

DEPARTMENT OF CHEMISTRY

UNIVERSITY OF WASHINGTON • SPRING 1962 •

A Report from the Chairman—Dr. Cady:

WE OF THE CHEMISTRY staff take pride in you, our graduates—our most valuable product—and we are happy to send our greetings with best wishes for the future. This newsletter will give some impression of departmental events and plans. We hope that you will be interested and that each of you will take time to respond by telling us what has happened to you. We hope, too, that you will visit us when you come to Seattle.

We and the rest of the University seem always to be changing. Students come and go, new discoveries come from laboratories, new construction is in progress near our building and major additions and improvements in our own building are about to start, new members are added to our staff, and old friends leave.

"Tommy" Thompson, affectionately remembered by his former students and colleagues, retired two years ago and soon thereafter was stricken by creeping paralysis. He passed away in August, 1961.

Paul Cross, our capable Executive Officer, resigned in the summer of 1961, and on September 1 started his duties as President and Chief Executive Officer of the Mellon Institute in Pittsburgh, Pa. We regret the change very much, but feel that the Institute deserves sincere congratulations for its choice.

Professor Wiberg finally yielded to one of the many good and well-earned temptations which have been coming his way and accepted a professorship at Yale.

In other cases we have been more fortunate and have been able to hold members of the staff against really strong competition from other schools. We regard the efforts of these schools

as real compliments to our staff and expect that it will not be long before similar substantial praises are received by the newest members of our faculty. Professors Pocker, Slutsky and Vincow are first-class additions to the Department. Another improvement in the staff is the addition of Frank Seiler as Manager of Administrative Services.

An "inside job" has been done in appointing a new head of the Department. He intends to do his best to fill the shoes of Paul Cross and to maintain the growth and improvement which has existed in the past. He feels fortunate to have as colleagues men who are dedicated to excellence in teaching and research and to doing each day's work better than the last.

Paul has left things in good shape, and we intend to keep them that way.

George H. Cady
Chairman.

ALUMNI NEWS

Dr. John F. Voeks (Ph.D. 1951), who has been Senior Research Chemist in the Pittsburgh Research Department of Dow Chemical Company, recently was promoted to the position of Associate Chemist. He is the second person to receive this advancement in the Western Division of the company.

Dr. John F. G. Hicks, who received his Bachelors and Masters degrees from the U. of W., and his Ph.D. from Berkeley, was appointed this year to the position of Associate Director, Battelle Memorial Institute at Columbus, Ohio. His superior is another UW man—Dr. B. D. Thomas (Ph.D. 1933), President of the Institute.

Dr. Clinton M. Kelley (Ph.D. '41) is returning to the University of Denver as Chairman of the Department of Chemistry. For more than ten years he has been at the Stanford Research Institute in California.

A BACKWARD LOOK

Department History

THE DEPARTMENT OF Chemistry had its beginning in 1885 when courses in the natural and physical sciences were first taught at the struggling young school. The years since then have brought a steady growth in the range of subject matter taught, and in the size of the staff and enrollment as the department kept pace with the total development of the University. This year there is a faculty of 24, with over 50 teaching assistants, serving 2,700 students, including 180 undergraduate and 142 graduate majors.

An independent department of chemistry was organized in 1896 under the direction of Dr. H. C. Myers. A reorganization just three years later resulted in separate departments of pharmacy and chemistry, with chemistry being headed by Dr. H. G. Byers from Johns Hopkins University. Under Dr. Byers' administration a curriculum in chemical engineering was added about 1904. Following Dr. Byers' resignation in 1919, Dr. H. K. Benson was named head of the Department, an appointment that was to continue until his retirement in 1947. Professor Benson was succeeded by Dr. H. V. Tartar, and from 1949 to 1961 Dr. Paul C. Cross held the office.

The original Bagley Hall, now called the Architecture Building, was constructed for the Alaska-Yukon-Pacific Exposition. Chemistry occupied this building until 1937, when both the name and the department moved to the present site.

