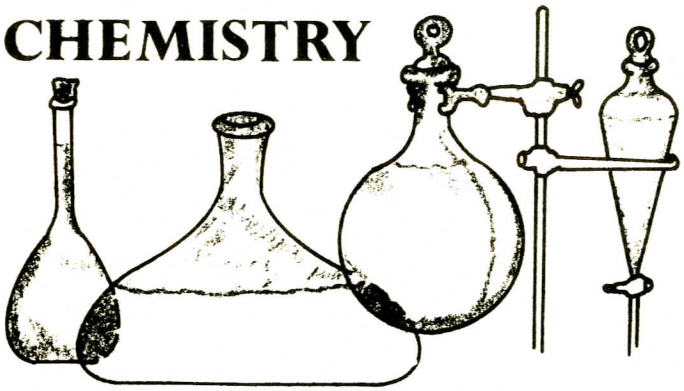
DEPARTMENT of CHEMISTRY

NEWSLETTER

UNIVERSITY of TEXAS - AUSTIN

No. 3 Spring 1980



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Mailing address: The University of Texas, Department of Chemistry, Newsletter, Austin, TX 78712.

FROM THE CHAIRMAN

I have now been chairman for almost six years and in that period there have been many changes--mostly for the good, I believe. We have reduced the need for major instrumentation to a manageable level. My colleagues have gotten their research funding to a decent, if not extravagant, level. We have a new major addition to the building (even though half the hoods still are not functional), and the undergraduates will finally get first-class laboratories when the remodeling of the old building is completed. However, I am most pleased at not seeing any of the malaise that has gradually permeated some chemistry departments.

The biggest problem we are faced with is a lack of general student interest in chemistry. Exactly when and why this happened is not clear, but it is a national phenomenon. The number of interesting and challenging problems are as unbounded as ever, and the jobs are there, yet the excitement of chemistry seems to be shared by less students now than ten years ago. The only consolation is that chemistry is vitally needed and in the long term this current trend must reverse itself.

If you have detected in the above that I'm saying farewell, it is only partly true. It is time to let someone else have the fun of being chairman, but I'll still be down the hall doing research. Come around and let me spend an hour or so telling you what we have learned in the last few years about the mechanisms by which surfactants function in getting more oil out of the ground.

FACULTY HONORS

(Eds. note: This column will be devoted to announcement of honors adjudged to be of particular interest to readers of this newsletter.)

A. J. BARD has been appointed to the following bodies: Chemical Sciences Committee (National) Research Council); Committee on Invention Evaluation (National Bureau of Standards), and the National Materials Advisory Panel. He has also been named as an Associate Editor of the Journal of the American Chemical Society and a titular member of the Electrochemistry Commission of the International Union of Pure and Applied Chemistry (IUPAC). He was appointed to the Jack S. Josey Professorship in Energy Studies by the Regents.

A. H. COWLEY has been appointed to the Board of Editors of Inorganic Chemistry, the Nomenclature Panel of IUPAC, and the U.S. Army Basic Research Committee. He was a Jeremy I. Musher Memorial Lecturer in Jerusalem this past year.

M. J. S. DEWAR received the 1979 Southwest Regional Award this past year.

K. FOLKERS was co-chairman and lecturer at the 2nd International Symposium on Coenzyme Q, held in Tokyo.

G. J. FONKEN was appointed as Vice-President for Research and as Acting Vice-President for Academic Affairs by President Flawn.

M. A. FOX was named an Alfred P. Sloan Foundation Fellow for 1980-82.

B. A. HARDESTY has been selected for the Editorial Board of Archives of Biochemistry and Biophysics and the NIH Study Section Panel for Pathobiological Chemistry. He has also been named to the Scientific Advisory Board of the Max Planck Institüt für Molekulare Genetik in Berlin.

G. B. KITTO was a visiting senior scientist at the Marine Laboratory of Duke University and the Demokritas Nuclear Research Center in Aglria Paraskevi, Greece.

F. A. MATSEN serves on a site visiting committee for the National Bureau of Standards.

P. MUNK has been appointed as a visiting professor at Johannes Gutenberg University, Mainz, West Germany, for the 1979-80 academic year.

J. M. RAVEL is on the Editorial Board of the Journal of Biochemistry and on the Committee on Equal Opportunities for Women of the American Society of Biological Chemists.

L. J. REED serves on the U.S. National Committee for the International Union of Biochemistry and the Executive Committee for the Division of Biological Chemistry of the ACS.

R. M. ROBERTS is a member of the Board of Trustees of Austin College (Sherman, Texas).

W. SHIVE continues as Liason Officer for the UT System to the Robert A. Welch Foundation and is serving on the Board of Directors of the Foundation for Nutritional Advancement and on the National Committee for the Development of Abilene Christian University.

(continued to page 3)

HONORS TO STUDENTS

Undergraduate Awards

ACS, DIVISION OF ANALYTICAL CHEMISTRY
Martha Narro

AMERICAN INSTITUTE OF CHEMISTS
Roger Hurst
Thomas Bowers

BOSWELL SCHOLARSHIP
Lori Brotman

INDUSTRIAL SCHOLARSHIPS

Dow

Howard Bruce Baum
Thomas Norman Dewar
Lynn Marie Trautwein

Dow Chemical for the Minorities

Kim Jeannine Horn

ACS. CENTRAL TEXAS SECTION
James Studt
Boyce Cabaniss

MERCK BOOK AWARD
Harvey Kimsey
Marilyn McConnell

W. A. FELSING AWARD
For Outstanding Scholarhip in Physical Chemistry
Boyce Cabaniss

AYRES BOOK AWARD
Susan Olive

ROBERT A. WELCH FOUNDATION SCHOLARS
Thane E. Kreiner
Brian Laird
John Rainey

Graduate Awards

DUPONT FELLOWSHIPS
Lee Handley
Mary F. Leopold
Don McRorie
William Osterloh
Diane Peebles
Rob Smith
Bob Wheeler

EXXON FELLOWSHIPS
Cynthia Belcher
John Buckley
Vickie Grizzle
Mary K. Holloway

UNIVERSITY FELLOWSHIPS
Curtis Shoemaker
John Hutchinson

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FACULTY HONORS, continued from page 2

J. M. WHITE has recently returned from Washington, D.C., where he was a Program Director for the NSF and a guest researcher at the National Bureau of Standards.

