

NEWSLETTER

Chemistry Department
University of Massachusetts

November 25, 1970

NEWS OF GENERAL INTEREST

A newly constituted Alumni Relations Committee is making a renewed and determined effort to keep in touch with our Alumni. This Newsletter is an initial step in that direction, and we plan to put it out on a regular basis.

There are many important changes on the University of Massachusetts campus which you should know about, such as:

1. A 17 story Chemistry Tower is rising behind the Goessmann Laboratory to dominate already impressive structures such as the five high rise dormitories (which though taller are 100 feet below, because they are built, as you know, on the lowest level of the Campus). The Chemistry Tower will be even more impressive in a few years when connecting towers will be built (to be occupied by physics and math). These and the adjoining Physical Science Library, Computing Center, and Graduate Research Center which are also under construction will complete a 20 million dollar facility which should give a big boost to chemistry and physical science at the University. (See a sketch of these facilities on the inside of the enclosed booklet.) We hope that the Chemistry Tower will be ready for dedication and use by the fall of '71, and shall keep you advised of progress and plans for the opening festivities. Orders are beginning to go out for the impressive instruments needed to equip the research laboratories.
2. An impressive Campus Center, which extends the Student Union facilities and serves as a center for conferences and continuing education, has just been built across the street from the Goessmann Laboratories. This massive, vault-like, concrete structure (much of which lies in huge underground caverns, along with a 1000 car garage) is rapidly becoming an object of student scorn and protest - even though designed by the very respectable architects Breuer and Beckhard (a picture of this appeared in the September 21, 1971 issue of Time magazine).
3. A 28 story library is rising in the very center of the campus (just west of the pond) to house most of the millions of badly

needed volumes which the University is desparately struggling to acquire.

4. A long-overdue Fine Arts Building will soon change the shape of the college pond, obliterate Ellis Drive and its diseased elms, and further diminish the open area and green grass which have so characterized our campus. Construction started 11/24/70 with fencing off the area, and building an earth-dam across the pond to serve as a temporary walk-way.

These and a host of other buildings represent an effort to cope with a population explosion which has already brought enrollment to almost 20,000. And no seer has emerged to say that it will level off at 30,000 or even 40,000 in the '70's or '80's - or anytime in the foreseeable future (even though a long range planning committee is in the throes of making a report).

But these physical changes, impressive and overwhelming as they are, represent only the "tip of the iceberg"; the really important changes lie beneath the surface, almost hidden from view. Some of these are quite obvious and widely known, for example:

1. A new President, Robert Wood, presides over the Boston, Worcester, and Amherst branches of the University and is located in Boston.
2. Chancellor Oswald Tippo (formerly the Provost) is the dedicated and hard-working chief at Amherst, who now views the campus from the president's home on the hill. He is leading a valiant effort to preserve a free and open university for scholarship, study, and teaching - and warns that repression or worse will be our fate if serious disruption occurs.
3. Robert Gluckstern (the former head of physics) is acting provost; and Mortimer Apley (former psychology head) is now the Graduate School Dean.
4. The Arts and Science College is without a permanent dean still, following Moyer Hunsberger's resignation in March of 1969 (former Head of Chemistry, Moyer Hunsberger, has not yet gotten back to his field; he is on a 2 year assignment with the Ford Foundation in Pakistan).

The College of Arts and Science is being separated into 3 faculties: (only a few short years after we combined the three!)

1. Humanities and Fine Arts
2. Social and Behavioral Sciences
3. Natural Sciences and Mathematics

Each will be headed by a dean, and Dr. McEwen is Chairman of the search committee for a Dean of Natural Science (he will be most grateful for any nominations you can suggest!).

With the opening of Hampshire College this fall, in the apple orchards

of South Amherst, we are now part of a 5-college complex. Hampshire admits 250 coeds to a very novel and innovative liberal arts program, which for example does not have the traditional "departmental" organization. Such departures are attractive to many of today's modern students, and will be watched with much interest by Hampshire's more conventional neighbors.

The enclosed booklet ("Graduate Study in Chemistry at the University of Massachusetts") gives you a sketch of the new Graduate Research Center and considerable information about the Department. It's intended for prospective graduate students; we hope that you know some able prospects with whom you'll be willing to share this! Few things are more important in building a first-rate university than able students - and alumni can play a key role in helping to recruit them.