The first Ph.D. awarded by the University was in chemistry—to Frank A. Hartman in 1914. Since then nearly 300 graduate students have completed work in the Department for the Ph.D. degree, and included among them are many of America's outstanding scientists.

NEWS OF THE FACULTY

Research, Teaching, Professional Activities

PROFESSOR ARTHUR G. ANDERSON, JR. studied and worked on research problems at the Chemical Institute of the University of Heidelberg during the last school year under a National Science Foundation Senior Postdoctoral Fellowship. In addition, Dr. Anderson lectured at the Universities of Heidelberg, Karlsruhe, Zurich and Marburg, and at several major European industrial plants. Mrs. Anderson and their three daughters accompanied him during this European sojourn. Dr. Anderson resumed his place in the Department in September. Azulene and other nonclassical aromatic systems are Dr. Anderson's main subject of investigation.

PROFESSOR GEORGE H. CADY recently was made Chairman-Elect of the Division of Inorganic Chemistry of the American Chemical Society for 1962. His research deals with compounds of fluorine, the most interesting of these being several covalent hypofluorites. He has lectured about this work to an international congress in Munich, to the Chemical Society in London, and to many local sections of the American Chemical Society.

ASSOCIATE PROFESSOR ALDEN L. CRITTENDEN and Eloise Snyder were married in 1958, and now have a daughter born last spring. He assisted Professor Lingafelter in managing a five-week institute for high school chemistry teachers during July and August of last year. His research deals with quantitative electrode processes.

PROFESSOR PAUL C. CROSS guided the Department in its efforts to keep up with the increase in student registration, growth of science and changing approaches to teaching. Staff, physical plant, scope of research interests and national status of the Department increased notably under his direction during the twelve years of his leadership. In fact, he did so well that unfortunately we lost him! (*A letter from Dr. Cross will be found on page 3.*)

PROFESSOR H. J. DAUBEN, JR. has attended a variety of symposia, and presented papers on several occasions.

At the ACS meeting in Chicago he spoke on Linear Aromatic Systems, and gave a research talk on "Strain Energies" at the dedication of the new Evans Laboratory at Ohio State University. During spring quarter he will be on leave to Cornell University as Visiting Research Lecturer and will also give research talks at Harvard University and at the Philadelphia Organic Chemists' Club. He plans to attend the ACS meeting in Washington, D.C., this spring.

ASSOCIATE PROFESSOR D. F. EGGERS, JR. heads a research group working on infrared spectroscopy. In June he went to Columbus, Ohio, to present a paper at a symposium on molecular structure and spectroscopy. His research is supported by grants from the U.S. Air Force and the National Science Foundation. Dr. Eggers is another of our faculty men who take considerable interest in the Boy Scouts. Last summer he took a group on a week's hike in the mountains.

Carbon-14 Dating

ASSOCIATE PROFESSOR A. W. FAIRHALL came to the University in 1954 from M.I.T. His time is divided between chemistry and the cyclotron, through the Department of Physics. He is becoming well known for his work on nuclear fission and on dating archeological remains from the Pacific Northwest as far back as 40,000 years ago. Since 1958 he has developed a carbon-14 dating laboratory, financed by a grant from the National Science Foundation. The age of wood samples from sequoia trees, which live as long as 3,000 years, can be accurately determined from counting growth rings of tree stumps. By using these results as standards of comparison, the ratios of C-14 to non-radioactive carbon in different samples can be correlated with age of the sample. This has given interesting results on the age of trees killed by lava flows, of Indian relics, and prehistoric animal and plant remains from both land and marine sources. In 1959 Professor Fairhall gave an invited paper at the International Congress of Pure and

Applied Science in Brussels, Belgium, and in August of the same year he presented an invited paper at the West Coast meeting of the American Physical Society, held in Honolulu.

