

the Test Tube

THE CHEMISTRY DEPARTMENT NEWSLETTER 1983

Texas Tech University Lubbock, Texas

Editor: Henry J. Shine

Editorial Assistant: Jane Bradley



To Our Readers:

I hope you will enjoy this fourth edition of our departmental newsletter. It contains news about current happenings in the department as well as items about our former students. We especially appreciate those of you who took time to send us news of your current activities. It is always gratifying to learn of the successes of our graduates.

The past year has been a period of change and continued development for the department. First of all, there was a change of leadership as I became the permanent Chairman and Dr. Holwerda agreed to serve as Associate Chairman. My administrative goal is for additional growth in our educational and research activities by enhancing both the scope and stature of our undergraduate and graduate programs.

We have just completed the selection of three new faculty members (net replacements), who will join us next fall. Two of them will strengthen our expertise in the areas of analytical, organometallic, and synthetic organic chemistry. The third is a permanent Coordinator of General Chemistry who has excellent credentials in chemical education and will develop our use of computer assisted instruction.

Undergraduate enrollments, particularly in general chemistry, are considerably higher than last year. The number of graduate students is at an all-time high. Unfortunately, these increased enrollments have placed an even greater burden on our instructional and research equipment resources.

Like many chemistry departments across the nation, we have a continuing problem with inadequate and out-dated equipment for instruction and research. These deficiencies span the breadth of our program from balances for general chemistry to a mass spectrometer for graduate student and faculty research. During the past year we made some progress in this area. Microcomputer hardware and software was acquired for the physical chemistry laboratories. This equipment allows for simulation of experiments which are too sophisticated, too expensive, or simply impossible to perform at the bench. With funds from an NSF Equipment Grant and matching monies from TTU, we were able to up-grade our EPR equipment to provide an essentially state-of-the-art instrument. Despite these advances, the overall situation regarding instrumentation leaves much to be desired.

One additional problem is that of undergraduate scholarships. Although we do have a few scholarships available, the number is inadequate. We lose many good prospective chemistry majors to other universities where scholarship funds are more available. If you have any innovative ideas on this matter, please contact me.

Except for the problems mentioned above, I'm very optimistic about the prospects for continued growth and development of both the undergraduate and graduate chemistry programs at Texas Tech University. We are all doing our best.

Richard A. Bartsch

Richard A. Bartsch
Chairman, Department of Chemistry

Faculty News

Dr. Joe Adamcik continues to serve with the American Chemical Society. He has been appointed Chairman of the ACS Board Committee on Professional and Member Relations for the 1983 calendar year. During 1982, as a member of the ACS Board of Directors, he attended Board meetings in June (Columbus, Ohio), November and December (Washington, D.C.). He also attended meetings of the Society Committee on Chemical Abstracts in February and November (Columbus, Ohio). In September '82, Dr. Adamcik represented the ACS in presenting an Outstanding Local Section Award to the Wichita Falls—Duncan local section on the campus of Midwestern University, Wichita Falls.

Dr. John A. Anderson attended the 30th Congress of the "Gesellschaft für Arzneipflanzenforschung" (Society for Medical Plant Research) in Graz, Austria, July 12-17, 1982, and presented a paper on "Conversion of Elymoclavine to Paspalic Acid by a Particulate Fraction from an Ergotamine-Producing Strain of *Claviceps* sp". Following the meeting Dr. Anderson visited the laboratory of Prof. Detlef Gröger, Institut für Biochemie der Pflanzen, Halle, East Germany, and gave a seminar on "Oxidative Steps in Ergot Alkaloid Biosynthesis".

Dr. Richard A. Bartsch was appointed Chairman of the Department on September 1, 1982. Of course, he was already well established in that position after serving as interim chairman for the preceding year. Dr. Bartsch was host in late September for the 1982 Rocky Mountain Chemistry Department Chairman's Conference. This is an annual affair, and at this time 40 chairmen gathered at TTU to discuss common problems in chemical education and research. Dr. Bartsch presented invited papers in Symposia on Macrocycles in Analytical Chemistry and on Theoretical Organic Chemistry at the 38th Southwest Regional Meeting of the ACS, held in El Paso in December, 1982.

Dr. Walter Chesnavich attended the First Symposium on Applications of Theoretical Chemistry in Industry, Austin, TX, October 14, 15, 1982. Dr. Chesnavich has been awarded a Welch Foundation grant of \$54,000 (3

years) for studies of "Periodic Trajectories in Atom-Diatom Exchange Reactions".

