

PUGET SOUND CHEMIST

BULLETIN OF THE PUGET SOUND SECTION OF THE AMERICAN CHEMICAL SOCIETY

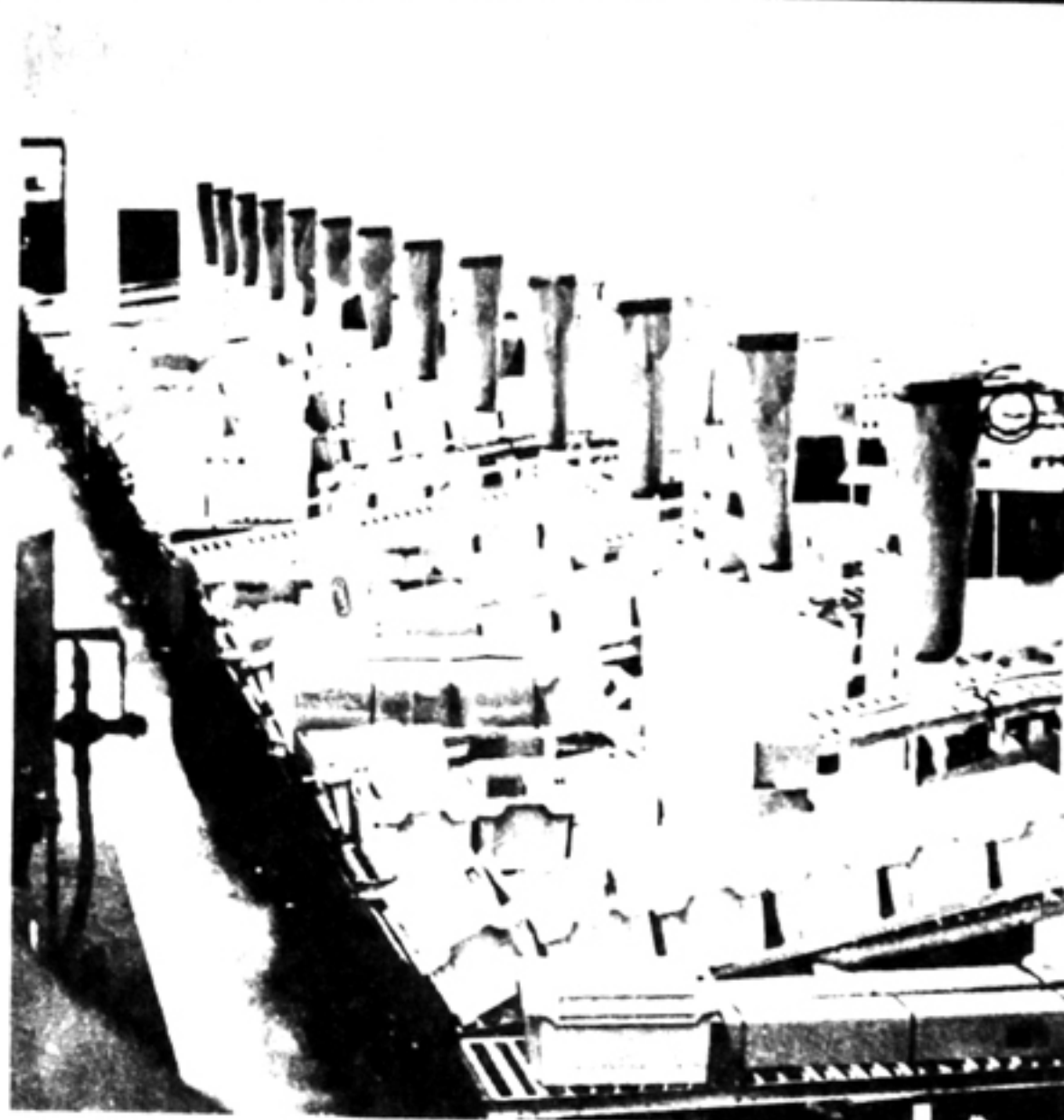
Volume 53, Number 2



March 1992

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On the cover: Dr. Kenneth Mattes, Eastman Kodak, will be the ACS Tour Speaker for the March 1992 meeting of the Puget Sound Section of the American Chemical Society (see related articles in this issue).