R. E. WYATT is Secretary of the ACS Subdivision on Theoretical Chemistry.

ROGER WILLIAMS was honored last fall for his 40 years of contribution to mankind through his research in nutritional biochemistry. Linus Pauling spoke to a full house of interested faculty and students at the affair co-sponsored by The Foundation for Nutritional Advancement and The Clayton Foundation for Biochemical Research.

GRADUATE DEGREES FALL, 1978 - FALL, 1979

Master of Arts

Richard Anderson — with Prof. P. Parker
Fatty Acids and Hydrocarbons of Selected Blue-Green Algae

Karen Carey — with Prof. J. Boggs
Geometry and Rotation Barrier of 2,3-Dimethyl-1,3-Butadiene by Ab Initio Gradient Calculation

Lek Chantranupong — with Prof. M. Dewar
MNDO Study of ^{2}H, ^{14}N and ^{35}Cl Nuclear Quadropole Coupling Constants

John Colapret — with Prof. S. Martin
General Methods of Alkaloid Synthesis

Lynn Cooley — with Prof. K. Wang
Purification and Immunological Characterization of the Smooth Muscle Intermediate Filament Subunit, Desmin

John Coors — with Prof. J. Ravel
Protein Synthesis in Cell-Free Extracts from Yeast

Catherine Culver — with Prof. W. Shive
Peptide Modulation of End-Product Control of Amino Acid Biosynthesis

Jeanmarie Kachnik — with Prof. J. Lagowski
Reactions of Metal Atoms with Unsaturated Ligands

Robert Ligday — with Prof. A. Bard
Applications in Photoacoustic Spectroscopy

Donald Miller — with Prof. R. Wyatt
Formulation of Dim Electrotational Basis Set for Three Dimensional Quantum Mechanical $F + H_2$ Reactive Collisions with Electronic Non-Adiabaticity

Usha Patel — with Prof. J. Gilbert
Synthesis and Reactions of Endo-3-biphenyl-4-oxytricyclo[3.2.0.$0^{2,7}$]heptan-6-one.

Khier Remadna — with Profs. Davis/Cowley
A Structural and Photoelectron Spectroscopic Study of $Me_2N_3P_2\ Fe(C))_3$

Martha Russ — with Prof. R. Pettit
Some Aspects of the Chemistry of the Iron Tetracarbonyl Dianion

Jing-Fang Wang — with Prof. L. Morgan
A Spectroscopic Study of Cytochrome c Modification with 4-Bromomethylbenzoic Acid

Warunee Yongskulrote — with Prof. R. Roberts
Model Studies on the Coal Structure by Friedel-Crafts Dealkylation

Doctor of Philosophy

Tejraj Aminabhavi — with Prof. P. Munk
Polystyrene in Mixed Solvents

Thomas Arnold — with Prof. B. Swanson
The Evaluation of Completely General Quadratic Force Fields Using Theory and Experimental Data

Marsha Arvedson — with Prof. D. Kohl
An Electron Diffraction Study of Laser Excited Sulfur Hexafluoride

George Brilmyer — with Prof. A. Bard
Photothermal Spectroscopy: Fundamentals and Applications

Diane Cabelli — with Profs. Dewar/Cowley
Studies of Conjugation Involving Benzene and Group VA Elements by Ultraviolet Photoelectron Spectroscopy and Semi-Empirical MO Calculations

Charles Campbell — with Prof. J. White
The Adsorption, Desorption and Reactions of Carbon Monoxide, Oxygen and Nitric Oxide on Polycrystalline Rhodium Surfaces

Kevin Cann — with Prof. R. Pettit
The Homogeneous Water-Gas Shift Reaction and Reductions Employing Carbon Monoxide and Water in Place of Hydrogen

Rosalind Chen — with Prof. A. Cowley
Synthetic and Stereochemical Studies of Some Silicon-Nitrogen-Phosphorus Compounds and a Novel Diphosphorus Zwitterion

Ta-Shue Chou — with Prof. S. Martin
Total Synthesis of Racemic Acorone and Synthetic Approaches to Erythramine and Lycorine

Mike Cushner — with Prof. A. Cowley
The Synthesis and Stereochemistry of Some Organic Derivatives of the Main Group Elements Silicon, Phosphorus, and Sulfur

Michael Duffel — with Prof. D. Ziegler
The Role of N,N-Dimethylaniline Monooxygenase in Regulation of Cellular Thiol: Disulfide Potentials

Robert Eklund — with Prof. J. Holcombe
Electrothermal Atomization in Atomic Absorption Spectrometry: Fundamental Causes of Interference Effects and a Study of an Exploding Thin Film Atomizer

Louis Elrod — with Prof. R. Roberts
I. Friedel-Crafts Dealkylations of Secondary Heptylbenzenes II. Isotopic Labeling Studies of a Thermally-Induced Rearrangement of Phenyloxirane to Phenylacetaldehyde

Clay Frederick — with Prof. W. Shive
The Isolation and Characterization of Some Fungal Iron Transport Factors

Ronald Harris — with Prof. J. Lagowski
Investigation of Some Properties of the Solvated Electron in Ammonia

Calvin Jaeger — with Prof. A. Bard
The Electrochemical Behavior of Organic Conducting and Semiconducting Electrodes and Detection of Radical Intermediates in Photo-reactions on TiO_2 Powders