DEPARTMENTAL SCIENCE DEVELOPMENT GRANT APPLICATION

Planning the new building and its facilities has been a major activity of the Department for some time, but other related and extremely important activity has been going on as well. Particularly noteworthy is our application for a Departmental Science Development Grant from N. S. F., which was submitted March 5, 1970. Funds amounting to approximately \$9,500,000 are being sought to enable a substantial improvement of the Department (approx. 1 million from N. S. F., 6 million from the University, and 2.5 million from other sources). A massive and most impressive analysis and proposal has been prepared by Dr. McEwen, primarily, whose prodigious effort has been supplemented by the work of others - notably that of former dean and department head Moyer Hunsberger. A site visit from N. S. F. occurred October 20th and within a few months we hope to hear of a favorable acceptance. If so, our real work is just beginning since we will be faced with the challenge of developing a department of real excellence. Needless to say, this will call for all the energy, insight, wisdom, and imagination we can muster, as well as help from administration, professional associates, alumni, students, and friends.

THE ALUMNI ADVISORY COUNCIL

Along this line, the Department has just established a 9-member Alumni Advisory Council to aid, advise, and abet us in the development of a truly first-rate chemistry department. We hope that this Council will act as a sounding board for departmental proposals of many kinds; provide suggestions on curriculum, teaching, research programs, staff additions, and administrative matters; help keep the Department abreast of developments in the many areas of chemistry; stimulate self-evaluation by the Department and suggest opportunities for changes or new departures. We hope, indeed, that all of our alumni will be as helpful as possible along these and related lines, and we earnestly solicit your advice, criticism, and help. The initial membership of the Alumni Advisory Council is listed on the attached sheet.

The Alumni Advisory Council
Department of Chemistry
University of Massachusetts

Dr. Alexander R. Amell

Professor and Head of Chemistry
University of New Hampshire

B.S., U. Mass., '47
Ph.D., Wisconsin, '50
(Physical)
Hunter College '50-'52
Lebanon College '52-'55

Dr. Alexander M. Cruickshank

Director of the Gordon
Conferences
Associate Professor, Univ. of
Rhode Island

B.S., Rhode Island, '43
M.S., Rhode Island, '45
Ph.D., U. Mass., '54
(Inorganic)

Dr. Russell S. Drago

Professor, Univ. of Illinois

B.S., U. Mass., '50
Ph.D., Ohio State, '54
(Inorganic)

Dr. Malcolm Henry

Deputy Director, Clothing and
Personal Life Equipment Lab
U.S. Army Natick Laboratories

B.S., U. Mass., '49
M.S., U. Mass., '51
Ph.D., U. of Pa., '54
(Organic)

Dr. John J. Keane

Manager, Compound & Phenolic
Products R. & D.
General Electric at Pittsfield
Mass.

B.S., U. Mass., '51
Ph.D., U. Mass., '55
(Physical)

Dr. Anthony J. Matuszko

Directorate of Chemical Sciences
Air Force Office of Scientific
Research

B.S., Amherst College, '46
M.S., U. Mass., '51
Ph.D., McGill, '53 (Organic)
Instructor to Assoc. Professor
at Lafayette College, '52-'58
Head, Fund. Proc. Div., U.S.
Naval Prop. Plant, '59-

Dr. Robert E. Putnam

Senior Supervisor, Wash. Lab.
DuPont at Parkersburg, W. Va.

B.S., U. Mass., '50
M.S., U. of Illinois, '51
Ph.D., U. of Illinois, '53
(Organic)

Dr. Augustine Silveira, Jr.

Professor and Chairman of
Chemistry
S.U.N.Y. at Oswego
B.S., S.E. Mass. Tech. Inst.,
'57
Ph.D., U. Mass., '62
(Organic)
Asst. Professor, Rutgers,
'62-'63

Dr. Emil J. Slowinski

Professor and Head of Chemistry
Malcolmer College, St. Paul,
Minn.

B.S., U. Mass., '46
Ph.D., M.I.T., '49 (Physical)
Swarthmore College, '40-'52
U. of Conn., '59-'64

THE POLYMER SCIENCE AND ENGINEERING PROGRAM

This is an interdisciplinary program which leads to M.S. and Ph.D. degrees in Polymer Science and Engineering. Three chemistry professors, Chien, MacKnight and Stein, and three chemical engineering professors, Lenz, Laurence, and Middleman join with four staff members in the PSE program, Karasz, Porter, Price and Vogl to present a well rounded program in polymers. Under the vigorous leadership of Roger Porter, the program has attracted over 40 graduate students and 10 post-doctoral fellows. The program will occupy two floors of the tower of the Graduate Research Center.

Graduate students in chemistry may carry out thesis work with PSE staff and PSE students may work with chemistry staff. Arrangements have been made for students in either program to satisfy some of their requirements by taking examinations in the other. Next summer the program will present a six week NSF sponsoral Summer Institute in Polymer Science for 22 college teachers in materials science and related fields.