MARCH MEETING

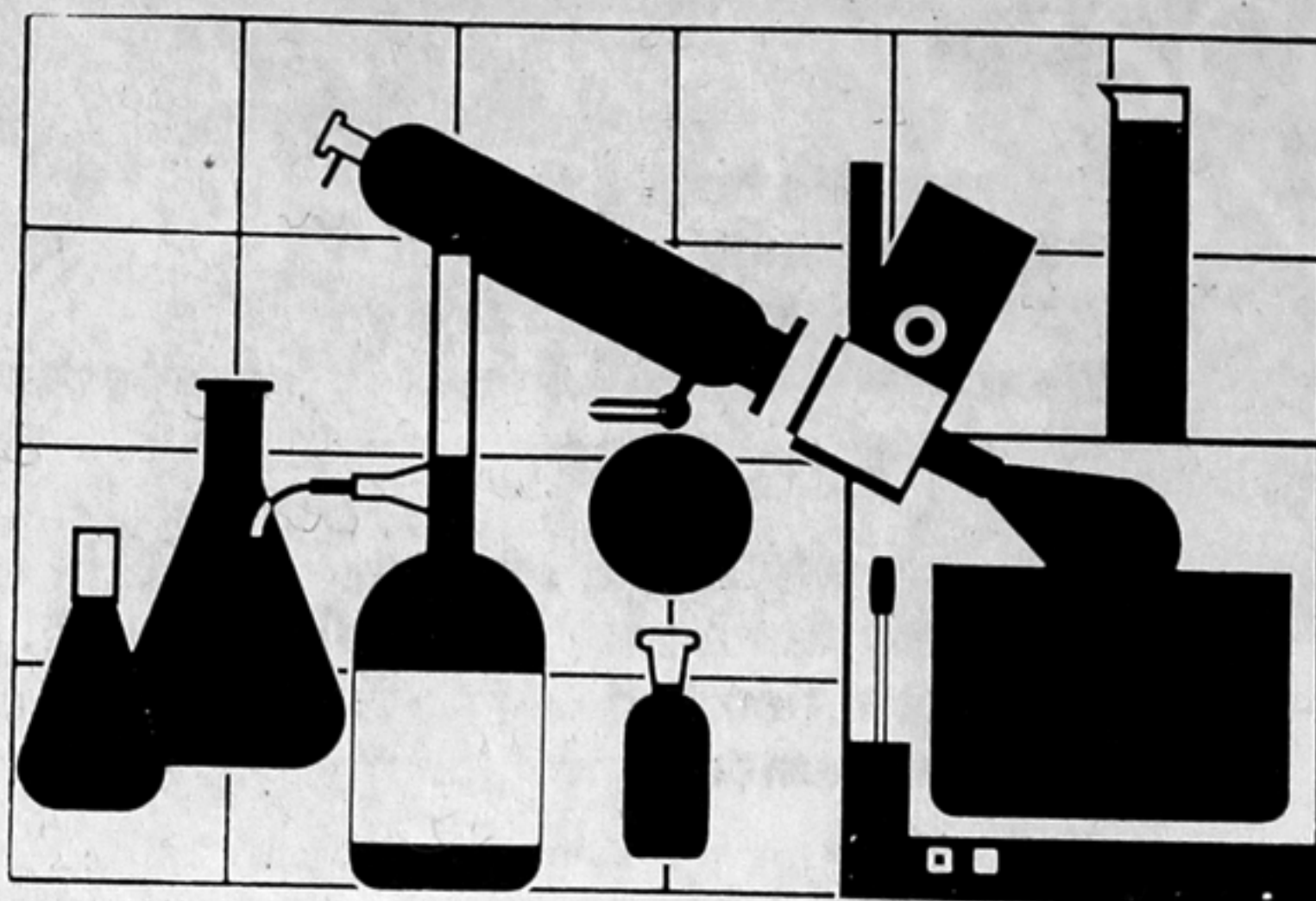
- DATE:** Monday, March 23, 1992
- PRESENTER:** Dr. Kenneth C. Mattes
Eastman Kodak
Rochester, NY
- PROGRAM:** "The Inside Story of Color Photography"
- LOCATION:** Rodeside Broiler
12531 Aurora Avenue North
Seattle
- SCHEDULE:** 6:00 pm - No host bar
6:30 pm - Dinner Buffet
7:30 pm - Speaker and program
Please feel free to join us for the program even if you don't attend dinner.
- DINNER:** Tossed green salad, vegetable tray, fruit tray, scalloped potatoes, pasta with three sauces, green pepper steak strips over rice, teriyaki chicken, pickles and condiments, rolls and butter, chocolate mousse, tea or coffee.
- COST:** \$14.00 per person
- NOTE:** When you reserve your 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, Friday, March 20.
Seattle: 543-1610 Bellingham: 676-3070
Tacoma: 535-7530
- OFFER TO STUDENTS:** The Section will pay half the cost of dinner for the first ten students (graduate, undergraduate, or high school) who call 543-1610.