PROFESSOR N. W. GREGORY sharpened up his spoken German, and flew to Germany during September 1959 to attend a meeting of the International Congress of Pure and Applied Chemistry. He acted as Chairman of a session, and gave an invited paper on his recent work on vaporization processes. In April of last year he was in charge of arrangements for a conference here on the campus of more than 100 college and university teachers from fifty institutions, who met to discuss common problems. He has recently been awarded research grants from both the National Science Foundation and the Army.

PROFESSOR GEORGE D. HALSEY, who joined the staff in 1951, has recently received research grants from the Sloan Foundation, the Air Force and American Petroleum Institute. These and another award from the Petroleum Research Fund, given jointly to him and to Dr. Cross, currently support his work on statistical mechanics and adsorption.

PROFESSOR E. C. LINGAFELTER was appointed Associate Dean of the Graduate School on a half-time basis in the Autumn of 1960. His main responsibilities there are in relation to research projects, research support and graduate school fellowships. He divides his time between the Administration Building, Bagley Hall and the Computer Laboratory, where he and his graduate students have staked out an extensive claim. He was in charge of an NSF Summer Chemistry Institute for high school teachers that was held on the campus during July and August of last year. In recent years he has lectured at similar institutes held at Montana State College in Bozeman. In the summer of 1960 he gave a paper at the International Crystallographic Congress in England. He continues to be active in Boy Scout circles.

PROFESSOR S. G. POWELL, at present the senior member of the teaching staff, carries a busy load of teaching duties and also heads the all-university committee on registration and scheduling. He still makes a lasting impression on his students. He and Mrs. Powell are both enthusiastic square dancers; this is an activity to keep any Grand-Dad young!

PROFESSOR B. S. RABINOVITCH is on leave this school year to the National Research Laboratories at Ottawa, Canada. His current research work is on the chemical energization of molecules and radicals; on collisional energy transfer from highly excited species; and on quantum statistical interpretations of unimolecular reactions. He recently received an International Award Fellowship from the Petroleum Research Fund and also a Guggenheim Fellowship to finance his travel and research in Canada. In April of last year he was on a week's speaking tour in Canada, addressing both university and industrial groups for the Chemical Institute of Canada.

PROFESSOR D. M. RITTER, when not busy teaching in both day and night schools, continues his research on boron and silicon compounds. He also finds time for leadership in the Boy Scout organization. During this past summer he directed the efforts of high school teachers from the Puget Sound area in rewriting a chemistry syllabus for the high school curriculum, collaborating with similar groups at Harvey Mudd College in Claremont, California. This was part of the Chemical Education Materials Study, financed by the National Science Foundation.

PROFESSOR R. J. ROBINSON is chairman of the Puget Sound Section of the ACS for 1962. Last year as chairman-elect he was in charge of the programs for the Section. Graduate students under his direction are engaged in research on spectrophotometric titrations in non-aqueous solutions, problems in thermal gravimetric analysis and polarographic studies of complexes of molybdenum. As the Robinson sons grow up, they also are turning to scientific careers. Dick, the eldest, is now in graduate school in chemical engineering at the University of Wisconsin, and the second boy, Neal, is a sophomore in chemistry at Washington.

PAUL C. CROSS

Writes from the Mellon Institute

Many of you know by now that I have left the University of Washington to become President of the Mellon Institute. This was indeed a grim decision because I had twelve very rewarding years as Executive Officer of the Department of Chemistry at the University of Washington. During this time, two-thirds of you received your degrees at the University.

Also, during this time, I have continually thought I was on the verge of getting off to you another news letter. This turned out to be a "manana" job, because my record reads: one news letter in 1951, a letter about the H. K. Benson Scholarship in 1955, and one list of alumni addresses in 1957.

I was expecting somewhere along the line to remind you of the fact that much effort had gone into procuring the financial support which enabled you to complete your graduate studies, and to suggest that contributions to the support of the Department would be welcomed by the staff here and would give you certain inner satisfactions as well as certain income tax advantages. I have hesitated to do so from a reluctance to interject such monetary aspects into what

has always seemed to me to be warm personal friendships. Now, however, that I am no longer officially connected with the Department, and thus not passing my own hat, I have no hesitation whatsoever in reminding you that your contributions now will benefit the current generation of graduate students. There are many circumstances in life where our debts of appreciation can only be liquidated to the benefit of a younger generation, and this, I believe, is one of them.