BIO-INORGANICS PROGRAM

In the final planning stages at the University of Massachusetts is the proposed Bio-inorganics program, a research oriented seminar-discussion program centered about the biochemical, chemical, and nutritional aspects of metal ion involvement in living tissues. One aspect of this program will be the study of a metalloenzyme (i.e., xanthine oxidase) involving the relevant chemistry, methods of detecting the binding of the metals to the apoenzyme. This will also include the biochemical and nutritional areas concerning the intake, transport, use, and elimination of metallic components.

Graduate students and postdoctoral fellows will gain laboratory experience to allow them to make contributions to the current knowledge. Cooperative ventures will be encouraged whenever possible.

Each student involved would acquire proficiency in the normal chemical areas including biochemistry. A typical graduate student program would include the basic (chemistry, biochemistry or nutritional) courses the first semester. The second semester includes bio-inorganic and advanced courses and the third term would include a second bio-inorganic course and research. Completion of research and dissertation should be completed in less than two years for the Master of Science degree. Students electing the Ph.D. option would enrich their program during the third or fourth term. The degree could be either chemistry, biochemistry, or nutrition, depending on the specialization and research emphasis.

This bio-inorganics program would produce professionals with a broad background. They could join colleges or universities and teach bio-inorganics or else join research institutes and work on environmental problems. As far as we know, after some preliminary probing, this would be the first bio-inorganics program of this size in the U. S.

Involved in this program are professors Archer (inorganic), Chien (physical), Rausch (organic), and Zajicek (inorganic) of this department, along with others from Biochemistry, Veterinary and Animal Science,

Microanalytical Services, and the Medical School.

CONTINUING EDUCATION PROGRAM

The University now has a Continuing Education Program in operation and the Chemistry Department is making its contribution. The undergraduate course for chemistry majors is being taught two nights a week by Dr. Robert Williams. The participants are students from various chemical companies in Springfield including Monsanto, Plastic Coating Corporation (Scott Graphics), and Uniroyal. The new Campus Center should facilitate the Continuing Education Program of the University, which is being expanded.

FACULTY NEWS (EMERITUS)

Professor Emeritus Charles Peters was presented with Amherst's gold-headed cane by the town selectmen in May of 1970, to honor him as the oldest man in town (at 95) and Amherst's most distinguished citizen. Dr. Peters entered U. Mass. (i.e. Mass. Agricultural College) as a freshman in 1893 when there were approximately 150 students. He retired as Professor of Analytical Chemistry in 1945, but has remained very active at chopping wood, walking and hiking (he doesn't need the cane!) gardening, and writing (autobiography, history of the Department, historical and family notes and records, etc.). Dr. and Mrs. Peters still live in the large house which they bought in 1912 (at 15 South Sunset Ave.). Mrs. Peters says "It was a marvelous place to bring up (4) children. At that time there was enough open space that they could go coasting and tobogganing." Since Mary Peters's eyesight is failing, Charlie walks to town to do the shopping, and then reads the recipes while she measures and mixes. We hope they'll have many more happy and healthy years together (why not drop them a note!).

Some may not have heard that former Dept. Head Walter S. Ritchie died of a heart ailment in July of 1968. He had remained active at teaching (at Centenary College, in Shreveport, La.), traveling and his many civic functions; Maggie Bell Ritchie has been busy settling their affairs and has recently sold the house on Mt. Pleasant which they had built in the early '40's. She now has an apartment (380 B, Northampton Road, Amherst, 01002) and is free to travel (Louisiana, Bermuda, London in '70), enjoy Amherst and her many friends here, and visit daughter Mary Ann's family (in Springfield, where son-in-law Dr. John Deedy is Superintendent of Schools).

NEW FACULTY MEMBERS - SEPT. - '69 AND '70

Mrs. Dorothy Soja Barnes, Instructor in General Chemistry. Mrs. Barnes is the former Dorothy M. Soja, U. of M. class of '62, who received the Ph.D. degree in biochemistry at the University of Illinois in '67. She and Dr. Ramon Barnes were married in May of 1969, and they spent that summer at Iowa State University prior to coming to U. Mass. Dorothy had a post-doctoral in the bio-

chemistry department last year, and replaces Gertrude Parkinson, who retired last June. Dorothy shares with Bertha Fessenden the very important responsibility of directing the work in the general chemistry laboratories.

Dr. Ramon M. Barnes, Assistant Professor, Analytical Chemistry.