Dr. Robert A. Holwerda was appointed Associate Chairman of the Department in September 1982. In this position Dr. Holwerda is responsible for particular administrative duties, such as graduate admissions and registration. In September 1982 Dr. Holwerda attended the National ACS meeting in Kansas City, Mo. with graduate student, Randy Johnston, and presented two papers on studies of copper and chromium compound reactivities.

Dr. John L. Kice has been appointed Associate Vice President for Research. In this important post Dr. Kice is the Director of the Office of Research and is responsible for many research-related matters throughout the University. As a result of accepting this administrative position, Dr. Kice will decrease his teaching duties in our department, a necessary but regrettable loss to us. He will, however, continue to direct graduate student and post-doctoral researchers in the department. During January-February 1983 Dr. and Mrs. Kice were in Japan, where Dr. Kice was a Fellow of the Japan Society for the Promotion of Science. There, he visited and gave lectures at eight Japanese universities, and also gave a plenary lecture at a Symposium on Organic Sulfur Chemistry at Tsukuba University.

Dr. David B. Knaff has also visited the Orient, going first to Jeju Island, South Korea, in May, 1982, to present a paper "Recent Advances in Photosynthetic Electron Transport" at the International Photobiology Workshop. Following that Dr. Knaff spent three weeks in Japan, giving lectures on his research work at Universities in Chiba, Fukuoka, Osaka, Saitama, and Tokyo. In February Dr. Knaff also spoke about his work "Cation Transport in Photosynthetic Purple Bacteria" at the 26th meeting of the Biophysical Society in Boston. Dr. Knaff has also bitten the apple of authorship-temptation by signing a contract with Springer-Verlag to co-author a graduate-level textbook in Bioenergetics. As yet he hasn't told us the name of Eve.

Dr. Jerry Mills shed the mantle of office of associate chairman (handing it with relief and pleasure to Bob Holwerda). To show that he is not entirely sane, though, he is continuing to give his time to the Department as Faculty Sponsor of our ACS Student Affiliate (named as an outstanding chapter). He is also the Chairman of the Preprofessional Committee, and to top it all has accepted the General Chairmanship for the 1984 Regional ACS meeting which will be held in Lubbock in December, 1984.

Dr. Roy E. Mitchell has been progressively making a name for himself and TTU during the last several years in the chemistry of wine making. By sorting out the parameters that make a good wine Dr. Mitchell has participated in the joint effort of UT and TTU in producing an experimental wine that won another silver cup in the wine competition at the State Fair of Texas. Wine from French Colombar grapes grown near Van Horn in Culberson County won this prize. On July 13, 1982, Dr. Mitchell represented the Texas Grape Growers Association at the Wine-grape Growers Association meeting in Washington, D.C. At the reception that followed the meeting, Dr. Mitchell served many nice Texas wines. On December 1-3, 1982, Dr. Mitchell attended the "Wineries Unlimited" meeting in Washington, D.C., too. Wineries unlimited, what a nice way of enjoying ones work! Is there a grapetreaders stomp, Roy?

Dr. Wilse Robinson, Welch Professor, has presented lectures on his research in picosecond spectroscopy in several places in the United States and abroad. In June, 1982, he was a session chairman at the Third Topical Meeting on Picosecond Phenomena at Garmisch-Partenkirchen, Germany. He also chaired a session at the Molecular Crystal Symposium Conference at St. Jovite, Quebec, Canada, and presented papers at various universities in Melbourne, Sydney and Canberra, Australia, on "Gauge Transformations" and "Chemical Reactions in Solution". Later, he attended the International Conference on Photochemistry and Photobiology in Alexandria, Egypt, and presented a paper, "Chemical Reactions in Solution: The New Photochemistry".

Dr. Robert W. Shaw has been nicely successful in obtaining support for his research work, an effort without which research in Universities would not be able to prosper. He has received a grant from the Robert A. Welch Foundation (\$45,000 for three years) and one from the Research Corporation (\$12,500). A very happy piece of news is his having obtained a cost-sharing grant of \$80,500 from the NSF's Biological Instrumentation Program to update our Electron Spin Resonance instrument. An equal sum of money was supplied by TTU. With this money the ESR instrument (acquired by the hon. editor in 1962) will be made suitable for Dr. Shaw's work in the biological and bioinorganic aspects of ESR and also better suited to ESR in organic chemistry.