There are very few of you whom I do not know personally and so I wish to close by saying to one and all, "Best of luck, and I'll be seeing you at a social hour sometime, I hope."

Paul C. Cross
*President,
Mellon Institute*

P.S. Make checks payable to the University of Washington, marked "Tartar Fund," (unrestricted as to use, i.e., can pay for scholarships, visiting lecturers, equipment, etc.), in lower left-hand corner, and mail to Department of Chemistry, University of Washington, Seattle 5, Washington.

PROFESSOR W. M. SCHUBERT was on leave in Germany during 1960-61 school year. His trip was financed by a Fulbright Travel Grant and a Guggenheim Fellowship. Most of his time was spent at the Technische Hochschule in Stuttgart, studying electronic effects of molecular grouping in certain aromatic organic substances. He visited England, Holland, Sweden and Switzerland before returning to Seattle last fall.

PROFESSOR W. T. SIMPSON received in 1960 a distinguished award from the California Section of the American Chemical Society. This medal for outstanding research in chemistry is presented annually to a scientist under 40 years of age from one of the thirteen western states. Dr. Simpson has

made important contributions to the understanding of molecular structure and the energies of electrons within molecules through his study of electron-state spectroscopy, working with polarized light and dye substances. He was on leave to the University of Florida for winter quarter of last year.

ASSOCIATE PROFESSOR VICTORIAN SIVERTZ is chairman of the University's Junior College Committee, and is in charge of the interviewing and employment program for the Department. In addition to his usual teaching duties, he coordinates undergraduate advising, assignments for teaching assistants and other aspects of the undergraduate program. He continues to be active in the Boy Scouts.

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FACULTY NOTES

(Continued from Page 3)

ASSISTANT PROFESSOR GEORGE HUGH STOUT joined the staff in 1957 after receiving his Ph.D. at Harvard and studying in Europe for a year. His research interests are in the structure and synthesis of alkaloids and natural coloring materials. He has recently determined the structures of three natural products with the aid of X-ray crystallographic techniques. His wife, Virginia Falk Stout, received her Ph.D. at the University last June, working under his direction. She is now employed at the Bureau of Commercial Fisheries in Seattle.

Research Continued

DR. HERMAN VANCE TARTAR, who retired from teaching in 1952, has continued to be active in research work, and his efforts have been reported in a series of publications. Dr. Tartar has achieved a record of research productivity that may well be unique, and is certainly unusual: on the fiftieth anniversary of his first appearance as a speaker before the American Chemical Society he was invited to present a paper at the spring meeting of the Society, held last March in St. Louis, Mo. His first lecture, presented in Indianapolis in 1911, was entitled "A Comparative Study of Chemical Methods for the Determination of Hard and Soft Resins in the Hop." It was later published in the *Journal of Industrial and Engineering Chemistry*. The paper presented in March of this year was given at the symposium on micellar solutions, and dealt with "The Effects of Salts on the Critical Concentration of Solutions of Paraffin-Chain Salts." Dr. and Mrs. Tartar make frequent trips to visit their children and grandchildren, and other relatives living in Oregon, but retirement for Dr. Tartar has meant an opportunity to continue with the activity he loves most—research in chemistry.

PROFESSOR K. B. WIBERG, who has been at the University of Washington since 1950, has accepted a position at Yale University, starting with the autumn of 1962. For the present school year, he is on leave from this Department and will spend his time mainly at the Technische Hochschule in Karlsruhe, Germany. A Guggenheim Fellowship was awarded to Professor

Wiberg to finance this opportunity for study and research.