John Kanalas — with Prof. G. Kitto
The Purification, Immobilization and Characterization of Phenylpyruvate Oxidase and Its Use in Phenylketonuria

An-Li Kuo — with Prof. C. Wade
Lateral Diffusion in Model Membranes by Pulsed Nuclear Magnetic Resonance

Linda LaBaume — with Prof. W. Shive
Peptide Modulation of End-Product Control in Isoleucine Biosynthesis

Ho-In Lee — with Prof. J. White
Chemisorptive Behavior of Small Molecules on the Basal Plane of Ruthenium

Yao-Ching Liu — with Prof. R. Pettit
A Study of Homogeneous Reduction of Carbon Monoxide to Hydrocarbons and Methanol

Diane Dottavio-Martin — with Prof. J. Ravel
The Role of Initiation Factor 1 in the Dissociation of 70S Ribosomes from Escherichia coli.

Arthur Monzingo — with Prof. J. Robertus
Crystallographic Studies of the Pokeweed Antiviral Protein, an Enzymatic Inhibitor of Protein Synthesis

Donna Nelson — with Prof. M. Dewar
An Investigation of Molecular Physical Properties and Reactions by Molecular Orbital Calculations

Frank Pang — with Prof. J. Boggs
An SCF Molecular Orbital ab initio Study of Six-Membered Ring Aromatics

William Peer — with Prof. J. Lagowski
Metals in Ammonia: Gold(1-) and Divalent Lanthanoids

Sophon Roengsumran — with Prof. R. Roberts
Studies on Friedel-Crafts Reorientations and Transalkylations of Toluene, Ethylbenzene, n-Propylbenzene and Isopropylbenzene.

James Rogers — with Prof. J. White
An Electron Spectroscopic Investigation of the Interaction of Methanol and Ammonia with Clean and Partially Oxidized Aluminum Surfaces

William Slegeir — with Prof. R. Pettit
Homogeneous Catalysis with Ruthenium Carbonyl Complexes

Nollie Swynnerton — With Profs. Morgan/Stotter
Regioselective Control of the Reactions of Sulfur-Stabilized Allylic Anions with Carbonyl Electrophiles; A New Synthesis of 3-Alkylthio- and 3-Alkoxy-4-Alkyl-1,3-Butadienes

Twofik Teherani — with Prof. A. Bard
Electrochemical Reactions in Liquid Ammonia

Lawrence Tinker — with Prof. A. Bard
Electrochemical Oxidations of Organic Compounds in Liquid Sulfur Dioxide

Mary Wallis — with Prof. B. Hardesty
Partial Purification and Characterization of Components of the Hemin-Controlled Translational Inihibitor from Rabbit Reticulocytes.

SOCIAL HOUR AT NATIONAL MEETINGS

A number of alumni have expressed interest in the department's sponsoring a social hour at national meetings of the American Chemical Society. Such an event hopefully would bring together, in one location, present and past faculty and students from UT-Austin. George Watt organized social hours at several meetings in the mid-70's, and so few people turned up at these that the department was left holding the financial "bag". Another attempt was made at the ACS meeting held in Houston this Spring, but it too suffered from poor attendance. (The turnout was low even though the event, entitled Lone Star State Colleges and Universities' Social Hour, was expanded to include all schools in Texas!) It is unclear to us whether there simply is a supreme lack of interest in a social hour or whether the "word" on it has not been getting out. In any case, we probably will try one last time at the San Francisco meeting. We tentatively plan to call the get-together the "State of Texas Colleges and Universities Social Hour," and to schedule it for Monday or Tuesday evening. Unless we find a benefactor, drinks will be pay as you go. Try to reserve time to at least drop-in on the mixer. In the meantime, we would appreciate your comments on whether or not to have it at all!

GRADUATE ADVISOR'S REPORT

The number of good freshmen entering our undergraduate program with a declared major in chemistry has slowly dropped over the last few years. There are strong indications that that is a general phenomenon in the major teaching institutions, which is reflected in reduced numbers of qualified applicants at the graduate level, as reported by the Admissions Advisor. At present, that is not reflected in either a reduction in the number of Ph.D.'s granted, or in the pattern of major emphases. Since 1975 the number of doctoral degrees in chemistry has been steady at 20-23 per year and the distribution among divisions has reflected the distribution of students registered in those divisions. That is, there does not appear to be any systematic change in directions chosen by our graduate students, nor is there any apparent bias with respect to successful completion of the Ph.D. degree in the various divisions. As a general rule, approximately 10% of registered graduate students complete their degrees in a given year. We are keeping a close eye on both trends in choice of major areas and number of degrees granted in order to improve our advising and recruiting procedures at both graduate and undergraduate levels.

GRADUATE ADMISSIONS ADVISOR

The department again experienced good success in attracting new graduate students to its programs. Since June, 1979, 58 M.A.- or Ph.D.-seeking candidates have entered here, of which 49 have earned either undergraduate or graduate degrees from U.S. academic institutions. As has been the case in the recent past, the vast majority of our new entrants are from out-of-state, only fifteen of them having been educated at Texas schools, with three of these being from our own department.

Eight of the new students were awarded University summer fellowships that allowed them to enter our program in June rather than September. These individuals were able to spend the summer initiating their research and/or coursework. An additional seven students entered in the summer with support in the form of research assistantships. In general, we are finding an increasing number of students wish to start graduate school in the Summer in order to get "acclimated" to their new environment in a more relaxed fashion than exists in the Fall. There is no doubt in our minds that these early entrants in general get off to a quicker start on their graduate programs than do students entering at the more traditional time.