Dr. Henry J. Shine managed to find yet again a way of visiting his homeland as a research chemist. He attended the 10th International Organosulfur Conference in Bangor, Wales, in September, 1982, and talked about his work "Reaction of Organosulfur Cation Radicals with Dialkyl and Diarylmercurials". Dr. Richard E. Wilde also crossed the briny this year, to attend the 8th International Conference on Raman Spectroscopy, in Bordeaux, France, during the first week of September.

NEW FACULTY APPOINTMENTS

We are very pleased to announce the appointment of three new members of the faculty, effective in the fall, 1983. Detailed information will appear in our next newsletter, but in the meantime we introduce to our readers:

Dr. Daniel W. Armstrong, appointed as Associate Professor in the Analytical Division. Dr. Armstrong will be joining us from the Department of Chemistry, Georgetown University, Washington, D.C., where he is currently an Associate Professor. Dr. Armstrong's research expertise is in phase transfer catalysis and pseudophase liquid chromatography.

Dr. Russell D. Larsen, appointed as Associate Professor and Coordinator of General Chemistry, will be joining us from the Department of Chemistry, University of Michigan, where he holds an analogous position. Dr. Larsen's duties will be in the coordination and re-vamping of our program in General Chemistry.

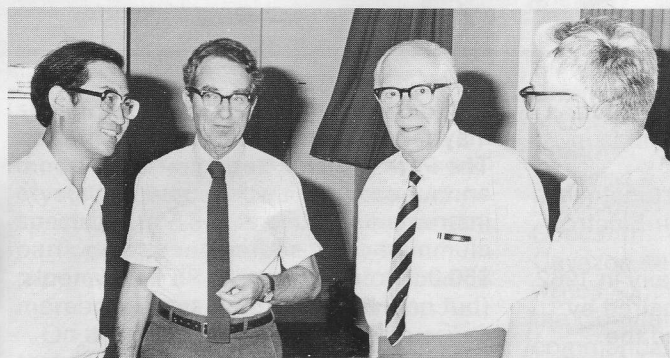
Dr. Robert E. Walkup has been appointed as Assistant Professor in the Division of Organic Chemistry. Dr. Walkup is currently a post-doctoral fellow with Prof. A. I. Meyers at Colorado State University. Dr. Walkup's research interests are in synthetic methods and organic syntheses, and will broaden the Organic Division's research capability with his contributions.



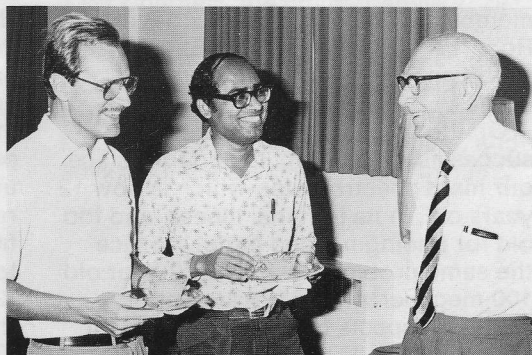
Prof. Charles Shoppee, Prof. Robert Rekers. Reception for Prof. Shoppee, October 4, 1982.

Professor Charles Shoppee Revisits TTU

Charles W. Shoppee, first Robert A. Welch Professor of Chemistry (1970-1975) in our Department returned to Lubbock for one week in October '82. Prof. Shoppee was on a round-the-world trip, having been first to Israel in early September to be a speaker in the International Congress of Hormonal Steroids. From there Shoppee went to his first homeland, England, to see friends and relatives, and thence to the USA and Lubbock, his adopted homeland, before returning to his second homeland, Australia. While in Lubbock Shoppee spoke at the weekly departmental seminar on "5-chloro-5 β -cholestane: the First Simple 5 β -chlorosteroid", and met former colleagues at a reception for him held in the Dennis Room on October 4, (see photos). Shoppee has now "retired" twice from University positions, first from the University of Sydney in 1969, and next from TTU in 1975. But, he hasn't retired from chemistry. During the years 1976-1979 he was an Hon. Professional Fellow in Chemistry, Macquarrie University (New South Wales) and having then moved to Melbourne was appointed in 1980 as Hon. Visiting Professor of Organic Chemistry, at La Trobe University. At La Trobe, as at Macquarrie, Shoppee consults with faculty and students, and even still works "at the bench" in his own laboratory. Y'all come back again Charles, and we'll give you a lab to work in here, whenever you wish.