FUTURE MEETINGS 1992

- | | |
|------------------|-------------------------------------------------------------------------------------|
| April (20-25) | Dr. Ellis K. Fields, Amoco Chemical Company
"My Career as an Industrial Chemist" |
| May | To be announced |
| June | Northwest Regional Meeting (NORM)
University of Montana, Missoula |
| October (19-24) | Dr. Ernest Simpson, California State Polytechnic University
"Chemistry of Wine" |
| November (16-21) | Dr. Carleton B. Moore, Arizona State
"Chemistry of the Moon's Surface" |
| Fall | 1992 Pauling Award
Puget Sound Section, Host |



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DR. KENNETH C. MATTES TO ADDRESS THE MARCH MEETING OF THE PUGET SOUND SECTION

Dr. Mattes received a B.S. degree in chemistry from the University of Illinois at Chicago in 1969, and his M.S. and Ph.D. degrees from Iowa State University in 1972 and 1975. He spent two years (1974-76) at the University of Wisconsin on a post-doctoral fellowship. In 1976 he joined the Research Laboratories of the Eastman Kodak Company. He has worked in the Photographic Materials Research Division (Applied Physical Chemistry Laboratory), the Chemical Manufacturing Organization in Kodak Park, and in 1985, moved back to the Research Laboratories, into the Life Sciences Division, as a Research Associate.

His scientific interests include mechanistic studies pertaining to the chemistry of instant and conventional photographic products, the synthesis of photographically useful molecules, as well as biologically active molecules (insect pheromones, anti-tumor agents, new drugs), new synthetic methodology, structure-activity (property) relationships, and applications of computers to chemical and information problem solving.

His hobbies include flying, racquetball, tennis, golf, SCUBA diving and bridge.

ABSTRACT

THE INSIDE STORY OF COLOR PHOTOGRAPHY

Eastman Kodak Company, Rochester, NY

Color photography is a process for the capture on film of an accurate representation of the light levels and colors of a scene. Most modern color photography is based on the sensitivity of silver halide to light, together with chemistry that couples the chemical reduction of silver halide to the formation of organic dyes. The properties of silver halide that make it uniquely useful as a photographic recording medium and the chemistry that results in dye formation will be explained. To understand how a color picture can be formed, the additive (red, green, and blue) and the subtractive (cyan, magenta, and yellow) color primaries will be discussed and their relationships demonstrated.

Modern color films use subtractive dyes almost exclusively. By coating appropriate silver halide grains and dye-forming chemistry in superimposed thin layers, images in three colors are formed in perfect registration. Clever manipulation of processing steps can then produce color negatives, color prints, and color slides from similar materials. Finally, discussion of some of the chemistry that allows the optimization of color reproduction and image sharpness will give a flavor for the sophistication of modern photographic science, which can provide high-quality color reproduction in layers only 10 micrometers thick.

CHAIRPERSON'S MESSAGE

When I was asked to address the section as the new chairperson, I found writing this note overwhelming. First, because I'm a newcomer to the area and a young ACS officer trying to reach over 1400 members. Second, because I don't know most of you nor have I met you. So, I wonder what message I should send you.

Clearly, I would like to meet you and see you at the meetings more often. My message is really very simple. GET INVOLVED. I did last year and learned a lot from the experience. I learned more about ACS, about being a chemist in the Northwest and about our responsibility to this community.