That's the good news. The bad is that the number of applicants for entry in Summer/Fall 1980 is down sharply (25%) from the previous two years, and we're unsure why. It appears that there are fewer people completing undergraduate degrees with majors in chemistry and, of those that do, an increasing percentage are really headed for professions in the allied health sciences. Moreover, the availability of industrial positions for B.S. degree holders with the associated salaries that are about triple what students are offered to serve as teaching assistants undoubtedly lured some potential applicants away from graduate studies.

We are continuing to work hard to contact new prospects and to get them to apply. You can help us by encouraging undergraduates that you know to apply to UT-Austin!

RENOVATION OF THE ORIGINAL CHEMISTRY BUILDING APPROVED BY BOARD OF REGENTS

In the last Newsletter we described the proposed renovation of the 1929 wing of Welch Hall, which was the original Chemistry Department. We are glad to report that at the December 1979 Board of Regents meeting a bid for this work was accepted, and as this is being written (the first week of February) the east end of the building has been vacated and we await the onslaught of the construction crews. Renovation of the east half of the building will require approximately thirteen months, followed by a one month period during which Chemistry will reoccupy the renovated space and then the west half of the building will be done. This renovation is not merely a "face-lift", but involves a complete rebuilding of the hood system, new plumbing and electrical systems, new laboratory furniture, and the establishment of certain specialized teaching and research laboratories (e.g. advanced organic techniques laboratory, laser research areas, etc.). The old lecture room (room 15) will become a special seminar room and the old library will become a study area. Both of these areas will be remodeled keeping as many of the traditional motifs as possible, such as the original (but retouched) multicolored painted ceiling. The real benefactors of this project will be the undergraduate students in freshman and organic chemistry labs who will finally have a laboratory experience worthy of one of the leading state universities. The time (approximately two and a half years for the completion of all aspects of the work) and the money (in excess of ten million dollars) will be well worth the improvement in our total facility.

THE NEW INSTITUTE FOR THEORETICAL CHEMISTRY

Last September, the Institute for Theoretical Chemistry was created within the Chemistry Department. The addition of a fifth theoretician to the four theoreticians already in the Department now provides UT with one of the world's strongest theoretical chemistry groups. The faculty, and their principal research interest, listed by the order in thich they joined the UT faculty, are: F. A. Matsen (theory of molecular electronic structure), J. E. Boggs (ab initio calculations of molecular geometries), M. J. S. Dewar (semi-empirical molecular electronic structure, with emphasis upon reaction pathways), R. E. Wyatt (chemical dynamics, emphasizing reactive scattering and laser-molecular interactions), P. J. Rossky (Statistical mechanics of solutions). In addition, there are now associated with the Institute 13 postdoctoral fellows, 14 graduate students and 4 undergraduate students. Thus, there are now over 35 active theoreticians within the Chemistry Department!

The Institute was formed to foster the interaction and collaboration among scientists working in different areas of theoretical chemistry. A monthly coffee and donut social hour, and invited speakers provide a means for the different groups in the Institute to learn of each other's work.

As might be expected, the Institute is making extensive use of the new computational facilities which were installed last August. At that time, the Computation Center received and began operating two new CYBER 170 computers, each about $2\frac{1}{2}$ times faster than the 13-year-old CDC 6600 which they replaced. These new mainframe computers, along with Professor Dewar's new VAX minicomputer, provide UT with unexcelled computational facilities. In the coming years, the ITC will become the focal point of many exciting new ideas and results in theoretical chemistry!

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DISTINGUISHED VISITING LECTURERS

The roster of Distinguished Visiting Lecturers in the period 1970-1980 is given below. The series continues to be an important source of stimulation to faculty and students alike.

T. GEORGE (U. of Rochester) - Reaction Dynamics
J. MARGRAVE (Rice) - High Temperature Chemistry
J. TROE (Universitat Gottingen) - Gas Phase Kinetics
N. SUTIN (Brookhaven National Laboratory) - Electron Transfer Reactions
R. HOFFMAN (Cornell University) - Theoretical Chemistry
S. DANISHEFSKY (U. of Pittsburgh) - Synthesis of Natural Products
H. GERISCHER (Fritz-Haber-Institut der Max-Planck-Gesellschaft) - Aspects of Photoelectrochemistry.
A. PINES (U.C. Berkeley) - Topics in NMR
G. WHITESIDES (MIT) - Bioorganic chemistry
F. STONE (U. of Bristol, England) - Topics in Inorganic Chemistry

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CLIFTON HOWARD DURHAM, JR. died in March, 1980 in Silver City, NM. He graduated from U.T. in 1970 with a BS in Chemistry (with Honors).

IN MEMORIAM

Professor George Watt died at his home in Austin on March 29th. George joined our faculty in 1937 and, save for the period 1943-1945 when he was associated with the Manhattan Project, served on it continuously until his retirement in 1968. He was a professor emeritus at the time of his death.

George earned all of his academic degrees from Ohio State University. An author of 17 textbooks and laboratory manuals as well as over 150 journal publications, his research interests centered on chemistry in non-aqueous solvents, primarily liquid ammonia, and more recently on complexation phenomena involving hallucinogenic substances. There were awarded 52 Ph.D. and MA degrees to students who worked under his supervision during his career here.

George was a Fellow of the American Institute of Chemists and a former member of the Board of Directors of the ACS. He served as a consultant for the AEC, General Electric, DuPont, and Exxon, among others.

He is survived by his wife, Pauline, three children and seven grandchildren.

FORMER FACULTY

Analytical Division

Gilbert H. Ayres became Professor Emeritus in 1974. He is living in Austin, is still active in local A.C.S. activities, and occasionally visits in the department. Neil Jespersen left U.T. in 1977 and is presently teaching at St. Johns University in New York City.