Professors Pill-Soon Song, Henry Shine, Charles Shoppee and Robert Rekers. Reception for Professor Shoppee, October 4, 1982.



Dr. Heribert Münsterer, Dr. Dillip K. Mitra, and Professor Charles Shoppee.

Dr. Katherine Lynn Rogers, M.D. (B.S. 1955) Honored as "Distinguished Alumna" by Ex-Students Association

On October 29, Dr. Katherine Rogers was one of four alumni (alumnae? alums!) honored by TTU's ex-student association at a banquet in the University Center. Earlier that day, though, Dr. Rogers revisited the Chemistry Department, recognizing much that had not changed (and most likely never will) in the old building, but marvelling at the comparative spaciousness and functionality of the new. Dr. Rogers even recognized herself in the photo of the 1953 class of Chem 331, still hanging in the second floor corridor of the old wing. A reception was held in the Dennis Room, sponsored by the Department and the Pre-med Societies, who did most of the work (see photos). Dr. Rogers obtained her M.D. from UT at Southwestern Medical School and was certified as a pediatric physician in 1964, practicing in San Antonio. She was the first female to serve as chief of the 1000-member Santa Rosa Medical Center (San Antonio), in 1978. She is currently also a staff member of San Antonio's Methodist, NIX, Metropolitan, and Baptist Hospitals, and is a clinical professor of pediatrics at the UT Health Sciences Center in San Antonio. In addition, Dr. Rogers does volunteer work as a pediatrician for the Texas Cradle Society and the Barrio Clinic for the Poor, in San Antonio. We tip our hat to a distinguished alum, whose work serves so many people in need.



Dr. Katherine Rogers, Mrs. Nancy (Dalton) Tarwater (pre-med advisor), with pre-med students Frank Burns and Richard Harrison. Reception for Dr. Rogers, October 28, 1982.

Dean Larry Graves and Dr. Katherine Rogers.



Dr. Katherine Rogers with pre-med students Harry Weaver, Richard Harrison and Jarvie McKenzie.

Instruments for Instruction and Research

Our Department is plagued continually with the shortage (even lack in some areas) of modern sophisticated instrumentation. Funds for the purchase of large, vitally necessary, pieces of equipment, costing in the hundreds of thousands of dollars, are not ordinarily available from the University's State monies. That is, we find it impossible to go to the University and say we need \$200,000 for a new mass spectrometer, or new NMR instruments. The University does not have such sums available. The usual way out of this dilemma is to apply for an NSF Instrument Grant on a cost sharing basis with the University. That is, we apply for a grant for an instrument costing, say, \$200,000 with the commitment from the University to pay half the cost if the NSF will supply the other half. Of course, in such applications we compete with other

applicants from other Universities for a limited amount of money available in the NSF.

This year we have been fortunate in obtaining funds to update our Electron Paramagnetic Resonance Spectrometer, bought originally in 1962. The grant application was chaired by Dr. Robert Shaw, and covered the research needs of several other faculty members including: Drs. David B. Knaff, Robert A. Holwerda, Julian Spallholz (Food and Nutrition), and Henry J. Shine.

On the other hand, we were not successful in our application to replace our mass spectrometer, which is now 12 years old, in its terminal illness, and too old for finding needed parts. We face the same problems with our 12-year old 100 megahertz NMR instrument.

The prospects for the future are not entirely bleak, though. Other avenues

for possible help are available and maybe we can find our way along them. The Perkin-Elmer Company has announced that it will donate instruments valued at \$16,500 for an alumni or other source donation of \$50,000 towards certain PE instruments (but not NMR and mass spec). The cause of PE's making this announcement was the report by the N.Y. Times that visitors from the Peoples Republic of China had expressed surprise at the outmoded equipment being used at a leading midwestern university. This report points up the dilemma many American universities are in, that funding for research and equipment comes mainly from external sources. When it comes to large pieces of equipment the dilemma is most painful. The pain of this dilemma is being felt severely at Texas Tech, where our NMR and mass

New Postdoctoral Fellows:

Dr. Heribert Münsterer, Technical University, Munich (Prof. G. Kresze) joined Dr. Shine in June 1982

Dr. Karamjeet Arya, Bombay University, India, Dr. Richard D. Griffin, Purdue University, Dr. Wayne A. Jalenak, University of Nebraska, and Dr. Jamine Lee, Colorado State University have joined Dr. Robinson's research group

"Who's Who Among Students in American Universities and College"

Two chemistry seniors, David Womack and Lyndra Bills, were among the 48 Tech and TTUSM students selected from the junior, senior, and graduate rosters for recognition in Who's Who this year. Selection for outstanding achievement in scholarship, leadership, and service while attending TTU, was made by a committee of faculty, staff and students.