B.S., Oregon State, '62
M.A., Columbia, '63
Ph.D., Illinois, '66

N.A.S.A. Lewis Research Center at Cleveland '66-'68
Lecturer, Baldwin Wallace College, Berea, Ohio '67-'68
Post-doctorate, U.S.A.E.C. Ames Lab., Iowa State, '68-'69

Dr. Barnes has received an N. S. F. grant for purchase of equipment to implement a unique method of teaching chemical measurements. Seniors in instrumental analysis will each have individual chemical measurement stations. Each station will include a complete set of modular equipment ranging from operational amplifiers and digital logic designer units to monochromators and combustion flame burners. The plan is to make this equipment the basis for a number of intensive summer teaching programs, as well.

Dr. Paul E. Cade, Associate Professor, Physical Chemistry.

B.S. (chem.), B.A. (math.), U. of Texas, '54
Ph.D., Wisconsin, '61

Research Associate, Lab. of Mol. Structure and Spectra, Univ. of Chicago, '61-'69.

In the spring of '69 Dr. Cade visited Moscow, Kiev, Leningrad, Vilnius, and Akademgorodok on a National Academy of Science Exchange Fellowship with the U.S.S.R. Academy of Science to survey Theoretical Chemistry in the U.S.S.R.

He has just returned from the French Alps where he was an invited lecturer at the Sagamore III Conference in Aussois on Electron Charge, Momentum, and Spin Density. He also attended a Conference on Photoelectron Spectroscopy in Oxford, England.

Dr. James C. W. Chien, Professor, Physical Chemistry.

B.S., Johns Hopkins, '49
M.S., U. of Kentucky, '51
Ph.D., Wisconsin, '54

Visiting professor at Stanford, '66
Chemist at the Hercules Res. Labs. '54-'69.

Dr. Chien's research interests are very broad and include a host of methods and techniques:

1. Metalloenzymes - in this work the prime objective is the understanding of the nature of the chemical bonds between the Fe atom, the ligands, and the F-8 histadines in myoglobin and hemoglobin derivatives.

2. Metal-ion activated enzymes - the subtle roles of metal ions in activating various enzymes are being investigated by e.p.r., spin echo nmr, and Fourier transform nmr. Various active sites have been identified, and interest centers on the interplay of enzyme, substrate and metal-ion coenzyme.

3. Nitrogen Fixation - involves a study of the active centers of nitrogenase, and a parallel effort on the synthesis of model compounds.

4. Autoxidation reactions and "programmed" plastics. The absolute rate constants in autoxidation of synthetic polymers have been determined. Hydroperoxides of the polymers, which are intermediates in these reactions, are prepared and their structures elucidated. The information will be used in an attempt to synthesize "programmed plastics" which will disintegrate when discarded - thus helping to alleviate one aspect of environmental pollution.

Dr. Stephen S. Hixon, Assistant Professor, Organic Chemistry.

B.A., U. of Penna., '65
Ph.D., Wisconsin, '70

N. S. F. Post-doctoral Fellow at Harvard, '69-'70
Research and teaching interest: mechanistic organic photo-chemistry, theoretical organic, enzymes, and bio-organic chemistry.

Dr. Hixon's wife, Susan (Ph.D. in biochemistry, U. of Wisconsin, '70), is doing research with him as a post-doctoral fellow. Dr. Hixon's interests include several sports, hiking, conservation and wildlife (member of both Sierra Club and Audubon Soc.).

The "brain-drain" from Britian has been tapped twice this year.

Dr. Peter C. Uden, Assistant Professor, Analytical Chemistry.

B.Sc., U. of Bristol, England, '61 (inorganic chemistry)
Ph.D., " " " " '64 (Gas chromatography)
(Organo-Silicon chemistry)

Research Assoc., U. of Illinois, '64-'66 (with John Bailar) and instructor in Gen. Chem.

Lecturer, U. of Birmingham, England, '66-'70

Research and teaching interests: separation methods, gas chromatography of volatile metal-containing systems, mass spectrometry, thermal analysis, etc.

Dr. Uden's wife, Janet, is a native of Chicago and is glad to be back in the U.S.A.; they are both very pleased to be located in New England.

Dr. John Wood, Associate Professor, Inorganic Chemistry.

B.S., U. of Keele, England, 1958
Ph.D., U. of Manchester, England, 1962

Research Associate at M.I.T., '62-'64, where he worked with Prof. Cotton

and helped set up his x-ray lab.
Lecturer, U. of Southampton, England, '64-'70.

Dr. Wood's research interests are in x-ray crystallography and coordination chemistry: the investigation of molecular and electronic structures of transition metal complexes using diffraction methods, electronic spectroscopy, and magnetic measurements.

RECENT PROMOTIONS:

Archer and Ragle to Professor.