Two persons were appointed to the staff in 1960, with the rank of Lecturer. DR. FRANK WARE, who previously taught in colleges in Pennsylvania and the Midwest, is supervising freshman laboratories. MRS. HELEN PEARCE, with the Department in various capacities since 1944, is assisting Dr. Sivertz in undergraduate advising and in the employment program, as well as serving as pre-medical and pre-dental adviser in the Arts and Sciences College on a half-time basis.

New Faculty Appointments

PROFESSOR YASHAYAU POCKER joined the organic division in November. Professor Pocker holds the M.Sc. degree from the Hebrew University in Jerusalem, and the Ph.D. (1953) and D.Sc. (1960) from University College, London. He had been a lecturer at this latter institution as a physical-organic chemist and has done advanced work on mechanism of reactions. He has over 40 publications to his credit.

ASSISTANT PROFESSOR LEON J. SLUTSKY, who received his Ph.D. from M.I.T. in 1957, came to Washington from the University of Texas, where he was an Assistant Professor. He is a physical chemist, interested particularly in lattice dynamics, heat capacities and reaction thermodynamics, and more lately in statistical mechanics of solids, and in adsorption.

ASSISTANT PROFESSOR GERSHON VINCOW, after receiving his Ph.D. in 1959 from Columbia University, spent some time as a Post-Doctoral Fellow at Hebrew University, Jerusalem. While there he worked with Professor William Low on paramagnetic resonance of ions in single crystals. Just prior to coming to Seattle, he was a Research Fellow at the California Institute of Technology.

FRANK J. SEILER, recently retired as a Colonel from the Air Force, where his position was Director of Science at the Hq. Air Force Systems Command in Washington D.C., came in July to assume the varied duties of Manager of Administrative Services for Bagley Laboratories and part-time lecturer in chemistry. He will be in charge of coordination and administration of non-academic services, including stock

rooms, shop and secretarial services, thereby relieving the Chairman of direct supervision in these areas. While in the armed services, he had graduate training in chemistry.

New Text Joint Effort

A new textbook of physical chemistry, written jointly by Professors Eggers, Gregory, Halsey, and Rabinovitch, was used in mimeograph form for the first time last year. The development of the subject requires a more extensive knowledge of calculus than was previously required. The authors plan to publish the final version following a testing period.

Non-Academic Personnel

As the research load grows, non-academic personnel play a larger and larger role in the work of the Department. Ray Newbury devotes his full time to glass blowing for Chemistry. William "Tony" Antonius is being assisted in the shop by Ralph Swanson, Charles "Chick" Arnhold and Robert Oliver.

Bernard "Barney" Nist operates and maintains the mass spectrometer, the NMR spectrometer and other instruments. Bill Jensen and Marie Akers run the stockroom system and are assisted by Tom O'Brien, Hugo Kopta and Frederick Nelson at the windows. Carl Pitman takes care of electrical instruments and he and Charlie Meacham maintain and operate the pool for instruments and research equipment.

LeRoy Hornbeck prepares lecture demonstrations and makes up special materials required for the general chemistry laboratories.

The secretarial staff, headed by Mrs. Helen Lea, includes Mrs. Elizabeth Draper, Mrs. Phillippa McClure, Joyce Proctor and Pauline Werth. This staff is hard-pressed to keep up with the secretarial work of the Department. Perhaps one measure of the change which has occurred is that in 1940 the combined Department of Chemistry and Chemical Engineering had only one secretary.

Many of you will remember Louis McVicar at the freshman stockroom window. The Department lost a valued member of the staff when Louis suffered a fatal heart attack on October 24, 1961.

Bagley Hall Slated for Lab Expansion

A consequence of growth in undergraduate enrollment and expansion in contract research is that the number of graduate students has greatly increased. When Bagley Hall was built, there were about sixty-five graduate students in chemistry and chemical engineering. Now there are 202 graduate students in the two departments and of these 163 receive financial aid in some form from the University. There are also ten post-doctoral research men. As a result of these factors, things are extremely crowded.

