

DEPARTMENT OF CHEMISTRY
CORNELL UNIVERSITY
ITHACA, NEW YORK 14853
U.S.A.

NEWSLETTER

Issue No. 23

August 1978

FACULTY HONORS & AWARDS

Barry K. Carpenter — Rohm & Haas Faculty Summer Fellowship.

Michael E. Fisher — John Simon Guggenheim Memorial Fellowship (for the second time); also Distinguished Scientist Visitor to Japan, July - August 1977.

Bruce Ganem — Alfred P. Sloan Foundation Fellowship 1978-80.

Melvin J. Goldstein — Japan Society for Promotion of Science Visiting Professor 1978.

Roald Hoffmann — Honorary Doctor of Technology degree from Royal Institute of Technology, Sweden.

George H. Morrison — Benedetti-Pichler Award of the American Microchemical Society.

Harold A. Scheraga — ACS Kendall Award in Colloid or Surface Chemistry.

DEGREES AWARDED

42 Chemistry Majors received their B.A. degrees at the May 30th Commencement. 27 graduate students in Chemistry received their Ph.D. degrees during the academic year 1977-78 and 33 M.S. degrees were awarded.

GRADUATE STUDENT AWARDS

Steven Russo, soon to receive his Ph.D. degree and who works with Professor Charles F. Wilcox, was one of only five graduate students within the College of Arts & Science to be awarded a Clark Teaching Award by the College.

Dupont Teaching Prizes were awarded by the Department of Chemistry to: Geraldine Franklin, Bruce Furman, William Hawkins, Martin Jefson, Ted Morgan, Michael Silver and Angelica Stacy.

The recipient of the Procter & Gamble Fellowship for the academic year 1978-79 is Allan Pinhas, a graduate student working with Professor Barry K. Carpenter.

The Eastman Kodak Research Fellowship for the academic year 1978-79 was awarded to William J. Tuszynski, a graduate student working with Professor Charles F. Wilcox.

VISITING LECTURERS

Professor J. -M. Lehn, Université Louis Pasteur de Strasbourg, France, will present the Baker Lectures during the fall semester. He will discuss Cryptates, Macropolycyclic Inclusion Complexes and the Intermolecular Bond. The Baker Lecture Series will be presented from October 17 - December 2, 1978.

Professor Klaus Weber, Max Planck Institute, Göttingen, Germany, will present the spring 1979 NIH Bioorganic-Biophysical Lectures.

The Debye Lectures, offered jointly by the Department and the Cornell ACS Section will be given by Professor Seymour Rabinovitch, University of Washington. The lectures will be presented during the week of November 13 - 16, 1978.

Executive Director's Comments

In this and the next several issues of this Newsletter, I'd like to tell you a little of what is going on in our teaching and research efforts in the Department. Today let's look at our introductory courses.

Our three, separate, beginning courses in chemistry are thriving. Chemistry 103/104 is recommended for students who have not had high school chemistry and who will probably not take any additional courses in chemistry. Chem 207/208 is intended for students who will take further courses in chemistry; this of course includes premeds. Then there is Chem 215/216 which is recommended only for students who intend to specialize in chemistry or closely related fields, and which requires some knowledge of calculus.

The enrollment in these courses has been remarkably steady in the last few years. Just about 500 students take both semesters of Chem 103/104; 40-80 students take Chem 215/216. 1200 students take Chem 207 and about 650 students take Chem 208. This difference in enrollment in the two semesters is largely due to the fact that non-chemical engineers are required to take only one semester of chemistry.

All of these courses have at least one laboratory session each week and therefore, in addition to the professors teaching these courses, we require the services of about 50 teaching assistants. Because of the large discrepancy between our spring and fall teaching assistants needs, we have been able to hire some of our best advanced undergraduate students to TA in the beginning courses in the fall. This has been a valuable addition to their learning experience here.

Despite the mind-boggling (for me) numbers of persons involved in these courses, the many laboratory and recitation sections, of 20 or fewer students each, run smoothly indeed. This in no small measure is due to the efforts of Dr. Stanley Marcus, who is Director of Introductory Laboratories and Mrs. Virginia Bell, the Course Coordinator.