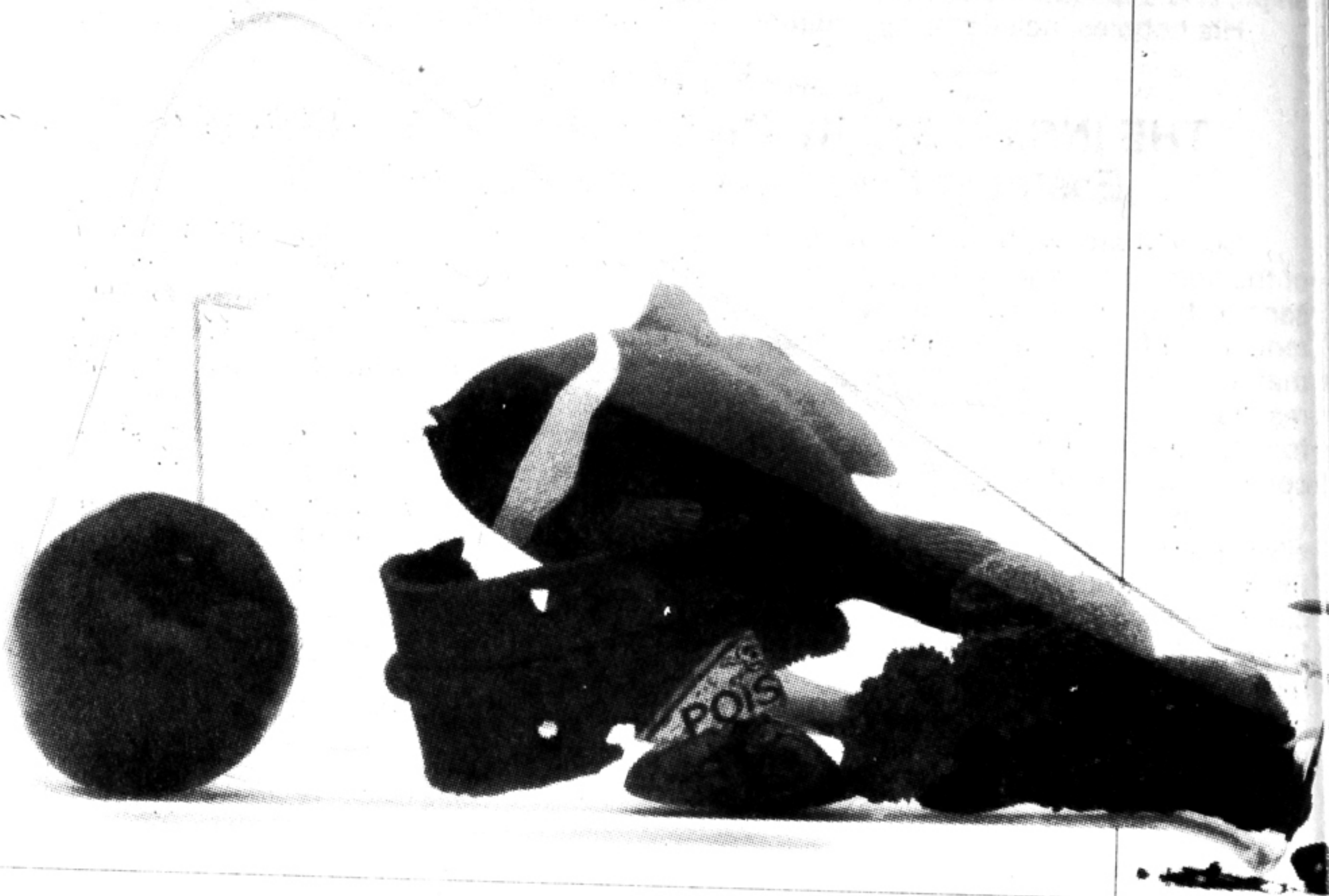
If you are concerned or unsure about how to get involved, call me at 895-4737 (office) or 364-9783 (home).

Better still, come to the next meeting and talk to me. I would like to meet you and see you participate.

You could have fun as I did. That's what it is all about.

Despina Strong

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1991 PAULING MEDAL AWARD AT OREGON STATE UNIVERSITY CORVALLIS, OREGON MAY 9, 1992

The 1991 Pauling Medal Award ceremonies will be held on May 9, 1992, on the Oregon State University campus. The 1991 recipient is Prof. Rudolph Marcus of the California Institute of Technology. A symposium will be held in the afternoon, followed by a social hour and the Award Banquet featuring The Pauling Award Address by Professor Marcus. The Pauling Medal Award, cosponsored by the Oregon, Portland and Puget Sound Sections of the American Chemical Society, annually recognizes outstanding achievement in chemistry and contributions to the field that have merited national and international recognition. The award is named after Dr. Linus Pauling, a native of the Pacific Northwest, because of the inspiration of his example.

The Award Symposium will begin at 1:30 p.m. in Wilkinson Auditorium, and will be chaired by Prof. Seymour Rabinowitz of the University of Washington. Speakers include Prof. Dudley Herschbach of Harvard University, Prof. William Miller of the University of California at Berkeley, Dr. Norman Sutin from Brookhaven National Laboratory, and Prof. Ahmed Zewail from the California Institute of Technology. A social hour, scheduled for 5:45 p.m., will be held following the symposium, in the Valley Football Center. The symposium and social hour are free and open to the public.

The Awards Banquet will follow the social hour, service beginning at 7 p.m. The meal will include choice of chicken breast or prime rib, as well as salad, vegetable, potato, bread, dessert and wine. The program, featuring Professor Marcus' address, will follow the meal.

The charge for the banquet is \$25.00. Tickets for the banquet may be obtained by sending a check for \$25 per person, payable to Oregon Section, ACS, to Prof. Kevin Gable, Department of Chemistry, Gilbert Hall 153, Oregon State University, Corvallis, OR 97331-4003. Deadline for receipt of payment is **May 1, 1992**. Tickets may be picked up prior to the banquet at the Valley Football Center.