The University recognizes the situation and is on the point of starting construction of laboratories on the fourth floor (above the area occupied by the College of Pharmacy). There is available \$1,340,000 by the state of Washington appropriation and \$300,000 from the National Science Foundation. Until the bids are in, it is not certain that this will be enough to buy all of the laboratories that are planned. If it is, we shall have an additional 28,000 square feet of space which will almost double the area available for chemical research. A part of the state appropriation is to be used in remodeling certain parts of the original structure.

NEW ALUMNI ADDRESSES

1929-30

Victor E. Wellman
Department of Chemistry
Phillips University
Enid, Oklahoma

1939-40

Charles H. Secoy
Oak Ridge National Laboratory
Oak Ridge, Tenn.

1941-42

LeRoy Dugan
Michigan State University
Lansing, Mich.

Robert G. Paquette
General Motors Corp.
Defense Systems Div.
Santa Barbara, Calif.

Robin E. Moser
Multnomah College
Portland, Ore.

Dr. Ernest Wenkert
(MS., U.W. 47)
Indiana University
Bloomington, Ind.

1951-52

Albert W. Jache
Assoc. Research Director
Ozark-Mahoning Co.
Tulsa, Okla.

1952-53

Chang, Yu Wei
Jackson Laboratory
E. I. du Pont de Nemours & Co.
Wilmington, Del.

John E. Douglas
Eastern Washington State College
Cheney, Washington

Kurt H. Nelson
Tetronix Corp.
Beaverton, Oregon

Wang, Shih Yi
Department of Biochemistry
Johns Hopkins University
Baltimore, Md.

1953-54

Richard O. MacLaren
United Technology
Sunnyvale, Calif.

Howard J. Ringold
Worcester Institute for Medical Research
Worcester, Mass.

Bertram I. Roland
Calif. Research Corp.
San Francisco, Calif.

1954-55

Jack D. Breazeale
United Technology
Sunnyvale, Calif.

George Feniak
Division of Pure Chemistry
National Research Council
Ottawa, Canada

Ted B. Flanagan
University of Vermont
Burlington, Vt.

Thomas W. Hutton
Rohm & Haas Co.
Philadelphia, Pa.

1955-56

Robert F. Adamsky
P. R. Mallory & Co.
Northwest Industrial Park
Burlington, Mass.

Sidney G. Gibbins
Aerospace Corp.
Los Angeles, Calif.

Lee E. Monteith (M.S.)
Space Medicine Group
Boeing Airplane Co.
Seattle, Washington

1956-57

Robert W. Cottingham
G. L. Cabot, Inc.
Boston, Mass.

Jorge Heller
Stanford Research Institute
Stanford, Calif.

Theodore Mill
Stanford Research Corp.
Menlo Park, Calif.

Andrew F. Montana
Dept. of Chemistry
Univ. of Hawaii, Hilo Branch
Hilo, Hawaii

Carl F. Prenzlow
National Bureau of Standards
Washington, D.C.

Janis Robbins
Dept. of Chemistry
Carleton College
Northfield, Minn.

William F. Skiens
Dow Chemical Co.
Pittsburg, Calif.

1957-58

Thomas G. Dunne
Dept. of Chemistry
Massachusetts Institute of Technology
Boston, Mass.

Frank E. Karasz
General Electric Co.
Schenectady, N.Y.

H. Edward O'Neal
San Diego State College
San Diego, Calif.

Bernard M. Steckler
Dept. of Chemistry
Seattle University
Seattle, Wash.

1958-59

Harris E. Kluksdahl
California Research Corp.
Richmond, Calif.

James M. Stewart
Dept. of Chemistry
University of Maryland
College Place, Md.

Joseph F. Walling
Battelle Institute
Columbus, Ohio

Richard P. Ciula
Fresno State College
Fresno, Calif.

David Dreyer
Agriculture Research Service
U.S.D.A.
Berkeley, Calif.

Richard B. Lund
Central Research Dept.
Allied Chemical and Dye Corp.
Morristown, N.J.

