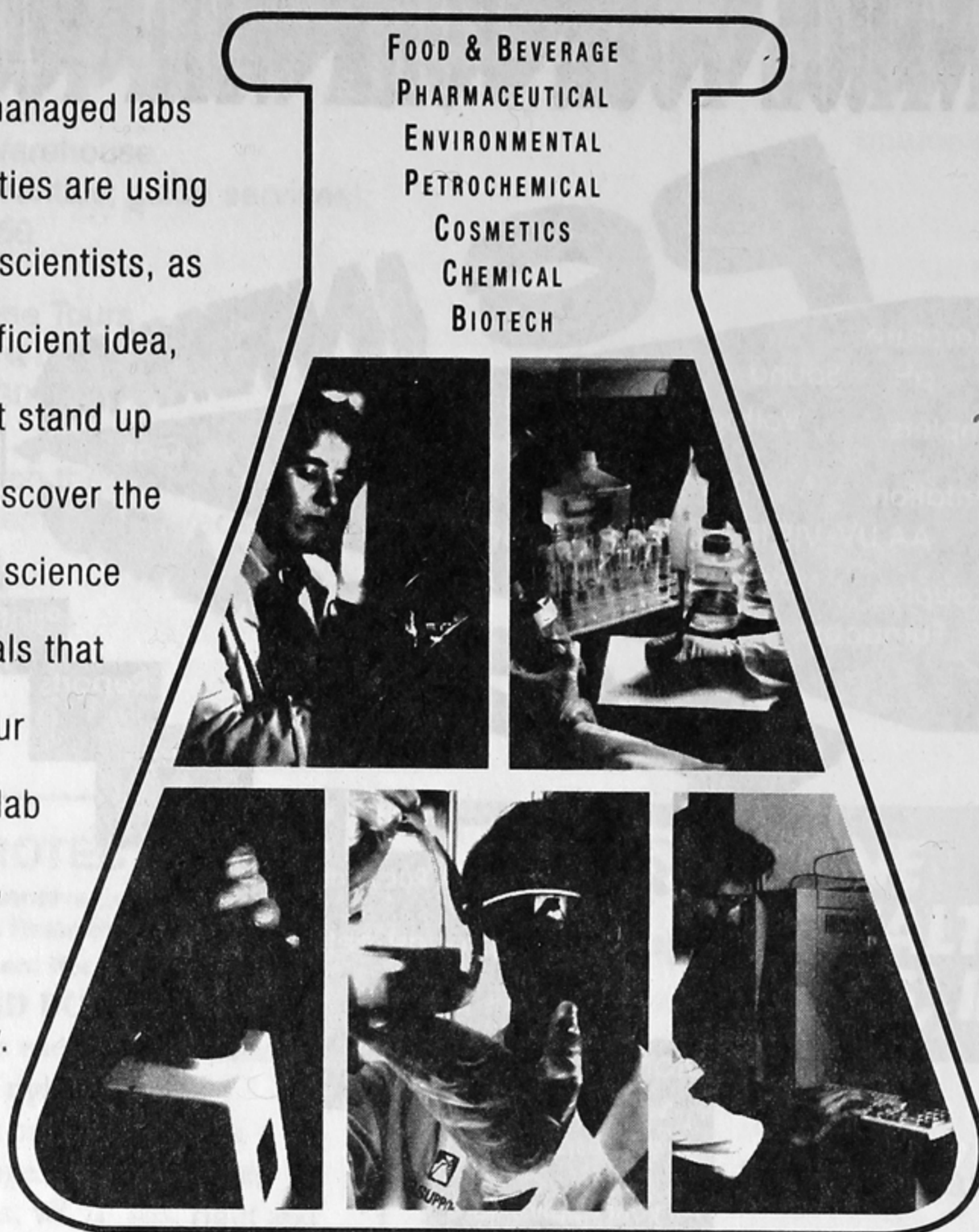
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## 1996 2YC<sub>3</sub> SUMMER INSTRUMENTATION WORKSHOPS

2YC<sub>3</sub> along with a coalition of 2-year and 4-year colleges will be offering a series of 1-week workshops on individual instruments for 2-year college chemistry faculty during the summer of 1996. The instruments include AA, FTIR, GC/MS, GC/HPLC, NMR, as well as both computer software and computer interfacing. The National Science Foundation is funding this project so the only cost to the participants is travel to and from the workshops. Room, board, and tuition are paid by the grant.

There are three different sites for the workshops: East Coast at George Mason University with Northern Virginia Community College; Midwest at the University of Dayton with Sinclair Community College; and West Coast at Western Washington University with Shoreline Community College. The workshops will be run during different weeks in the summer in different geographical regions in order to accommodate summer teaching schedules.

A brochure describing the contents of each sessions together with the times and locations of specific instrumentation workshops will be mailed to all members of 2YC<sub>3</sub> in December 1995. Information detailing application procedures will also be included. Those who are not members of 2YC<sub>3</sub>, and want to receive the brochure, may write to Richard Jones, Sinclair Community College, Dayton, OH 45402.