Earl Peters

Brief Biography of Ben Widom

Chairman, Department of Chemistry



Professor Widom was born in Newark, New Jersey, in 1927, and obtained his AB degree from Columbia University in 1949. His doctoral work was performed at Cornell University under the supervision of Professor Simon Bauer, and he received his degree in 1953. From 1952 to 1954, Dr. Widom worked as a research associate with Professor O. K. Rice in the Department of Chemistry, University of North Carolina.

In 1954, Dr. Widom returned to Cornell as an Instructor in Chemistry; a year later, he was promoted to Assistant Professor. Promotion to the tenure position of Associate Professor followed in 1959, and four years later, in 1963, he was promoted to Full Professor of Chemistry. Dr. Widom works as a theorist and has been particularly concerned with the kinetics of chemical reactions, and with the nature of phase transitions, especially critical and tricritical behavior in many-compo-

nent fluid mixtures. His skills as an expositor have been recognized at Cornell by the award of a Clark Distinguished Teaching Award in 1973, and on the national and international scenes by many invitations to speak. Dr. Widom served as a Guggenheim and Fulbright fellow at the University of Amsterdam (1961-1962). In 1965, he visited the University of Reading, England as an NSF Senior Postdoctoral Fellow. In 1969, he held a Guggenheim Fellowship at Imperial College, London. In 1972, he served as van der Waals Professor of the University of Amsterdam. In 1975, he spent a semester as Visiting Professor at Harvard University. During the spring of 1978, he was IBM Visiting Professor of Theoretical Chemistry at Oxford. Dr. Widom was elected to the National Academy of Sciences in 1974, and in 1976, he won the Boris Pregel Award of the New York Academy of Sciences for outstanding research in chemical physics. Dr. Widom has served extensively on departmental, university, and national advisory committees.

The Widoms are truly a "Cornell Family". Mrs. Widom, Joanne (McCurdy), B.A. Cornell '53, M.S. Duke '54, has long been a valued member of our teaching staff and is currently engaged in a program designed to instruct students in basic laboratory techniques thru the use of locally-produced closed circuit television. Their eldest son, Jonathan, graduated from Cornell with a B.A. in Chemistry and is now a graduate student at Stanford. A younger son, Michael, is now a Cornell junior majoring in Physics and Elisabeth, their daughter, is a junior in high school.

Several years ago, a brother of Professor Widom's, Harold, was on the faculty of Cornell's Mathematics Department and his daughter, Barbara, is currently a Chemistry Major here and will be serving as an undergraduate teaching assistant this fall.

Chairman's Column

It is now my privilege and pleasure, as the new chairman of our Department, to address you in this column of our Newsletter. On July 1, I succeeded Michael Fisher, who had just completed a three-year term as Chairman and will now begin a well-deserved sabbatic leave. Michael will remain in residence at Cornell through the fall term (though he will be travelling frequently, to fulfill some of his long-delayed engagements), and will spend the spring of 1979 in the Physics Department of MIT. As a token of the gratitude we all felt for the unselfish service Michael and Sorrel had given to our Department, we held a dinner in their honor on June 16. As organized by Gordon Hammes, Michael's immediate predecessor, and Earl Peters, our Executive Director, the dinner was a most successful and pleasurable occasion. Michael was firm in refusing any more formal gift, but he seemed pleased to have the photograph of the beautiful west front of Baker Laboratory (with a view of his former office!) that Gordon and Earl found for him.

It is with no little sense of awe and responsibility that I take over from Michael, who set standards of leadership it will be difficult to match. Our Department is held in high regard throughout the College and University, and is recognized internationally for its accomplishments in research. I quickly saw the truth of something Michael once told me: the feeling of being Chairman of the Cornell Chemistry Department is like that of being at the wheel of a Rolls Royce! Michael continued the tradition of his own predecessors — Gordon Hammes, Bob Plane, Harold Scheraga, Frank Long, and Peter Debye, to name those I have personally known — in continuing a vigorous and distinguished research program of his own while at the same time providing energetic and imaginative leadership to the Department. We all admire his energy, are grateful to him for his service, and wish him a productive and enjoyable leave.