Biochemistry Division

Roger S. Williams became Professor Emeritus in 1971, but he is still busily writing books in his office in the Experimental Science Building. Although handicapped by failing eyesight, he walks back and forth from his home almost every day. In October 1979 a lecture by Linus Pauling in the L.B.J. Library auditorium honored Dr. Williams' contribution to nutrition. R.E.(Bill) Eakin had a sudden heart attack and passed away on October 18, 1979. Esmond E. Snell, who left U.T. in 1956 for U.C. Berkeley, returned in 1976 to head the Department of Microbiology, and he holds a joint appointment in chemistry. David J. Cox left U.T. in 1974 to head the Department of Biochemistry at Kansas State University, Manhattan.

Inorganic Division

George W. Watt became Professor Emeritus in 1979 and died on March 29, 1980. Basil I. Swanson left Austin in 1979 to assume a position at Los Alamos Scientific Laboratory in New Mexico. Clifford A.L. Becker left U.T. in 1974.

Organic Division

Harry L. Lochte became Professor Emeritus in 1968. A few years later he moved to Alabama to be near one of his sons, and he died there in December of 1976. Henry R. Henze became Professor Emeritus in 1970. While on a trip with Mrs. Henze to Canada in the summer of 1974 he was stricken with a heart attack. He died in Austin in September, 1974. Lewis F. Hatch left U.T. Austin for U.T. El Paso in 1967 where he was Dean of the School of Science and then Vice President for Academic Affairs. After returning to teaching in 1974, he retired in 1975 and became Visiting Professor in The University of Petroleum and Minerals in Dhahran, Saudi Arabia, his present position, we believe. Alan S. Wingrove left the department in 1971; he is presently Chairman of the Chemistry Department at Towson State University in Baltimore, MD. Lynn B. Rodewald went to The University of Oklahoma as Visiting Professor in 1972, and in 1975 he joined Wingrove at Towson State University. Philip L. Stotter transferred from U.T. Austin to U.T. San Antonio in 1975.

Physical Division

Robbin C. Anderson went to the University of Arkansas in 1968 to be Dean of the College of Arts and Sciences. He retired from that position last year (1970) and has now returned to teaching. W. Albert Noyes Jr. became Professor Emeritus in 1973, but continued teaching a popular course on chemistry and government for several years. He still frequents his office in the chemistry building. Michael Davis went to U.T. El Paso in 1968. Richard B. Bernstein left U.T. in 1978 for Columbia University. Herbert M. Pickett went to Stanford Research Institute in 1978.

THE CHEMISTRY DEPARTMENT CAN USE YOUR HELP

Within the past several years, the department has initiated a number of new projects, among which are production of this newsletter, the establishing of fellowship programs for undergraduate and graduate students and the development of a fund that provides emergency interest-free loans for any of our students who are in financial need. The monies for these projects have largely come from unrestricted grants provided by various industrial firms, prominent among which are Dow, DuPont, Exxon, Monsanto, and Shell. It is now clear that owing to its increasing need for funds that can be used for purposes for which our budgeted university monies do not provide, the department must reluctantly turn to its alumni and ask for its financial support. We recognize that many individuals view our state-supported university as being exceedingly wealthy because of the magnitude of the Permanent University Fund (now over one billion dollars). However, we emphasize that the Legislature seemingly more than compensates for our share of the income from this Fund by virtue of appropriating less tax monies for UT-Austin, the net result meaning that the University as a whole, and consequently our department, does not have the financial support necessary to continue to strive for recognition as an institution of the first rank.

There undoubtedly are many agencies (including the IRS!) that extend an open hand to you in the hope that you will share your income with them. The chemistry department is now among these, as we urge you to give serious consideration to our request that you make us a part of your annual budget of tax-deductible contributions. Whether it is small or large, whatever funds you send will be exceedingly valuable as support of our ongoing and future programs. The form below allows you to designate the departmental use of your funds contribution.

I(we) wish my(our) tax-deductible contribution to be used for the following purposes:

_____ Emergency loan fund

_____ Fellowships (Graduate Students)

_____ Scholarships (Undergraduate Students)

_____ Departmental Newsletter

_____ Greatest departmental need

_____ Other (specify below)

_____

Checks should be made payable to the University of Texas at Austin and sent along with this form to: Chairman, Department of Chemistry, The University of Texas at Austin, Austin, TX 78712. Your cancelled check will serve as receipt unless one is requested.

Name of donor_____

Complete mailing address_____

Alum Retorts

GILBERT P. ANDERSON, Ph.D. (R. Roberts)
1967-1969 Capt. U.S. Army. 1969-1971 Sr. Res. Chemist, Ashland Oil, Ashland, KY. Two patents. 1971-1974 Mgr. Refinery Qual. Cont., Ashland. 1974-1976 Assistant Operations Supervisor, Petrochem. 1976-1978 Petrochem. Operations Supervisor 50,000 BPD plant. 1978-1979 Group Leader Process R&D, Ashland Chem. (Dublin, Ohio)

BRUCE H. CAMPBELL, Ph.D. (A. Bard)
Editor of Critical Reviews in Analytical Chemistry, Chairman-elect of Lehigh Valley ACS, member Food Chemicals Codex Committee, member SEMI subcommittee on chemical standards, chairman of local environmental commission, latest publication "Multiparametric Curve Fitting and the Number of Calculated Parameters" in Analytica Chim. Acta, 1978, Vol 275. (Phillipsburg, NJ)

ANTONIO A. CANTU, Ph.D. (F. Matsen)
Engaged in criminalistics, particularly in the forensic analysis of ink and paper for dating questioned documents. Also involved in applying pattern recognition techniques to forensic data for determining degree of individualization. (Falls Church, VA, Bureau of ATF)

JOHN D. CHRISTIAN, Ph.D. (P. Bailey)
Became Manager of Analytical and Research Services Section in April of 1978, after serving 8 years as Manager of Exploratory Research. (Monroeville, PA, Koppers Co, Inc.)