## SITUATION VACANT

**Positions Open- July 1996:** The Washington State Patrol Crime Laboratory Division will be hiring forensic scientists with experience in the areas of Biochemistry, Microanalysis, and DNA PCR. Forensic Scientist 2 and 3 positions will be available in Seattle, Tacoma, Spokane and Marysville. Employment will begin July 1, 1996.

Duties will include: Perform laboratory analysis 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 a natural or forensic science which includes a minimum of 20 semester or 30 quarter hours of chemistry, and 5 semester or 8 quarter hours of physics. In addition: to qualify as a Forensic Scientist 2, candidates must have 2 years full-time paid technical experience in an analytical, research or crime laboratory, one year of which must have been in a forensic science laboratory performing analysis of physical evidence. To qualify as a Forensic Scientist 3, candidates must have three years full time paid technical experience in a forensic science laboratory performing analysis of physical evidence, which includes testifying as an expert in courts of law. To receive an application, call 360-438-5868.

## SITUATION WANTED

Resourceful Chemist/biochemist with strong analytical and research skills, successful record of problem solving. Enthusiastic and imaginative professional whose recommendations have yielded rapid solutions. Dedicated scientist with sustained record of product and process development, careful documentation, attention to details. Skilled operator of complex analysis and synthesis instrumentation. Personable communicator with presentation experience and technical writing accomplishments. Please call 206-430-0112.



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Treasurer's Report  
 PUGET SOUND SECTION  
 AMERICAN CHEMICAL SOCIETY  
 31-Dec-95

	1995 BUDGET	1995 Year-to-Date
<b>INCOME</b>		
Annual ACS Allotment	\$9,281	\$9,281.00
New Member Commissions	30	0.00
Local Section Dues	4,300	4,803.29
Publications (advertising)	4,200	3,534.66
Directory (advertising)	500	0.00
Meals (total revenue)	2,000	1,996.50
Receipts (Chem Demo Wkshop, ACS pins, Safety Tapes, etc)	200	0.00
Interest, Dividends	1,000	1,143.92
Donations, Contributions (for minting PA medals)	1,500	0.00
Rebate from ACS for councilor travel expenses	1,000	757.30
Reimbursement for Pauling Award expenses	500	383.68
Other	0	0.00
<b>TOTAL:</b>	<b>\$24,511</b>	<b>\$21,900.35</b>
<b>EXPENSES</b>		
Administration	\$100	\$19.20
Education Committee	2,000	214.85
( National Chemistry Week		0.00 )
( Donations: Wash College Chem Teachers Assn		0.00 )
( Expanding Your Horizons		100.00 )
( W Jr Sci-Hum Symp & W Sci Teachers		0.00 )
( Precollege Program		
( Chem Olympiad		0.00 )
( Chemistry for Kids		114.85 )
( Chem Workshops for students/teachers K-12		0.00 )
( Recognition awards for HS students		0.00 )
( Grants to HS groups for K-9 chem demos		0.00 )
( Matching grants to HS for publications		0.00 )
( Scholarships K-12 teachers / chem classes		0.00 )
( HS Chem teachers group		0.00 )
Public Affairs Committee	0	0.00
Professional Relations and Status Committee	100	0.00
Public Relations Committee	0	0.00
Safety Committee	100	0.00
Local Meetings (includes speakers' expenses)	1,500	570.00
Pauling Medal Symposium	0	0.00
Pauling Medal - minting	1,500	0.00
Meals (total expenses)	2,000	2,158.11
Publications (printing, mailing, etc.)	10,000	11,758.86
Directory	2,000	0.00
Awards Other (50yr member dinners)	50	0.00
Pauling Award (1994 - 1995)	500	0.00
High School Teacher Award	200	0.00
Student Affiliate Award	200	146.45
Travel Subsidies for Councilors	2,500	1,741.28
Travel Subsidy and Fee for LSO Conference	500	560.00
Other	500	0.00
<b>TOTAL:</b>	<b>\$23,750</b>	<b>\$17,168.75</b>
<b>NET GAIN (LOSS)</b>	<b>\$761</b>	<b>\$4,731.60</b>
<b>ASSETS AND CAPITAL</b>		
Washington State Employees Credit Union Checking account	\$2,379.45	
Account number 156176-0 Share account	10,252.83	
1 year WStECU CD No.58648 @ 6.25% due 06/26/96	2,000.00	
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1 year WStECU CD No.64971 @ 6.00% due 03/19/96	7,500.00	
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A/V Equipment for Safety Talk (@ 10% of cost 10/90)	85.00	
<b>BALANCE</b>	<b>\$29,717.28</b>	

## Puget Sound Chemist Advertising Rates

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

**Circulation:** Approximately 2000

**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	.....	7 1/2"	by	3 3/4"
Half page (vertical)	.....	2 1/4"	by	7 1/2"
Quarter page	.....	2 1/4"	by	3 3/4"
Quarter page (vertical)	.....	4 1/2"	by	1 7/8"
Eighth page	.....	4 1/2"	by	1 15/16"
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 check payable to Treasurer, ACS Puget Sound Section.

**Advertising Copy:** Advertiser or his agent must furnish Black & White Camera Ready to size. You may supply your ad on a computer disk (3 1/2") (Please contact the typesetter listed on the inside cover of this publication for particular formatting directions.) 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:

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