Curran, Lillya, McKnight, McWhorter, and Rowell to Associate Professor.

NEWS OF THE FACULTY

Commonwealth Professor William McEwen is able to remain extremely active in chemistry, in spite of the very heavy administrative load involved in being head of a large department. He has an unusually large research group, and manages to stay in close touch with the many graduate students who are working with him. He gets around a good deal (A.C.S./C.I.E. meeting in Toronto in May, Thirteenth Conf. on Rx. Mech. at U. Cal. in Santa Cruz in June, etc.), and talks frequently at other colleges and universities. Dr. McEwen is on the Board of Editors of the Journal of Organic Chemistry, a Member of A. C. S. Council Committee on nominations and elections, Consulting Editor for Topics in Phosphorous Chemistry, Research Collaborator at the Brookhaven National Lab., and a Consultant for N. S. F. Preparation of the massive and very detailed application for the N. S. F. Department Science Development Grant involved a prodigious effort on Dr. McEwen's part and resulted in a most impressive document, which we hope will bear fruit in the next few months.

Dr. McEwen happily shares departmental duties and responsibilities with a number of committees and two very able associates.

Professor George Richason, Associate Dept. Head, handles undergraduate affairs, is in charge of the general chemistry program, coordinates the planning for the new building, is still a "Distinguished Teacher" (the second in the University to receive this honor), and plays a key role in a host of other departmental activities. He rounds out his days and nights by continuing to be a "big wheel" in campus and community affairs (Chairman of the Athletic Council, elder statesman of the University Senate, powerhouse on a score of important committees, President of the Amherst Golf Club, and the Department's most dedicated and able golfer).

Assistant Professor George Oberlander, has just been officially named "Director of the Laboratories" by The Chancellor. So he now has the title to go with the job he's been doing for some time - i.e. taking care of the physical facilities, keeping the storeroom supplied, riding herd on the large number of faculty and students to help them be happy and productive, etc. His interests in "safety" extends to programs for high school teachers and

students (incidentally, the Amherst High School chemistry teacher and Superintendent are currently being sued for \$500,000 in connection with a recent accident). Professor Oberlander has also been active on the University Senate and a number of the Pre-Medical Advisory Committee for many years.

Dr. Ronald Archer was invited to give papers at three international conferences in September in Eastern Europe. He delivered the plenary lecture at the Coordination Chemistry Symposium in High Tatras, Czechoslovakia, and also gave papers at the XIII International Conference on Coordination Chemistry in Poland and at Hungary's 3rd Symposium on Coordination Chemistry.

Dr. John Brandts, who has been an Alfred P. Sloan Foundation fellow, is on sabbatical but is staying in Amherst to push his protein denaturation research program (moving a family of 6 children involves an energy of activation that's almost prohibitively high!). Dr. Brandts has a large and vigorous research group, including 2 post-doctorates (one of them, Bill Jackson, U. Mass. Ph.D., '70). Dr. Brandts talked recently at the Calorimetry Conference in Washington, D.C., which he helped organize, and he also attended the Gordon Conference and talked on denaturation during the summer. Frequent talks and several substantial papers are rapidly establishing him as a very solid young scientist in this important interdisciplinary research field. Oldest son, Brad, is a star runner and pass receiver on the H. S. football team.

Dr. George Cannon received a Distinguished Teacher Award in September of 1969, thus bringing the number of awards in chemistry to three (Professor Richason in '63; Dr. McWhorter in '68) - more than any other department in the University. Dr. Cannon stays busy as Chairman of the very important Graduate Study Committee, which "rides herd" on our 125 graduate students.

Dr. Louis Carpino, and post-doctoral associate Dr. Grace Han, have discovered a new type of protective group for amino groups of synthetic proteins. The 9-fluorenylmethyloxycarbonyl group can be cleaved from an amino group under mildly basic, non-hydrolytic conditions in solutions of simple amines or in liquid ammonia. In syntheses of proteins and other polypeptides, the most common protective groups in current use are cleaved by acidic reagents.

Dr. David Curran was on sabbatical at the University of Wisconsin during the turbulent '69-'70 year, and reported that the disruption made life and research there quite difficult. He was appointed a visiting Associate Professor and did research on refractory materials as electrodes in electrochemical processes. Drs. Curran and Siggia have recently co-authored "Analysis of Azomethine" as a chapter in the book Chemistry of the Carbon-Nitrogen Double Bond, S. Patri Ed., Interscience Publishers, London, 1970. A new son, David Andrew Curran, was born September 18, 1970.