Lodging in Corvallis is available at the following motels:

Grand Manor Inn
925 NW Garfield Ave.
503-758-8571

The Jason Inn
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503-753-7326

Motel Orleans
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503-758-9125

Nendel's
1550 NW 9th St.
503-753-9151

The Riverbank Inn
101 NW Van Buren Ave.
503-752-9601

Shanico Inn
1113 NW 9th St.
503-754-7474

The Towne House Motor Inn
350 SW 4th St.
503-752-5917

DR. SHAKHASHIRI TO SPEAK AT CENTRAL WASHINGTON UNIVERSITY

Dr. Bassam Shakhashiri, Professor of Chemistry, University of Wisconsin-Madison, will present a distinguished lecture, "Science is Fun," at 8 p.m., Friday, April 10, on the campus of Central Washington University in Ellensburg, WA. Dr. Shakhashiri, nationally renowned speaker, best known to the public at large for his annual entertainment, "Once Upon a Christmas Cheer/In the Lab of Shakhashiri," is sponsored by the Institute for Science and Society at Central Washington University as the second in the organization's Distinguished Lecture series.

Dr. Shakhashiri describes himself as a "scientist by training, teacher and public servant by trade, advocate by conviction, optimist by nature...." Spectacular demonstrations will be used to show how science can be communicated to all segments of our society.

The Institute of Science and Society, located on the CWU campus, is dedicated to helping increase literacy in all segments of the population and provides the Distinguished Lecture Series free of charge. For more information please call (509) 963-3295, the office of the Institute.

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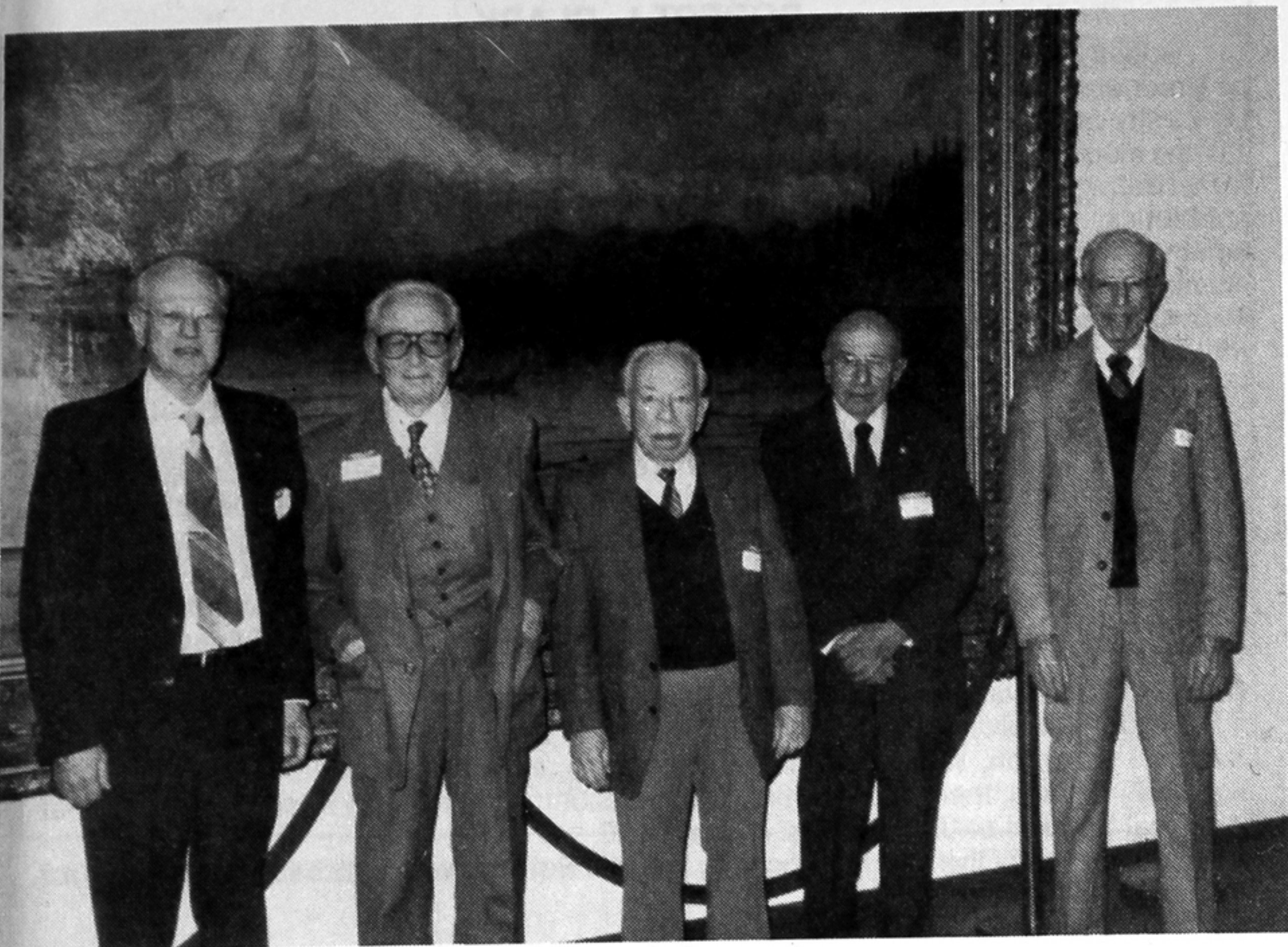