JOHN S. CLOSE, Ph.D. (J. White)
Returned to school as a full-time student, taking education classes at the University of Regina in Regina, Saskatchewan. Is thoroughly enjoying teaching at Western Christian College, his activities in the local church, but does miss stimulation of research. (Saskatchewan, Canada)

THOMAS WHELAN, III, Ph.D. (P. Parker)
Associate Professor of Marine Science and President Carbon Systems, Inc. -- applied geochemistry with emphasis on research and consulting in organic geochemistry. (Baton Rouge, LA, LSU)

Alum Retorts

ROBERT C. DANA, Ph.D. (J. Gilbert)
Supervisor of the document analysts of the organic sections at Chemical Abstracts Service. Also winding up an M.A. in organizational behavior at Ohio State. (Columbus, OH)

CARLOS deLLANO, Ph.D. (M. Dewar)
No longer connected with the University of the Americas. Now in business for himself -- computer center for calculations for schools, businesses, engineers, etc. (Puebla, Pue., Mexico)

RALPH J. BRODD, Ph.D. (N. Hackerman)
New position: Director of Technology for ESB technology-Ray Ovec, Yerdley, PA.

ROBERT B. FUGITT, Ph.D. (R. Roberts)
1971-1973 Post-Doc, School of Pharmacy, U of Georgia; 1973-1974 Post-Doc, Southwestern Medical School, Dallas; 1974-1978 Chemist in DuPont Biochem Dept. -- Agrichemical Div.; 1978- Agrichemicals product registration, DuPont Biochemistry Department. (Newark, DE)

RICHARD D. GOODIN, Ph.D. (A. Bard-J. Gilbert)
Corporate Research Laboratories - Process Sciences Department - Organic Electrochemistry Section. (St. Louis, MO, Monsanto Co)

FRANKLIN R. LEACH, Ph.D. (L. Reed)
Professor of Biochemistry at Oklahoma State University, doing research on biochemical indicators of groundwater pollution and on the mechanism of DNA-mediated bacterial transformation. (Stillwater, OK)

THOMAS W. McANINCH, Ph.D. (S. Monti)
Development Chemist; promoted to Senior Chemist in Jan., 1979. (Longview, TX, Tex Eastman)

JOHN W. PAUL, Ph.D. (M. I. Davis)
Currently a Senior Research Chemist with DuPont. (Kinston, NC)

PEGGY WILSON, Ph.D. (G. Watt)
Has new assignment for Mobil in Corrosion Research. Recently elected to 4th term of office on State Republican Executive Committee. (Dallas, TX)

Alum Retorts

JOHN CALDER, Ph.D. (P. Parker)
After 8 years with the Oceanography Dept. at Florida State University, I have assumed a research management role with NOAA concerned with environmental impacts of offshore oil and gas development and marine pollution in general. (Boulder, Colorado)

FRANK D. LONADIER, Ph.D. (J. Boggs)
Manager, Production at Monsanto Research Corporation since 1977. Interested in actinide chemistry and the chemistry of explosives and pyrotechnics. (Miamisburg, Ohio)

MICHAEL C. PIRRUNG, BA (Class of 1975)
Received Fannie & John Hertz Foundation Fellowship.
ed note -- Michael is working toward a Ph.D. at U of California, Berkeley

GEORGE M. SIMS, M.A. (R. Eakin)
Director of Research & Development -- clinical diagnostic firm involved in development of both instruments and methodologies for clinical diagnostics. (Houston, TX, Hycel, Inc)

EDWARD N. WHEELER, Ph.D. (H. Lochte)
Vice President, Research & Development. (Dallas, TX, Celanese Chemical Co)

STEPHEN E. McGUIRE, Ph.D. (R. Roberts)
Group Leader, Chemicals Research Division, R&D Department, Conoco, Inc. (Ponca City, OK)

LARRY WHEELER, Ph.D. (A. Bard)
Research Associate, Analytical Department, Celanese Technical Center. (Corpus Christi, TX)

THOMAS ROGERS, M.A. (G. Ayres)
Have worked at PPG's Corpus Christi Technical Center for 25 years, first in analytical method development, next in inorganic process research, and since 1968 in Development Department: Chemical process economics, preliminary process design and development of computer methods for process design.

Alum Retorts

FRANK L. SIEGEL, Ph.D. (R. Williams)
Professor of Pediatrics and Physiological Chemistry, University of Wisconsin, Madison.

STEPHEN H. TEDDER, Ph.D. (S. Webber)
As of April '79 I am gainfully employed as a research engineer (!) (Tulsa, OK, AMOCO)

ANN BAUGH TIPTON, Ph.D. (J. Boggs)
Group Head for Fuels Desulfurization Group in Coal Research. My work is primarily involved with developing a coal desulfurization process for which I am sole inventor. (Diamond Bar, CA, Occidental Research Corp)

VADDADI RAO, Ph.D. (unknown)
Head of Petroleum and Natural Gas Division Laboratory. (Jorhat-6 (Assam) India)

BEN WALKER, Ph.D. (W. Gardiner)
Promoted to Professor, effective 9/79 -- Stephen F. Austin State University. (Nacogdoches, TX)

LARRY D. JOHNSON, Ph.D. (G. Ayres)
Employed as research chemist and contract project manager with EPA's office of Research and Development. (Cary, NC)

FRANCIS J. BEHAL, Ph.D. (R. Eakin)
Was Professor and Chairman of the Biochemistry Department at the Texas Tech Medical School until February 1978. Presently Professor of Biochemistry & Surgery and Director of the Surgical Research Laboratories for the Amarillo, El Paso, and Lubbock campuses of the Texas Tech Medical School complex. (Lubbock, TX)

JOHN L. IRVINE, Ph.D. (R. Roberts)
Project leader for flexible PVC technical service. (Ponca City, OK, Conoco)

FRED F. KADLUBAR, Ph.D. (D. Ziegler)
Present position: Chief, Biochemical Division, Mechanisms of Toxicity Branch of Chemistry, National Center for Toxicological Research. (Jefferson, Arkansas)
Personal: Won the Daily Double at Oaklawn Race Track recently -- one of his life goals!