Bruno Morosin
Sandia Corp.
Albuquerque, N.M.

William B. Olson
National Bureau of Standards
Washington, D.C.

Ph.D. Graduates Since June 1960

Elmer A. Augustin
E. I. du Pont de Nemours & Co.
Wilmington, Del.

Edwin E. Barnes
American Marietta Co.
Seattle, Wash.

(Continued on Page 6)

ADDRESSES

(Continued from Page 5)

Alexandre Berlin
Dept. of Chemistry
New York University
Washington Square
New York, N.Y.

Frank G. Borgardt
Lockheed Aircraft Corp.
Missiles and Space Division
Sunnyvale, Calif.

Bruce W. Brown
Dept. of Chemistry
Everett Junior College
Everett, Wash.

Darrell W. Brownawell
Esso Research and Engineering Co.
Linden, N.J.

William F. Harrison
Institute for Organic Chemistry
Cologne, Germany

Leslie M. McDonough
E. I. du Pont de Nemours & Co.
Film Department
Circleville, Ohio

Franklin L. Oetting
Dow Chemical Co.
Midland, Mich.

L. L. Replogle
San Jose State College
San Jose, Calif.

Siegfried W. Schubert
Ingoldstadt-Donau
Munchenstrasse 42 1/6
West Germany

Jean'ne M. Shreeve
Dept. of Chemistry
University of Idaho
Moscow, Idaho

James G. Smith
Whitemarsh Chemical Research Labs.
Pennsalt Chemical Co.
Wyndmoor, Pa.

Virginia F. Stout
Bureau of Commercial Fisheries
2725 Montlake Blvd.
Seattle 2, Wash.

Joseph W. Tracy
Dept. of Chemistry
Northwest Nazarene College
Nampa, Idaho

Hubert William Wilson
Institute of Physical Chemistry
Freiberg i. Br.
Germany

Richard E. Wilson
Argonne National Laboratory
Argonne, Ill.

Edward W. Zahnow
Shell Chemical Co.
Torrance, Calif.

Since June 1961

Robert G. Anderson
California Research Corp.
Redmond, Calif.

Domenick J. Bertelli
Department of Chemistry
Univ. of California
Berkeley, Calif.

Floyd L. Brooks, Jr.
Dept. of Chemistry
University of Illinois
Urbana, Ill.

Jack H. Colwell
Division of Pure Chemistry
National Research Council
Ottawa, Canada

Jerry H. Current
Dept. of Chemistry
University of California
Berkeley, Calif.

Carl D. Good
Aerojet-General Corp.
Sacramento, Calif.

Robert F. Kubin
National Aeronautical and Space Admin.
Moffett Field, Calif.

Arnold P. Lepse
Institut für Organische Chemie der
Universität München
München 2, Karlstr. 23
Germany

Charles H. Ludwig
Research Division
Puget Sound Pulp & Timber Co.
Bellingham, Washington

Henry Montgomery
Royal Roads
Victoria, B. C.

Edwin E. Motell
Swiss Federal Institute of Technology
Zurich, Switzerland

Richard E. Redington
Mellon Institute
Pittsburgh, Pa.

Friedemann W. Schneider
Dept. of Chemistry
University of Washington
Seattle 5, Wash.

Donald W. Setser
Physical Chemistry Laboratory
Cambridge University
Cambridge, England

Richard Wilde
Dept. of Chemistry
Johns Hopkins University
Baltimore, Md.

Stanley M. Williamson
Department of Chemistry
University of California
Berkeley, Calif.

Byron J. Wilson
Department of Chemistry
Vanderbilt University
Nashville, Tenn.

UNIVERSITY OF WASHINGTON
DEPARTMENT OF CHEMISTRY

ALUMNUS
REPORT

Name _____ Class _____

Address _____

Position _____ Organization _____

Business Address _____

News Notes:

News of Other Graduates:

Date: _____ Signed _____

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Tear along this line

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DEPARTMENT OF CHEMISTRY
SEATTLE 5, WASHINGTON