I am looking forward to working in close association with Earl Peters. He is almost as new to his job as I am to mine (the readers

of this Newsletter will know that it was only in January of this year that Earl took over full time as Executive Director), but he has already contributed inestimably to the smooth running of the Department. As you know, among his very many other responsibilities, he serves as editor of the Newsletter. I must not fail to mention also the important role in our Department that Lois Stout, as the Chairman's secretary, continues to play. She is a worthy successor to Essma Davis and Vivian Bower, whom many of you knew and remember well. In a forthcoming column of "Lauby's Recollections" we shall be reminded again of Essma and Viv.

We take great pleasure in welcoming James Rasmussen to our Department as Assistant Professor. Jim's specialty is bioorganic chemistry. He comes to us with a Ph.D. from MIT and postdoctoral research at Harvard. By now, Professor Jon Clardy, who joined us in January, and Assistant Professors Lawrence Que and Edward Grant, who have been with us since last September, are well settled in and have their research programs vigorously underway. We shall now, regrettably, be losing the valued services of some of our faculty colleagues. Professors Earl Muetterties and Marty Semmelhack are off to Berkeley and Princeton, respectively. Also, Assistant Professor Art Schultz is going to an attractive position at Rensselaer Polytechnic Institute. We wish them all well in their new positions, and look forward to continued close relations with them and to what we hope will be frequent visits by them to Ithaca.

One of the more striking developments in our Department in the last few years has been the rapid increase in the number of our special facilities. To the original machine shop and glass shop were added the now longstanding departmental facilities for electronics, mass spectroscopy, and NMR. They have now been joined by computer, X-ray, and most recently, laser facilities. The latter was funded by the National Science Foundation with matching funds from the University. Three of the facility's founders and core users are Assistant Professors Paul Houston and Ed Grant and Associate Professor John Wiesenfeld. They provide our Department with a uniquely strong concentration of research in laser chemistry and chemical dynamics.

One of our high priorities now is the upgrading of our NMR facility. We are at present seeking a new manager for it. (Dr. Ron Garber, who has been its manager, is returning to a position of even greater responsibility at the University of South Carolina.) At the same time, under the direction of Gordon Hammes, the chairman of our NMR committee, we are preparing a proposal for the purchase of a new, high-field instrument for the facility. Obtaining the funds for this necessary addition to our research capabilities will no doubt be difficult, but we are resolved to pursue it and we remain optimistic.

It has been a pleasure to address this letter to you, who are our alumni and friends, and I look forward to an early occasion for doing so again.

Ben Widom

Homecoming Weekend, 28 - 29 October 1978

Some of you will be in Ithaca this fall for Homecoming Weekend to participate in the many scheduled activities and to watch Cornell beat Yale on the troubled-and-soon-to-be-replaced turf at Schoellkopf Field. I invite all of you to have orange juice, a Danish and coffee with us in 125 Baker Lab between 8:30 - 10:00 AM on Saturday and then to observe a laser demonstration by Assistant Professor Paul L. Houston and members of his research group.

THE NON-ACADEMIC PERSONNEL OF CHEMISTRY
DOWN THROUGH THE YEARS

Thus far in my rambling contributions to our CHEMISTRY NEWSLETTER, I have written about the beginnings of chemistry at Cornell and the development of our laboratories. I have dealt in some detail with the past frontline troops, the departed professors who built up the academic offerings of our Department. But, with the exception of Henry Feehan (Issue No. 4, August 1969), I have not yet touched upon the supporting troops, the non-academic personnel, who have played such a vital part in making it possible for our academic staffs to perform effectively. (Note: my present reading of Bruce Cotton's three volume coverage of the Civil War is having an obvious effect upon my choice of military terms.)

As I remember the succession of secretaries, record clerks, librarians, stockkeepers, mechanics, glassblowers, administrative aides, and lecture assistants, it becomes clear that these supporting troops have been indispensable to a smooth departmental operation. They include a remarkable series of truly notable characters whom many alumni will recall vividly. Most graduate students in particular may well have had more close association with some of the non-academic personnel than with many professors. In times of stress we students confided our troubles to them and were rewarded with warm friendship and help. I propose to bring recollections of many of them to you in this and in some of the future issues of Newsletter. It is my hope that many of you alumni will cooperate by sending interesting information and anecdotes to make our records of these folks more complete. Pictures will be especially appreciated.