Teaching Awards to Graduate Students

Texas Tech University Outstanding Graduate Student Teacher Award, Randy Johnston

Department of Chemistry Awards (for superior performance as a teaching assistant),

Hoon Hwang

William McDowell

Louis Stewart



Dr. Henry J. Shine receives Dads Association Distinguished Faculty Research Award, February 5, 1983, from Dr. Robert C. Albin, representing TTU's Research Council.

Itsnowjoke

The Dads Association Award to Editor Shine (see above) was to have been presented at a luncheon on February 5. But, on Friday, the 4th, the snowman visited Lubbock for the third time this winter, bringing a neat little blizzard that closed down the campus by 12:30 p.m.. So, discretion being this time the lesser part of valor, the Dads Association luncheon was called off and the award was made to Shine at a short business meeting on the 5th. By that time, of course, the fine West Texas sun had vanquished the snow. But, all of this brings us to point out to those of you who are now far afield that Lubbock has had record-breaking snows this year, totalling, so far, 34.8 inches. The second one, a 17-incher, also closed the campus and just about everything else in Lubbock on January 21. Yes, we know that that's not the way it goes up in the frozen north, but how'd you think you'd get on in one of our dusters?

ACS Student Affiliate Chapter Commended

Our student affiliate chapter of the American Chemical Society was awarded a rating of commendable by the Society Committee on Chemical Education. In a letter to President Cavazos, the chairman of the committee writes "out of a total of 776 chapters, the Committee judged 34 to be commendable. The students (of the TTU Chapter), the chapter advisor, Dr. Jerry Mills, and the chapter president, Ms. Lyndra Bills, have set an excellent example for others to follow." The Department is fortunate in having had such dedicated officers, members, and advisor of the student affiliate in 1982.

Editor Receives Dads Association Award for Research

Dr. Henry Shine has received the 1982-83 Distinguished Faculty Research Award from TTU's Dads Association. This award has been made yearly for the past seven years and is for "that full-time professor who during the preceding calendar year has published distinguished research". Selection is made from ten nominees by the University Research Council and a committee of the Dads Association. Presentation of the award to Shine was made in the University Center on February 5.

Our Polish Connection

Returning to Poland to resume duties in his homeland university was Prof. Witold Charewicz (Technical University, Wroclaw). Dr. Henryka Slebocka-Tilk (Academy of Sciences, Lodz) has left TTU (Dr. Kice) to continue research in Canada. Joining TTU is Dr. Ludmilla Weclas (Technical University, Wroclaw) to work with Dr. Kice, and Dr. Anna Czech and Dr. Bronislaw Czech, husband and wife team from Katowice, to work with Dr. Bartsch.

And Other Connections

News of former postdoctoral fellows: Dr. A. L. K. Aljibury (postdoctoral fellow '68-'69) spent the past year in the Chemistry Department, University of California, Berkely.

Dr. Shimon Cohen (postdoctoral fellow 1976, 1977 with Dr. Wilde) and formerly at the Technion, Israel, is now at the General Electric Research Laboratories, Schenectady, N.Y.

Dr. Holger Hansen (Dr. Kice) from Kemisk Institute, Aarhus University, Denmark, has returned to Denmark.

Dr. Ja Hong Kim (Drs. Holwerda and Mills) has returned to Jeonbug National University, Korea.

Dr. Dilip K. Mitra has left the department after completing his year with Dr. Shine.

spectrometry facilities are now in a very bad way indeed, and where some modern instrumentation facilities (x-ray crystallography, photo-electron spectroscopy) are non-existent. Hence, participation in the Perkin-Elmer program, via a donation of \$50,000 or more, would be most timely for us.