Alum Retorts

DAVID F. PICKETT, Ph.D. (R. Anderson)
Head, Battery Section, Power & Propulsion Lab., Hughes Aircraft Co., Space & Communications Group, Los Angeles, CA. Managing R&D and in-orbit operation of satellite batteries has replaced my past duties as a bench scientist.

PATRICIA MOORE PLUMMER, Ph.D. (F. Matsen)
Currently Assoc. Professor of Physics and Assoc. Director of Cloud Physics, working on problems in nucleation theory, molecular dynamics of water clusters, molecular models of surfaces radiation processes in gas phase ion hydrates. Two children, ages 1 and 5. (Rolla, MO, Univ. of Missouri)

FRED E. POTTS, III, Ph.D. (P. Bailey)
Graduated with M.D. from U.T. Medical School at San Antonio in May, 1977. Presently an Anesthesia Resident at Wilford Hall Hospital at San Antonio, Texas.

CHESSIE E. REHBERG, Ph.D. (H. Henze)
Retired from Dow Chemical Company Patent Department, 9/1/75, after 20 years service as a registered patent agent. (Hendersonville, NC)

JOSEPH H. ROSS, M.A. (P. Bailey)
Has been on the faculty at Indiana University at South Bend since 1963, and was Chairman of the Chemistry Department from 1969 to 1973. (South Bend, Indiana)

JERALD SCHWEIGER, Ph.D. (A. Cowley)
Married Peggy J. Easterwood (BS Chemistry UT-Austin, 1971); have two children - Tina age 5 and Jerry age 2. Post-Doc A.H. Cowley 1972-73; employed DuPont Co. 1973 as Research Chemist, Wilmington, Delaware. Presently Technical Sales Representative. (Houston, TX)

WARREN H. PHILIPP, Ph.D. (L. Morgan)
Research Scientist at LeRC engaged in organic and inorganic synthesis via high energy electrons from a linear accelerator (Dynamitron). Present work involves polymer preparation for ion transport membranes. (Cleveland, Ohio)

Alum Retorts

KENNETH WILLIAMSON, Ph.D. (F. Matsen)
Charter member and first treasurer of the local Alpha Chi Sigma. (South Charleston, WV)

HERBERT SINGER, Ph.D. (W. Shive)
A charter member of the UT Alpha Chi Sigma; presently at VA Hospital, Lyons, NJ.

CARL T. ASHBY, Ph.D. (F. Felsing)
Retired Oct., 1972 from staff of the University of Arizona. 1965-1972, Research Fellow on Single Crystal Growth; 1963-1965, Director of Advanced Engineering, Arkla Industries, Evansville, Ind.; 1960-1963, Director of Engineering and Research, Norge Division of Borg-Warner Corp.; 1956-1960, President and Director of Engineering, Conrad, Inc., Holland, Michigan (this company designed and built special test equipment for the Space Program); 1934-1956, Research Engineer to Chief Engineer, Servel, Inc., Evansville, Ind. (Tucson, Arizona)

THOMAS FERRELL, Ph.D. (P. Bailey)
Since September, 1976, employed as senior research chemist in Organic Process Research Department of Dow Chemical, Texas Division, Freeport, Texas.

MARYLU BENTON GIBBS, M.S. (R. Pettit-A. Bard)
In charge of fumed silica pilot plant in Dow Chemical, Louisiana Division. (Plaquemine, LA)

RONALD GIBBS, M.S. (R. Pettit)
Working on high efficiency Ziegler catalysts for past 3 years in Dow Chemical Company, Louisiana Division. (Plaquemine, LA)

JOHN I. HEDGES, Ph.D. (P. Parker)
Assistant Research Professor at the University of Washington since 1977, studying marine organic geochemistry. (Seattle, WA)

VINCENT J. PUGLISI, Ph.D. (A. Bard)
Professional: Director of Research, Yardney Electric Division. Personal: Children Vanessa (6) and Joseph (4). Now residing in Waterford, Connecticut.

Alum Retorts

DUANE F. BUROW, Ph.D. (J. Lagowski)
Professor of Chemistry at University of Toledo; research in Raman optical activity, Sulfur dioxide and coal chemistry supported by the NSF and DOE, respectively, is underway.

JEFFRIES EILERT, Ph.D. (N. Bauld)
Left George Williams College 1976 and became chief administrator of St. Charles Medical Center outside Chicago.

WILLIAM GAMMANS, Ph.D. (H. Henze)
Senior Chemist/Group Leader of Exploratory Chemicals Research Group at Texas Eastman. (Longview, TX)

SUSAN HARMS, Ph.D. (R. Wyatt)
Two children, Peter age 3, Samuel age 1. My job is completely removed from chemistry. Requires travel all over the country & Canada and riding freight trains. -- enjoy it very much. (Duncan, OK, Halliburton Services, MRD)

WALTER W. HENSLEE, Ph.D. (R. Davis)
Promoted Sr. Analytical Chemist to Analytical Specialist 1978. From 1976-Pres., supervisor of surface chemistry group which specializes in materials characterization of catalysts, polymers, refractories and alloys using XRD, XRF, ESCA, SEM, TEM, microbe and gas adsorption techniques. Special interests are high temperature XRD and solid solutions. Recent publications include "Particle Size Effects in the Determination of Respirable α-quartz by X-ray Diffraction" in analytical chemistry and several papers highlighting computer automation of x-ray powder diffraction, presented at ACA, ACS, and the Denver x-ray application meetings. (Freeport, TX, Dow)