Which ones in the following random listing did you know?
Henry Feehan, Mr. Knapp, Miss Townsend, Mrs. Atwood, Mrs. Selover, Grace Price, Mrs. Ellis, Mona Hallock, Deila Baker, Viv

Bower, Kay Holmes Hill, Essma Joseph Davis, Hilah Beam, Mrs. Beadle, Mrs. Martin, Mrs. MacIntyre and Jean Storandt? And how about Mr. Griffiths, Eddy Baron, Harry Brashear, Harry Bush, Dana Green, Jesse Shoemaker, Russ Gallagher, Al Brandt, Freddy Morgan, Ed Sauers, Ed McDaniels, Mr. Willsey, Joe Frost, Leon Holman, Shorty Sherwood, The Sullivan Brothers? And do you remember John Burry, Todd Reynolds, Bill Gurowitz, and Harold Mattraw? Not included are such as Gene Cramer who are still active in the Department. I hope to get to them later. I surely have omitted some who should be on the list and hope that you readers will help complete the record.

I should remind you also of Mr. Banta and Mr. Hinman of the physics glassblowing shop who helped us when Chemistry had no glassblower. Also recall crusty, rotund Dewitt Calkins who managed to keep the ancient liquid air machine in Rockefeller producing liquid air for us chemists.

Very little non-academic assistance was available to Cornell professors in the 1800s. Henry Feehan started taking care of chemical supplies and equipment in 1896 and was joined by Mr. Knapp. Professor Caldwell, the first head of chemistry applied in vain for a stenographer because the Board of Trustees feared this would precipitate similar requests from other departments.

When I came to Cornell in 1917 as a freshman in the B. Chem. course, Chemistry was trying to carry on in the roofed-over first floor and basement of Morse Hall which had been gutted by fire in February of 1916. The supporting troops then included Henry Feehan and Mr. Knapp in the stockrooms. Mrs. Selover was secretary to Professor Dennis, the head of the Department. Miss Townsend kept the records, and Mrs. Atwood was in charge of the fire-scorched chemical library. Mrs. Ellis and probably one other stenographer completed the office force.

When the Chemistry Department moved in 1923 to the splendid new Baker Laboratory with its extensive office, library, shop, and

stockroom facilities the non-academic staff was expanded considerably. Mrs. Selover continued as the King's secretary, Grace Price became business clerk in charge of purchasing; Mona Hallock kept the records; and Nora Leonard guarded the safe and dispensed its store of platinum and other precious equipment. Mrs. Ellis and another stenographer were available to do typing for the rest of the professors and Mrs. Atwood presided over the elegant chemistry library.

In order to insure the best maintenance of the extensive new facilities, Professor Dennis managed to set this up independent of the University Buildings and Grounds department by providing his own maintenance crew. Mr. Griffiths had been in charge of the electrical work in the construction of Baker and he was hired away from his company to become Building Superintendent, with Eddie Baron as his assistant. Harry Brashear took charge of keeping the plumbing in repair. A suitable staff of janitors was recruited. This staff who were all located full-time in Baker and responsible directly to Dennis, were able to give expert and prompt attention to the many problems and crises common to the operation of a large scientific educational laboratory. This favorable arrangement was terminated when Dennis retired in 1933. Mr. Curtis of the University Buildings and Grounds Department had always been unhappy because Baker Laboratory was an exception to his campus-wide show. He persuaded the Board of Trustees to transfer the maintenance of the chemistry building to his organization on the basis of greater efficiency and economy of operation. The chemistry faculty understandably were skeptical of the first argument.