On the home front Texas Tech, in fact, has applied to the State Legislature for a grant approximating \$1,250,000 for equipment for the sciences, for inclusion in the next biennial budget. We hope that the Legislature will be sympathetic and generous. That sum seems like a lot of money, but when one realizes that a modern mass spectrometer or 250 MHZ NMR instrument may cost \$200,000-250,000 it can be seen that a million dollars may not go very far. We are open to all ideas and large donations!



Officers of the Department of Chemistry Graduate Student Association: Mary Ettel (President), Jesse Yeh (Vice President), Louis Stewart (Treasurer) and Clinton Anderson (Secretary).

News from Alums

Burton K. Andrews (BS '82) is continuing at TTU for an MS degree with Dr. Chesnavich. Research as an undergraduate with Dr. Chesnavich has resulted in co-authorship of one research paper.

Kelia (Allen) Ballou (BS '72) now "retired" from chemistry, living in Houston with husband (Troxel), son and younger daughter, describes herself now as mother and homemaker. Kelia worked in the TTU Agronomy Department for a while and then for Dow Chemical in Freeport. Kelia sends news of Sandra (Carson) Hufsmith, M.D., (BS '70) now living in Hillsboro, Oregon. Many thanks Kelia, and our greetings and best wishes to you.

Joel C. Budge (BS '81) is a chemist-toxicologist with the Texas Department of Public Safety. Joel wrote from Odessa that he would be moving to Temple to work for the DPS and would be marrying another chemist, Sondra Frisbie (MS, P.H., '76).

Samuel J. Campbell, M.D. (BA '76) began his general surgery residency at TTUHSC in July. Dr. Campbell (MD June '82) was inducted as a charter member of the Alpha Omega Alpha Medical Honor Society at TTUHSC on May 28, 1982. He received the Robert J. Salem award "for the graduating senior at TTUHSC who has demonstrated excellence in scholarship and performance during his surgical clerkship".

William J. Dunn (BA '81) is in Dental School at UTHSC, Houston. Bill has written about the maturing year he spent in oil field service following graduation in 1981 and prior to entering Dental School. He also comments on the support and help he received from Dr. Mills during that period. For this, we thank him. Bill asks "how are Steve Harrelson ('81), Stephanie Nelson ('81) and Reza Fathi"? Let's hope they

respond, Bill, both to you and us.

Dr. Robert D. Fugate (Ph.D. '79) has been promoted to Vice President of Sales for SLM Instruments, Inc. Dr. Fugate lives in Champaign, Ill, with wife, Linda, and sons, John (10) and Jim (2). Earlier in 1982 perceptive readers could see Bob Fugate's smiling face (now bearded) in the full-page ad. for SLM-Aminco, when Bob was Customer Applications Manager for SLM. In earlier-yet days during his Ph.D. work Bob Fugate was the guiding and operating light for the circular dichroism instrument in Prof. Song's group. So, instrumentation has remained the thing with him.

Tzu-Li Ju (MS '79) writes from Gaithersburg, Md., where she is a senior systems analyst with M/A COM Sigma Data, Inc., and sends her appreciation for the assistance and time at TTU. Thanks, Tzu-Li. That helps even seemingly impassive chemistry pundits.

Weldon E. Schaefer (BS '59; MS '61) is living in Bethlehem, Pa., and running Schaefer Industries, Inc., in Allentown, Pa., which makes ceramic castings for industrial use. Weldon and family visited us after a long, long absence in July 1982.

Douglas A. Webb (BS '82) is now a graduate student at Cornell University. While at Tech, Webb did undergraduate research in theoretical physical chemistry with Dr. Chesnavich and is a co-author of two research papers.

Dr. Fred H. Wolfe (Ph.D. '66) has been made Chairman of the Department of Food Science, University of Alberta, Edmonton, Canada. Fred Wolfe got his Ph.D. in physical biochemistry with former chairman and "founding researcher" at TTU, professor emeritus, Joe Dennis. He went to Alberta in 1966 as a research associate in the Department of Biochemistry, and was appointed assistant professor in Food Science in 1968. In 1975 he was