Professor Robert Holmes delivered an invited paper "Spectroscopy and Structure of Fluorophosphoranes" at the Symposium on Fluorocarbon Compounds at the C.I.C./A.C.S. meeting in Toronto this summer. His recently acquired summer cabin on Lake Sunapee is partially "wallpapered" with spectra, indicating that time up there is not all spent in fun and frolic. The Holmes have also taken skiing, to keep healthy and happy in the winter time.

Dr. Peter Lillya is an Alfred P. Sloan Foundation Fellow, '69-'71, and left Amherst in July with his family for a sabbatical year at U.C.L.A.

Dr. William McKnight is involved in a cooperative research program with Professor Chien of this department and Professor R. W. Lenz of the Chemical Engineering Department to develop a fundamental understanding of the chemistry of degradation processes in polymeric materials. Besides the scientific interest in such research, great ecological significance is also attached inasmuch as plastic materials tend to be non-degradable and one of the principal solid pollutants. This problem is an ever increasing one since the volume of plastics being consumed expands greatly every year.

The specifics of the program call for the "building in" to the plastic of chemical groups which will initiate degradation, probably under the influence of ultraviolet radiation. The aim is to cause a physical breakdown of the material without the formation of noxious by-products. Studies are to be made of reaction kinetics, physical properties and analytical aspects of the degradation process.

Dr. Earl Mc Whorter taught a course in Natural Products at Mt. Holyoke College in the spring of '70, in addition to his usual duties at U. Mass. This summer he won a free trip to Mexico sponsored by the Smithsonian Institute as part of a promotional campaign for Smithsonian Magazine. Three days of the week-long, expense-paid trip were spent in the Yucatan exploring Mayan ruins; the remainder of the time in Mexico City.

Dr. John Olver has been on leave from chemistry for 2 years while serving in the Mass. House of Representatives. He's just been re-elected and will serve for at least another term as an able, articulate, informed, and highly dedicated representative of the best interests of the people of the Commonwealth. John's wife, Rose Olver, is still teaching psychology at Amherst College (she was the first woman appointed to their faculty!), and dividing the rest of her time between politics and enjoying their year-old daughter.

Dr. John Ragle spent an "intellectually stimulating" sabbatical year with Professor David Frost at the U. of British Columbia in Vancouver. His research, in the area of UV - excited photoelectron spectroscopy, was presented at the Chicago ACS meeting. The Ragles' spent their vacations climbing the gorgeous snow-covered peaks in the Vancouver area - and they have the pictures to prove it!

Dr. Marvin Rausch has just returned from a "glorious" sabbatical year at Munich, Germany, studying with Professor E. O. Fischer and his research group. He was supported by a Von Humbolt Foundation Fellowship (similar to a Guggenheim). Dr. Rausch took a graduate student, Glenn Moser, along with him, and found this arrangement worked out extremely well. His very active organo-metallic research program at U. Mass. is continuing to receive strong support (\$5000 from Gulf Oil Foundation and \$56,000 from N. S. F., most recently). Dr. Rausch has just completed his term as Chairman of the Organo-Metallic sub-division of the Division of Inorganic Chemistry of the A. C. S. He is a delegate and member of the organizing committee for the 5th International Conference of Organo-Metallic Chemistry, which meets in Moscow in August of 1971. Dr. Rausch has been invited to present a paper. Plans are being made to hold the 6th International Organo-Metallic Conference at U. Mass. in Amherst, in August of 1973.

Dr. John Roberts has a sabbatical planned for the spring of '71 at the Analytische Institut, U. of Vienna, Austria - working with Professor Hecht, probably on analysis of meteorites by neutron activation. The Roberts will be near-neighbors of daughter Christine, who has married an army officer stationed in Germany (following graduation from William Smith College, last June). Son Jay recently made the Dean's List at the U. of New Hampshire (his father's alma mater), where he is majoring in physics.

Dr. Robert L. Rowell remains very active in the local section of the A.C.S. and is currently a candidate for election as Chairman of the section. He has just completed a term as President of the Association of Chemists at Indiana University, where he received the Ph.D. degree in '60. Dr. Rowell is setting up a research program on gas scattering with an argon ion Laser source, and recently acquired some equipment from Perkin-Elmer who phased out some of their work in this area (on which he was collaborating). Dr. Rowell delivered a paper at the 44th Colloid Symposium in June, and 2 papers at the Chicago A.C.S. meetings. The Rowell's youngest son, James Lewis, was born November 6, 1969.

Dr. J. Harold Smith is applying for a sabbatical leave for second semester of next year, and is planning to go to England to study innovations in science education which are contemplated in the British Universities to meet the needs of changing times. He is still consulting with Johnson and Johnson, and is currently involved with commercializing one of his recent patents. He's become an avid golfer, primarily to improve his health, but (unbelievably) recently won the championship of the little industrial league he played with this summer.