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50 YEAR MEMBERS HONORED AT FEBRUARY SOCIAL MEETING



Arnold
Gahler

William
Gleim

Peter
Zopolis

Otto
Goldschmid

Albert
Cozza

The February meeting at the Rainier Brewery was well attended. Five of the eleven 50 year members from the Section were present and were introduced. Biographies of eight of the honorees appear in this issue.

MEMBERSHIP SURVEY

There has been a slow but steady return of the Membership Survey published in the December 1991 issue of the *Chemist*. So far we have received around 15 returns. These surveys show that there is an interest in a number of areas of participation for the members. It also tends to indicate a general agreement with the way the meetings of the Section are currently run. There have been a number of very good suggestions that will be seriously considered by the officers.

If you still have the December issue of the *Chemist* knocking around and have not yet sent in the survey, please do so. Thanks to all of the members for their interest.

Robert J. Smith

IOTA SIGMA PI REUNION PLANNED

Members of Iota Sigma Pi, national women's chemistry honorary, who are interested, may contact Kathy Dugaw at 526-2102 (wk) or 622-8469 (hm).

NOTICE

Franklin Press, our printer, has moved. The Puget Sound Chemist will have a new P.O. Box address by the next issue. For the present, mail will be forwarded to us or you may FAX materials to our typesetter, Scarlet Letters, Ltd., 206-547-0303.

50 YEAR MEMBERS HONORED

ROBERT L. CLARK

Robert L. Clark was born June 15, 1915, in Tekamah, NE. After attending schools there he graduated from Park College, Parkville, MO, in 1937. His graduate work was at the University of Nebraska, where he received his doctorate in organic chemistry in 1942. In 1941 he married Ella May Eskridge. In 1942 he joined the research department of Merck and Co. in Rahway, NJ. While there he worked on many projects, including organic arsenicals, antibiotics, analgesics, animal health products, especially coccidiostats, and anti-inflammatories. He is the author of 12 publications and holds 72 U.S. patents. He is a member of Sigma Xi and Phi Lambda Upsilon. His three children, Carolyn, Joyce and James, have graduate degrees in physics, biochemistry and geophysics. After 36 years with Merck he retired as a Senior Research Fellow in 1978, and moved to Sequim, WA.

ALBERT G. COZZA

Mr. Cozza was born October 1916 in Tacoma, WA, and attended Tacoma schools, graduating from Stadium High School in 1933. He received a B.S. in Chemistry from College of Puget Sound (now UPS) in 1937, and took some graduate work at the University of Washington, but no advanced degree. He started working for Rayonier, Inc. (subsequently ITT Rayonier) at its Port Angeles Division in 1939 as a shift chemist and then control chemist. He transferred to Rayonier's Jesup Division in Jesup, GA, as Assistant Technical Superintendent in 1957. He was on detached duty for Rayonier with Cellulose du Maroc in Sidi Yahia, Morocco, from February to October 1961, to assist in efforts to make high quality dissolving pulps from eucalyptus. He transferred to ITT Rayonier Research Division in Shelton, WA, in December 1961 as a research chemist in the Pulping and Bleaching Groups, then as Bleaching Group Leader, and finally as Assistant Manager of Technical Support until retirement in June 1982.

He is currently living in Shelton with his wife Betty, to whom he has been married for 28 years.

ARNOLD R. GAHLER

Arnold Gahler is a native of Portland, OR, and graduated from Pacific University in 1941. Graduate studies at Oregon State University were interrupted by World War II. After being commissioned by the Navy, he was sent to UCLA for training in meteorology and received a certificate in professional meteorology in 1943. Weather forecasting responsibilities then took him to locations in the U.S. and Japan. After the war he attended Purdue University and received an M.S. in chemistry with a minor in metallurgy. While at Purdue he held a National Institute of Health fellowship relating to the development of analytical methods for the determination of metals in sewage and industrial wastes. Some of these methods are still published in the 1990 edition of "Standard Methods for Water and Wastewater."