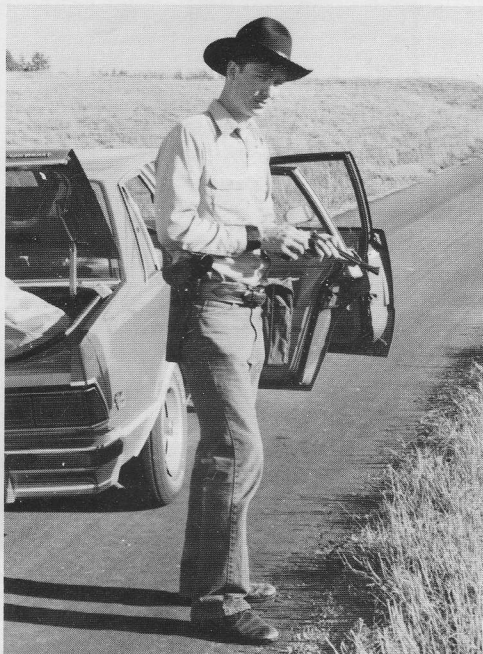
promoted to full professor. Dr. Wolfe has entered the agricultural and food science scene in Alberta with great vigor and gusto. He is Chairman of the Alberta Dairymen's Association sub-committee on contaminating substances. He is a member of the National Advisory Committee to the Federal Department of Agriculture Expert Committee on Meats, and of the Advisory Committee on pig project research to the Alberta Hog Producers Marketing Board. This January (1983), his department began the first of a series of innovative programs on "Topics of Importance to Food Science Research and Education in Canada". The series consists of seminars by guests from other institutions, mainly, and is supported by the Endowment Fund for the Future.

All of that seems far removed from physical biochemistry, but the connecting links can be seen in Wolfe's research interests: ultrastructural changes and physicochemical, biochemical, and physiological properties of beef muscle during the onset of rigor and under different processing conditions. Dr. Wolfe is a co-author of the textbook "Food in Perspective" (Pica Pica Press, Edmonton 1978). Dr. Wolfe asked for the address of Jim Burton (MS '66, Ph.D. Yale?), which we promptly culled from our computer print out. But, Jim are you out there? Send Fred a "howdy" and a line or two to us.

Kenneth F. Rash (B.S. '69) is a pilot flying Boeing 727s for Republic Airlines out of Atlanta, GA. Ken spent 5 years as a pilot in the USAF and then returned to graduate school at the University of California at Davis. There he completed all of his course work and his orals for the Ph.D. when along came temptation in the form of a job offer with Republic. As Ken said it, he "tossed test-tubes aside and took to the skies," and now sees Lubbock sometimes from 35,000 feet up. Well, some people would feel that's a reasonable point of view, but then there are the others who stay a little closer. All was not lost at UC, either, for with his wings Ken has an M.S. ('77).

Dr. Bong Rae Cho (Ph.D. '80), now on the faculty of Korea University, and Dr. Il-Woo Yang (Ph.D. '82), now on the faculty of Korea Military University, have been awarded young-scientist research grants from the Korea Science Foundation.

Dr. Jong Gun Lee (Ph.D. '78) has joined the faculty of the Department of Chemistry, Pusan University, Korea.



How to survive in the U.S. Airforce stationed in Papillion, Nebraska: Captain Gerald Walzel (M.S. 1976).

Energy-Conservation Renovations

As the Spring semester ('83) progresses, visitors and occupants of the chemistry building will become more and more aware of energy-conserving construction work underway. A contract for \$1,045,130 has been let for making extensive alterations in the air handling and energy balancing systems in the building. These alterations are designed to provide more fume hoods, improve existing hood facilities, and improve the temperature control in the building. At the same time, more economical heating, air-conditioning, and air handling will be achieved. The air pressure (from heating and cooling air flow) in the building will also be better controlled. At the present time the negative air pressure in the building often makes the opening of outside doors feasible only to the well-muscled among us. Changes in the building hoods have been called for, not only by the need to adjust air-pressure balance, but also to meet safety standards and research emphases. Construction work is being carried out at one site at a time in the building so as to cause minimum interruption of class and laboratory work.

Supervising the logistics of the renovations is in the hands of Dr. Robert Rekers, who was the liaison man for the department and builders when the new chemistry building was built over 10 years ago. Completion of renovations should occur in May, 1983.