SURESH C. MEHROTRA, Ph.D. (J. Boggs)
Joined Physics Department, Marathwada University, India, as Associate Professor. (Aurangabad, India)

DAVID LANDMAN, Ph.D. (M. Dewar)
Development chemists working on epoxy curing agents. We have just set up this lab for testing and developing new products. (Spartanburg, SC, Milliken Chemical)

Alum Retorts

CARL W. HUDSON, Ph.D. (E. Kyba)
Senior Research Chemist in Research and Development -- Oxides and Derivatives Group. Currently working on a new product venture as well as production support for new Division glycol ethers plant. (Plaquemine, LA, Dow)

CAROLYN WEATHERSBEE LARA-BRAUD, Ph.D. (Shive)
Asst. Prof. Dept. Home Economics; secretary of Iowa Chapter of Sigma Xi (79-80); Chairman Research Section of the Iowa Home Economics Association (78-80) (U of Iowa)

EMERSON H. LEE, Ph.D. (N. Hackerman)
Science Fellow at Monsanto, Petrochemicals Dept.; working in heterogeneous catalysis. (St. Louis, Missouri)

BALDEV S. MANHAS, Ph.D. (G. Watt)
Prof. of Chemistry, Punjab University, Patiala, India since 1976; since May, 1978 also working as Head of the Department of Chemistry.

JAMES L. MEADOWS, Ph.D. (J. Bailey)
Retired from Texaco with 37 years service. Supervised patent and research efforts from R&D Department. Doing some substitute teaching of math and physics. (Port Arthur, TX)

THOMAS MUECKE, Ph.D. (M.I. Davis)
Currently Research Supervisor of Well Completions section at Exxon Production Research Company. (Houston, TX)

HARVEY HERMAN, Post-Doc (A. Bard)
I am now Professor of Chemistry (since 1973) at The University of North Carolina at Greensboro. Have 4 children and a working wife (Emily).

SIDNEY PARKER, Ph.D. (G. Watt)
Now a solid state chemist. Presently working on garnet materials for use in magnetic bubble memory devices. (Dallas, TX, TI)

JAMES A. PETRICH, M.A. (B. Swanson)
Ph.D. in science education, UT-Austin, May, 1979. (San Antonio, TX)

Alum Retorts

DANIEL W. BAUGH, JR., Ph.D. (G. Watt)
Research Specialist - New Products Research, Louisiana Division R&D, Dow Chemical. (Baton Rouge, Louisiana)

SEYMOUR POMERANTZ, Ph.D. (P. Bailey)
Professor of Biochemistry at the University of Maryland School of Medicine in Baltimore.

JOHN MARTIN WEAVER, Ph.D. (W. Shive)
Manager, Biochemical and Microbiological Research, Lever Brothers Co. Past President, NJ Chapter of International Association for Dental Research. Councillor, IADR-AADR 1979.

ELDON H. SUND, Ph.D. (H. Henze)
Professor of Chemistry, Midwestern State University, Research in heterocyclics. Councilor of local section of ACS. Received Hardin award for outstanding research and teaching, 1975. Four children, three in college, one in high school.

ROBERTA FAULKNER SUND, M.S. (W. Shive)
Chemistry teacher, Wichita Falls High School, presented a paper at the 3rd International Conference of Chemical Education, August 27-31, 1979 in Dublin, Ireland. Four children, three in college, one in high school.

MICHAEL LELAND McKEE, Ph.D. (M. Dewar)
Accepted Post-Doc under W.N. Lipscomb at Harvard, starting September, 1979.

TAKAAKI ARATANI, Ph.D. (M. Dewar)
Our faculty are now the last program for the reformation and repletion of the educational and research systems as the Interdisciplinary Studies of Natural Environment proceeding from Departmental Organization for the past six years. (Hiroshima, Japan)

WILLIAM J. WELLS, III, Ph.D. (G. Watt)
Promoted to New Products Account Manager, April 1979, in Dallas home office. Two U.S. patents recently issued on which I was co-inventor (assigned to Celanese), U.S. 4,110,298 and 4,138,420.

Alum Retorts

JEFFREY T. NELSON, Ph.D. (J. Lagowski)
R&D Supervisor and Project Officer, Power Supply Branch (electrochemical), Harry Diamond Laboratories, U.S. Army Electronics R&D Command. (Adelphi, Maryland).

DONALD I. MARSHALL, Ph.D. (N. Hackerman)
Senior Staff Development Engineer, Plastic Materials for communication cables. Western Electric Company, Norcross, Georgia.

J. VIRGIL WAGGONER, M.A. (P. Bailey)
Promoted from General Manager level to Corporation Vice President and Managing director, Plastics and Resins Co., Nov. 1977, then to Group Vice-President, Plastics and Resins Co., Dec. 1978.(St. Louis, MO, Monsanto)

REX E. HORNISH, Ph.D. (P. Bailey)
Recently promoted to Senior Research Scientist-Metabolism and Residue Analysis-Agricultural Division-Upjohn Company. (Kalamazoo, Michigan)

LARRY G. MAURER, Ph.D. (P. Parker)
Post-Doc, Texas A & M Dept. of Oceanography, 1971-72; Director, Organic Chemistry Program, NSF Coherent-Area Marsh Project, Univ of Georgia Marine Science Institute, Sapelo Island, GA., 1972-75. Chemical Projects Supervisor, E.Q. Lab, 1975 to present. (Port Charlotte, Florida)

KAREN SHIVE-BROWNING (Class of 1975)
Received Ph.D. in biochemistry at University of Illinois; has accepted a post-doctoral position with Dr. V. L. Ray Blandany at MIT.

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UNDERGRADUATE MAJORS
1979 Fall Semester

Classification	Biochem	Chem	Total
Freshmen	31	49	80
Sophomores	26	40	66
Juniors	22	31	53
Seniors	43	66	109
TOTAL	122	186	308