Dr. Sidney Siggia completed his term as Chairman of the Analytical Division of the A.C.S. in October, but remains just as busy as ever with a host of important activities. He was awarded the A.C.S. Tour Speaker of the Year award for his lectures to the New England and Midwestern Sections of the A.C.S. Dr. Siggia was Keynote Speaker at an A.C.S. Conference on the Industrial-Academic Interface held recently at the U. of South Carolina, and gave a paper at the Chicago A.C.S. meeting on "Reaching Students with Analytical Chemistry". He has organized a "Chemistry in Action" lecture series, which brings a prominent industrial chemist in each week to talk on some important facet of the chemical industry. This is being well-received by both students and staff, and many are getting a better idea of what chemists do and what opportunities are available in the chemical industries. Through Dr. Siggia's efforts, U. Mass. was recently chosen as one of 4 universities in the country to participate in an Environmental Pilot Program of the A.C.S. The objective is to test the feasibility of using students to monitor the water bodies of the U.S. Students from several quantitative analysis courses and instrumental analysis are being utilized under the direction of Professors Siggia, Barnes, Roberts, and Zajicek in this test program. The Connecticut River is the source of analytical samples. Results will be analyzed and then sent to the A.C.S. for evaluation and the decision on the feasibility of the full monitoring program.

Commonwealth Professor Richard Stein is just back from the West Coast where he gave a seminar at Cal. Tech. and a talk in Seattle. This is almost a typical week for Dr. Stein, who coauthored 3 papers at the I. U. P. A. C. Congress on Macromolecular Chemistry held in Leiden, Netherlands, this summer and has recently presented papers at Battelle Institute, the Chicago A. C. S. meetings, the Rheology Society at Princeton - and is scheduled for talks in Pittsburgh, Hoboken, etc. in November. He continues to direct the Polymer Institute and be a moving force in the rapidly-developing Polymer Science and Engineering Program, which is one of the best in the country. The A. I. C. Honor Scroll and the International Award in Plastics Science and Engineering of the Society of Plastics Engineers are among the many awards which Dr. Stein is receiving in recognition of his outstanding accomplishments. The Stein's enjoy their summers at their home on Lake Wyola, and invite friends to drop in for a swim or sail.

Dr. Thomas ("Casey") Stengle has been spending his summers working with the High Mountain Environment Project which is operated by the Arctic Institute of North America. Early in the summer a group of climbers, including Casey, are flown to the base of Mt. Logan in Canada's Yukon Territory. From the 10,000 ft. level they slowly ascend to a plateau at 17,500 ft. where they set up a semi-permanent camp. This camp and its facilities are made available to any organization or individual wanting to do high altitude research. Studies have been made on meteorology, glaciology, and human physiology. Casey has been using the glacier as a device for sampling the upper atmosphere for contaminants such as pesticides, trace metals, etc. Since it never gets above freezing at this altitude, many years of snow lie on top of each other, and by drilling down into the glacier one can sample back into time to detect the buildup of contaminants in the atmosphere during the past decades. This year he obtained twenty samples of snow ranging back to 1960. According to Casey the project is the ideal way to beat the summer heat. The average daily high temperature this summer on the mountain was 0°F, while the low ranged around -20°F.

Dr. Howard Stidham continues to push hard at both teaching and research, but he and wife Sue (Asst. Professor in Computer Science) still find time for mountain climbing (with Drs. Mc Whorter, Ragle, and Stengle often in the group), and Howard and Sue are Faculty Advisors to the U. Mass. Ski Patrol. The Stidhams have also bought an airplane, both have over 200 hours in the air, and are working on Commercial and Instrument licenses.

Dr. Alfred Wynne earned the Ph.D. degree in analytical (with Dr. Roberts) this summer, and is continuing to teach general chemistry (and perhaps quant. next semester, while Dr. Roberts is on sabbatical). The Wynne's have helped organize and spark an "ecumenical" group which is collecting and shipping food and clothing to the poor people of Appalachia.

Dr. Thomas Zajicek is working on a project to characterize a natural body of water as a chemical system, with respect to area, depth, and time. The study has focussed on the Quabbin Reservoir. These chemical data will be combined with microbiological data in an attempt to develop an ecological pattern for the Quabbin. Due to start shortly is a similar study of the Connecticut River and other tributaries, waters which will be added to Quabbin when the planned diversion takes place, to predict the ecological and public health impact of diversion on the donor waters (river, etc.) and the receiving

waters (Quabbin). The continued study of Quabbin subsequent to diversion will enable predicted ecological changes to be measured, thus providing a test of the predictive model. Dr. Zajicek's "Lake Dynamics" project was featured in a front page article in the Amherst Record November 18th, which pictured him with his now familiar boat and jeep.