From 1950 to 1963 he was employed as a chemist with the R and D Laboratory of the Metals and Mining Division of the Union Carbide Corp. in Niagara Falls, NY. The work involved development of new analytical methods, some inorganic projects, and supervisory functions leading to Assistant Chief Chemist. In 1963 he was transferred to the alloy plant in West Virginia.

With the decline of the metal and alloy industry in the U.S. in 1964, an opportunity became available to return to the Northwest. The National Environmental Research Center was to be established by the U.S. Public Health Service at Corvallis, OR, in 1965. Eventually it became a part of the Environmental Protection Agency. His work under the National Eutrophication Research Program was directed to laboratory and field studies of lake sediment-water nutrient interchange processes and lake nutrient control especially by dredging and nutrient inactivation techniques. This involved studies of various small and large (Lake Erie) lakes throughout the U.S.

In 1971 he transferred to the Seattle area to become Chief of the newly established EPA Region 10 Laboratory. He was involved, along with members of the laboratory, in design of the laboratory at Manchester, WA. For several years he was also Regional Quality Assurance Coordinator and Regional drinking water laboratory certification official. (continued next page)

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(continued)

His wife, Helen, is a native of Portland, OR. They have a daughter and son living in the Seattle-Southworth area.

He had been active in the Niagara Frontier Section of the ACS and was Chairman of the Puget Sound Section in 1978. He served on the ACS Committee on Standardization.

Since retirement in October 1985, he is currently a Senior Environmental Volunteer for the QA Section of the Washington State Department of Ecology. His main activity relates to the State environmental laboratory accreditation program. He also is in the Master Gardener program, which assists the local County Extension Service under the direction of WSU.

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DR. OTTO GOLDSCHMID

Born in Vienna, Austria, Dr. Goldschmid received his engineering degree at the Technical University, Stuttgart, Germany. After two years at the University of Vienna, he came to the United States and received his Ph.D. at the University of California at Berkeley. Dr. Goldschmid joined the staff of Rayonier Incorporated as a chemist in Tacoma in 1939, and the following year transferred to the research division in Shelton. He retired from the ITT Rayonier Research Center in 1975.

In 1965 he served as chairman of the Puget Sound Section of ACS.

RICHARD W. GORMLY

Richard W. Gormly was born October 4, 1919, in Newburyport, MA. He received his B.S. in Chemistry in 1941, from the University of New Hampshire. He was employed by General Chemical Co., Claymont, DE, following graduation. He did graduate study in 1941-42, in Chemical Engineering at the University of Penn., Philadelphia. In 1942, his graduate study was interrupted by transfer to West Virginia Ordnance Works in Point Pleasant, WV, by General Chemical Co. (operator). From 1942 to 1945, he was production supervisor of the West Virginia Ordnance Works (explosives). He was employed by Rohm & Haas Co., Philadelphia, PA, in Chemical Research from 1946 to 1950, and from 1951 to 1955 by Rohm & Haas Co. as Technical Assistant to the Manager, Special Products Dept. From 1956 to 1963, he worked for Arthur D. Little, Inc., Cambridge, MA, and San Francisco, CA, as Senior Staff Consultant. In 1964 he moved to Weyerhaeuser Co., Tacoma, WA, where he worked in Corporate Development. He initiated their chemical business. He was Sales and Marketing Manager for 13 years until his retirement in 1982.

Mr. Gormly holds several U.S. patents, and has several publications. He is a licensed professional Chemical Engineer (Massachusetts, 1957). He attended the Graduate School of Business Administration at the University of Washington (Small Business Administration, condensed management course, certificate, 1964). He is a member of Alpha Chi Sigma.

He was married in 1942 to his wife Janet (Rutgers, 41). They have three children, all now in the greater Seattle area. Their older son is a psychologist, their daughter is a Russian language and history expert, and their younger son is a law firm partner (J.D. cum laude). Mr. Gormly is currently Vice President, a director, and business manager of the Key Peninsula Health Center, Inc. (medical & related services), and also Vice President and a director of Citizens Against Crime, Inc. (Pierce County). He enjoys downhill skiing, hiking, and moderate mountain climbing, having climbed Mt. St. Helens in 1990.