Baker Laboratory gave Chemistry two new services which had become increasingly important as laboratory techniques and experimental equipment grew more sophisticated and complicated. A well-equipped machine shop in the basement under the physical chemistry lab was put in charge of Harry Bush who turned out to excel in helping design and build many custom pieces of equipment. (More about Harry and his coworkers in a later column.) Before Baker, any special experimental glass apparatus had to be ordered

from Germany, entailing long waits and imperfect fragile products not readily modified or replaced. Many of us had short-circuited this by learning to blow glass ourselves. At one time, I gave instruction to seniors and graduate students. A number of chemists, such as Joe Brant and Milt Bush, became really expert in the art. When the move to Baker Laboratory was made, a glassblowing shop was put in next to the machine shop and a professional glassblower, Al Brandt, was recruited from New Jersey. Al was an accomplished glassblower but quite temperamental and it turned out that at that time, when glass vac-lines were just coming in, there was not enough work to keep him busy. So after several years, Al moved on to an industrial job and Chemistry arranged with the Physics Department to have their Mr. Banta and later Mr. Hinman take care of our needs. Finally, when the Olin Research Wing was added to Baker, a glassblowing shop was installed and an expanded machine shop was moved to the new building.

In 1923 the large main stockroom in the basement of Baker was manned by Mr. Willsey and Mr. Knapp. Henry Feehan set up quarters in the first-floor branch stockroom next to the freshman laboratory, where he completed 52 years of devoted service to Cornell when he retired in 1934.

This completes what I can recall or have found out by consulting Professor Nichols and Viv Bower about the non-academic staff up through the move to Baker Laboratory. I plan to continue in future columns to review the expansion of the supporting troops down through the years and will try to picture the many outstanding people who have given so much to Cornell. I am counting on you alumni and faculty readers to supplement my memory by sending in interesting notes and pictures to enliven and make these columns more complete.

As usual, the Annual Chemistry Open House in Baker Lounge on Friday afternoon of Reunion in June was attended by a goodly number of Chemistry Alumni. Emeriti Professors Clyde Mason, Lynn Hoard, Bill Miller, and Si Bauer helped me welcome the returnees and many of our active faculty dropped in. We were gratified to have such a good attendance at an hour when so many other reunion activities were

competing. Our picture exhibit increases each year.

Thanks to all those who have contributed to our historical files. Noteworthy were pictures sent by Bobby Gallagher and her husband, Spike Witherall, some of which go back to the years when Bobby's father studied chemistry at Cornell. H. E. Mattin contributed a fine group photo of B. Chems. of the Class of 1918, in which I recognize Harrison Hood, Snooky Sherburne, George Brandes and Bill Lipincott. I'll get Pete Nichols to identify the rest. And Arnold Feinberg has furnished a fine collection of pictures of more recent vintage. The brown paperback booklet giving detailed description of Baker Laboratory which was circulated in 1923 has now become hard to find and I need several copies for our historical files. I hope that anyone having a copy will send it in to be preserved in our archives.

A. W. Laubengayer

CORNELL SOCIAL HOUR

176th National ACS Meeting

Tuesday, September 12, 1978

DORAL BEACH HOTEL

Spanish Court Yard
(alternate, Madrid Room)

Miami Beach, Florida
5:30 PM

Faculty Members

(Fall Term 1978)

A. C. Albrecht
J. M. Burlitch
B. K. Carpenter
J. C. Clardy
W. D. Cooke
E. L. Elson
R. C. Fay
M. E. Fisher
J. H. Freed
B. Ganem

M. J. Goldstein
E. R. Grant
G. G. Hammes
R. Hoffmann
P. L. Houston
R. E. Hughes
J. P. Lekner*
F. A. Long
E. R. Lory**
F. W. McLafferty
J. Meinwald

G. H. Morrison
E. Peters
R. F. Porter
L. Que, Jr.
J. R. Rasmussen
H. A. Scheraga
M. J. Sienko
D. A. Usher
B. Widom
J. R. Wiesenfeld
C. F. Wilcox

* Visiting

** Temporary

Emeritus Faculty

S. H. Bauer	J. R. Johnson
V. du Vigneaud	A. W. Laubengayer
J. L. Hoard	W. T. Miller
M. L. Nichols	

CORNELL CHEMISTS

Please inform us of any changes of address or circumstances by completing this form and mailing it to Earl Peters, Department of Chemistry, 122 Baker Laboratory, Cornell University, Ithaca, N.Y. 14853. Thank you.

NAME _____

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YEAR OF GRADUATION: _____

COMMENTS:

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