NEWS OF ALUMNI

News of alumni is rather scarce, and we have thus concentrated on letting you know what's happening at U. Mass. and in the Department and among the faculty.

Please fill in and return the attached form to bring us up-to-date on your current address, position, and any items of interest or news. We'll then be able to give "equal time" to alumni in the next Newsletter. (By the way, any suggestions about a name for the Newsletter? How do you like: - Chem-Mass., Goessmann Gazette, U. Mass. Newsletter, Chem-Alum, Mass. Fragments, U. Mass. Amherst Chem Letter, Mass. Medium? What's your suggestion?)

James E. Curley (Ph.D., '70, Analytical) has joined Pfizer and Co., Groton, Conn.

Donald Drum (Ph.D., '70, Inorganic) is an instructor at Columbia Green College, Athens, New York.

Ohiko Hyodo (M.S., '70, Inorganic) has completed his studies at U. Mass. and is back with an industrial firm in Japan.

Robert York (Ph.D., '69, Inorganic) is doing research with the U. S. Army Chemical Corps, D. O. D.

George Reilly (Ph.D., '65, Organic) is now employed as "Museum Scientist in Residence" at the Harry Francis du Pont Wurterthur Museum, Wurterthur, Delaware.

Carol Hermsdorf (B.S., '65) and Edward Novak (B.S., '65) have earned Ph.D. degrees at Penn. State. Ed has accepted a position with Goodyear in Akron and is doing catalysis research. The Novak's have a daughter, Tonya Christine, whose arrival in May helped make this a very eventful year.

Al Masino (B.S., '70) spent the spring semester in the Honors Program at the Argonne National Laboratory.

Dr. Stuart B. Clough (B.S., '59, Chem. Eng.; Ph.D., '66 in Chem.) has joined the faculty of Lowell Technological Institute, Lowell, Mass., as an Assistant Professor, teaching physical chemistry.

Dr. Chester A. Giza (B.S., '55; M.S., '58; Ph.D., Yale) has been promoted to Associate Professor of Chemistry at Wheeling College, Wheeling, W. Va.

Dr. Popkin Shenian (Ph.D., '55, Organic) has been named Manager of the Polyemide Business Operation of G. E. at Pittsfield. "Pop" has a long history of successful accomplishments in technology, marketing, and new business development since joining G. E. in 1960, and has been very active in the local A. C. S. section and other professional affairs.

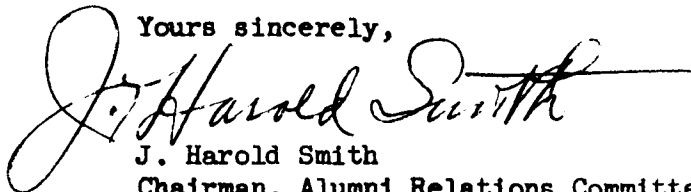
Francis Plankey (B.S., '71) President of the Undergraduate Student Affiliate Section of the A. C. S., received one of the Undergraduate Awards of the Div. of Analytical Chem. of the A. C. S.

Timothy J. Sheehan (M.S., '52, Organic) has been named a Product Operations Manager at Dow, where he had been business manager for Industrial Organic Chemicals since 1966.

Dr. Allen H. Keough (B.S., '50; Ph.D. in '56 from M.I.T.) has left the Norton Research Corporation after 13 years to become President of his own company, Chem. - Tech Associates, Inc. ("Consultants to the Chemical and Polymer Specialties Industries"). It takes courage, ability, and energy to strike out on your own, especially in uncertain times such as these; we admire Allen for these qualities and wish him well!

Please keep in touch with us, let us know where you are and what you are doing, and any other news of special interest. Also, remember that we need your interest, suggestions, and help in building a better Department!

Yours sincerely,



J. Harold Smith
Chairman, Alumni Relations Committee
and Newsletter Editor, Pro Tem.

Up-to-Date Information and News Items

Name: _____ Date: _____

Professional Position: _____

Business Address: _____

Home Address: _____

Degrees, Schools and Dates:

_____	_____	_____
_____	_____	_____
_____	_____	_____

Employment History:

Professional Affiliations, interests, activities, citations, honors, no. of publications, etc.

Personal and Family News:

Suggestions:

- a) Name for the U.Mass. Newsletter _____
- b) U. M. Social Hours, etc. at meetings?
- c) Other suggestions -

Please return to: Professor J. Harold Smith
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Chairman, Alumni Relations Committee
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