PARKER ERWIN MALSON

I received my B.S. degree in 1934. During 1935-37, I attended Washington University Graduate School part-time while employed full time as an analytical chemist by Shell Oil Co. In 1936 I was elected to Alpha Chi Sigma. They don't issue annual cards so I am still carrying my original card signed by John R. Kuebler. In 1937 our chemistry prof, John H. Gardner, persuaded us to join ACS. We accompanied him to our first meeting which was held in a small hotel around the corner from the Park Plaza in St. Louis. The speaker was from Kodak and his subject was color photography, which was still pretty "high tech" in those days. I received my M.S. degree in June of 1937. I never returned to Washington University or saw Dr. Gardner again.

V. S. PODBIELANCIK

I was born January 10, 1916, in Rossland, B.C., Canada, and spent my younger years in Fernie, B.C. I came to Seattle in 1933 to finish my high schooling at Seattle Prep. I graduated in June of the following year. I obtained a B.S. degree from Seattle U in 1938 and spent the next few years working in the mining and metallurgical fields. I joined the Chemistry Department of Seattle U in the fall of 1947 and remained there until I retired in June of 1981 with an Emeritus status.

I attended the U of W during those years and obtained an M.S. in 1958 and the Ph.D. in 1966. Both degrees were in analytical chemistry.

Now that I am retired I spend a large amount of time looking after my home and yard. I also enjoy hunting and fishing for salmon and trout.

PETER N. ZOPOLIS

I was born in Chehalis, WA, May 30, 1909. I attended the Chehalis school system, graduating from the Chehalis high school in 1928. In the fall of 1928 I entered the University of Washington and in 1932 I graduated with a B.S. degree in Chemistry. In the fall of 1933 I was hired by the Grays Harbor Pulp and Paper Company as a control chemist. In the fall of 1936 I was transferred to the company's newly built research laboratory in Shelton, WA, and was assigned to the viscose research section of the laboratory. In the meantime, the name of the company was changed from the Grays Harbor Pulp and Paper Company to Rayonier Incorporated. After a few years with the research laboratory, I was appointed group leader of the Viscose/Acetate research section. In the sixties, the company was acquired by I.T.T. Corporation and the company's name was changed, for the second time, to ITT Rayonier Inc. In May 1974 I retired from ITT Rayonier Inc. at the age of 65. My wife passed away in 1984. We had two boys. The older attended the U.S. Air Force Academy and the younger is a computer programmer for the Frank Russell Co. in Tacoma.

47th NORTHWEST REGIONAL AMERICAN CHEMICAL SOCIETY MEETING

June 17-19, 1992, at the University of Montana, Missoula

The Montana Section of the American Chemical Society cordially invites all chemists and interested scientists to the beautiful University of Montana campus in Missoula, Montana, for the 47th Northwest Regional American Chemical Society Meeting, June 17-19, 1992. ACS President Ernest L. Eliel will give the plenary lecture and will address the banquet on June 18.

The meeting will center around six exciting symposia and contributed papers in all areas including undergraduate research.

An exciting range of commercial exhibits will be located in the same area as the poster sessions. The close proximity of the exhibition to the poster sessions and meeting rooms will be especially attractive.

For more information, contact the chairmen at the Department of Chemistry, University of Montana, Missoula, MT 59812-1006:

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(406) 243-4992 or 4022

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Chemistry In The News

□ **Man-made sulfates cause global cooling**—Man-made aerosols in the atmosphere, notably sulfates from fossil fuel combustion and metal smelting, contribute substantially to global cooling and may be canceling out the heating effects of greenhouse gas pollutants in the Northern Hemisphere [*Science*, **255**, 423 (1992)]. Robert J. Charlson of the University of Washington and his coworkers estimate that man-made sulfate aerosols cause a globally averaged cooling of 1 to 2 watts per square meter, which is comparable in magnitude but opposite in sign to the estimated warming caused by greenhouse gases. The sulfate aerosols cool Earth in two ways: by direct scattering of short-wavelength solar radiation and by enhancing the reflectivity of clouds. Unlike some of the greenhouse gases, aerosol particles have a short residence time in the atmosphere and remain concentrated near their sources. They consequently have the most effect in the regions where they are generated. Formerly, man-made aerosols were thought to be only marginally important for global climate change. (Jan. 27, 1992 C&EN)

119 years ago—Hermann W. Vogel (born 1834) invented the orthochromatic photographic plate in 1873, designed a photometer, research in spectroscopic photography.

(From the Milestones in Chemistry calendar produced for National Chemistry Week 1991 by the American Chemical Society and the Beckman Center for the History of Chemistry. For more information contact ACS, 1155 Sixteenth Street N.W., Washington, DC 20036.)

PUGET SOUND CHEMIST



BULLETIN OF THE
PUGET SOUND SECTION
AMERICAN CHEMICAL SOCIETY

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Second Wednesday each month

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Meeting: 6:30 PM in Room 511

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