Scholarships and Awards to Undergraduate Students, 1982

The Samuel Hunt Lee Memorial Award (to an outstanding freshman chemistry major), Girish Vallabhan

The CRC Press, Inc. 35th Annual Freshman Chemistry Achievement Award, (to an outstanding student in freshman chemistry), Donald Braswell

American Chemical Society Student Affiliate Scholarship (to an outstanding sophomore chemistry student), Karen Mikkelson

The "Analytical Chemistry" Award (to the best junior chemistry major in analytical chemistry), Stephen Stults

The Texas Institute of the American Institute of Chemists, Student Award (for outstanding accomplishment in a baccalaureate program in chemistry or chemical engineering, and potential as a professional chemist), Douglas A. Webb

The Merck Index Award (for outstanding achievement by a graduating senior), Harry Weaver

The Weymouth-Campbell Scholarships: for superior performance (as a freshman chemistry major), Girish Vallabhan

(as a sophomore chemistry major),
Lennis Dippel,
Gene McDonald

(as a junior chemistry major),
Floyd Barry,
Lyndra Bills,
Ricardo Matos,
Stephen Stults,
David Womack

The Dow Scholarships (for outstanding achievement by a chemistry major),
Lee Somnitz
Rob Tschauner

Texas Tech Dads Association Scholarships for 1982-83

Floyd Barry, senior.
Karen Mikkelson, junior.
Tracey Price, junior.
James Ryder, senior.

Editorial Assistant

Mrs. Sharon (Gerald) Grant, who saw us through the first three newsletters, left Texas Tech in June to work in one of the local law offices. Sharon set up much of the logistics of the newsletter, addresses of exes, mailing, as well as the expert typing. She has handed over the reigns to Mrs. Jane Bradley who has taken them over for Newsletter 4.

Research Degrees

Larry Avens (Ph.D. '82, Dr. Mills)
"Contributions to the Group V-Group V Bond"

Dong-Hak Bae (Ph.D. '82, Dr. Shine)
"Scope and Mechanism of the Decomposition of 1, 4-Dimethyl-1, 4-diaryl-2-tetrazenes"

Victor L. Davidson (Ph.D. '82, Dr. Knaff)
"Ion Transport in Photosynthetic Purple Bacteria"

Paul D. Dobrowolski (M.S. '82, Dr. Marx)
"Total Synthesis of Catalpalactone"

Delphia F. Hamill (Ph.D. '82, Dr. Redington)
"Vibrational Studies of Hydrogen Fluoride"

Yen-long Vincent Hong (Ph.D. '82, Dr. Marx)
"Migration Tendency of Some Substituents in Cationic Rearrangement Reactions"

Sukon Pirakitigoon (Ph.D. '82, Dr. Mills)
"Ring Size Interconversions of Cyclopolyposphines"

Rupa Ananthanarayan (M.S. '82, Dr. Bartsch)
"Cation Complexation by Multidentate Ligands"



The Last Stage.....

The hon. editor's practice is to write the rough copy for these newsletters during the Christmas holiday period. All materials are assembled in the months previously. Photographs are made for us by Carol King, the chief photographer of the University's News and Publications office. The Newsletter is typed in January and then taken over to Tech Press, and handed over to Elaine Atkinson, the notorious "Misselaineous" of the University's Publications Bureau (where she is Assistant Manager). Misselaineous puts our copy into the attractive layout of the final form, chooses each year the photographic design for the front page, and sees the Newsletter through the printing stages. Misselaineous puts her mark on the design of many of Tech's publications, particularly of the Theatre Center. Our thanks, then, to Misselaineous. We offered her, as a sign of our thanks, the free, life-long audit of all chemistry courses. But, she said she'd just as soon have the second prize, the trip to Las Vegas (the one in Nevada, of course).

Non-Profit Org.
U.S. Postage
PAID
Lubbock, Texas
Permit No. 719

Texas Tech University
Department of Chemistry
Lubbock, Texas 79409

We would be very pleased to hear from the Department's graduates. Send us your updated address and description of what you are now doing professionally or otherwise. If there is a particular inquiry you may have for news of the Department, let us have it please.

Name: _____

Date of Graduation (or Association with Department): _____

Address: _____

Current Position: _____

Item of news for us: _____

Inquiry of news from us: _____

Send Response to: Professor H. J. Shine, Editor
Dept. of Chemistry
Texas Tech University
Lubbock, Texas 79409

When these newsletters were begun in 1980 we had no preconceptions about the future years. Here, though, the fourth newsletter is out and we seem to be in harness for the foreseeable future. But, the newsletter does depend so much on our graduates for news. Write to us about yourselves and your work. All the best until number five.

H. J. Shine