

DEPARTMENT OF CHEMISTRY  
CORNELL UNIVERSITY  
ITHACA, NEW YORK 14850

## NEWSLETTER

Issue No. 12

March 1973

### DEPARTMENT NEWS

#### FACULTY

Roald Hoffmann and Robert Woodward (Harvard) will share the first American Chemical Society Cope Award for outstanding contributions to organic chemistry. Woodward and Hoffmann's "Rules of Organic Symmetry", formulated in 1965, for which the award will be made, has been called the greatest theoretical advance in organic chemistry in 30 years.

This semester Bob Plane has taken a "sabbatical leave" as Provost and is now residing in Baker Lab again. We are all pleased to have him back in the department if only for the Spring semester.

Another of our faculty, Don Cooke, is resigning as Dean of the Graduate School at the end of this semester but Don will still wear his other hat as Vice President for Research for Cornell.

Michael E. Fisher is the recipient of two distinguished honors. Michael has just been elected as one of the Horace White Professors at Cornell. University President Dale R. Corson announced the establishment of two such chairs at a recent meeting of the Executive Committee of the Board of Trustees. Michael's second

honor was an invitation to present the Richtmyer Memorial Lecture before members of the American Physical Society and the American Association of Physics Teachers. The lecture will be published shortly in the American Journal of Physics.

Earl L. Muetterties, associate director for research at E. I. duPont de Nemours & Co., in Wilmington, Delaware, has been elected Professor of Chemistry. A widely recognized inorganic chemist with an interest in undergraduate teaching, he will join the faculty September 1, 1973.

### VISITING LECTURES

Dr. Sydney Brenner of the Medical Research Council, Cambridge, England will deliver the Molecular Biophysics N.I.H. Lectures during the period April 10 — May 3, 1973. The lectures will discuss "Problems of Gene Regulation in Higher Organisms".

### ALUMNI

Mr. Harry Eastwood, B. Chem class of 1911, who resides in San Francisco, sent a picture of the Class of 1911. Along with this treasured photograph Mr. Eastwood supplied the names of the individual members of the Class of 1911 and had some interesting comments regarding that period in the history of Chemistry at Cornell.

It was interesting to read in the November 13, 1972 issue of Time that Dr. Joseph Verdol was cited for his success in negotiations with the Soviet Union for the design and initial operation of a chemical plant near Leningrad. Dr. Verdol received his Ph.D. from Cornell in 1955 and was a student of Professor A. T. Blomquist.

## GRADUATE STUDENT

The news of the sudden death of Murray D. Lawless, killed in an automobile accident Thanksgiving Day, was received with sadness. About ready to take his final examination, Murray was in his fifth year at Cornell as a student of George Morrison.

A graduate of McMaster University summa cum laude in the Honors Chemistry Program in 1968, he was awarded a Woodrow Wilson Graduate Fellowship for prospective college teachers. An outstanding student, Murray was awarded a National Research Council of Canada fellowship as well as being the recipient of the Eastman Kodak Scientific Award for the 1972-73 academic year.

He was the son of Mr. and Mrs. D. Lawless of Burlington, Ont.

## UNDERGRADUATE CHEM MAJOR

Janice D. Gorzynski has been selected as Cornell University's first recipient of a DuPont Graduate Fellowship. The \$10,000 award will be given to the graduate school which Ms. Gorzynski decides to attend, to cover certain tuition and living expenses during the first two years.

A senior chemistry major, Ms. Gorzynski has been conducting research with Professor Martin F. Semmelhack, for the past two years, investigating the uses for organometallic compounds.

Other scholarship awards Ms. Gorzynski has received include the Cornell National Scholarship and the New York State Regents Scholarship.

In 1972, Ms. Gorzynski was elected to Phi Beta Kappa and received the Lovenberg Prize in Chemistry. She is also a member of Alpha Lambda Delta Women's Honorary.

## Annual Open-House in Baker Laboratory at Reunion Time

On Friday afternoon, June 8, 1973 an open-house will be held for Cornell chemists as part of the University Reunion Program. Emeritus Professors Clyde Mason, Lynn Hoard, Al Blomquist and "Lauby" Laubengayer as well as numerous members of the active faculty will host the affair. If last year's reunion is an indication of things to come, there should be some light refreshments and tall stories. Departmental pictures will be on display and wives keep repeating, "that can't be you!" Be sure to fit this Chemistry Open-House in your reunion plans. (If any of you have pictures you would share, please bring them.)

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## Eighteen Ph.D. Degrees Awarded

Congratulations are in order for the following people who received their Ph.D. degrees in Chemistry on January 9, 1973.

Aldo Antonio Algieri  
David Arthur Bennett  
Melvin I. Buchwald  
Frank Lennox Douglas  
Timothy Gerald Geiser  
Susan Earle Hayes  
Paul Myron Helquist  
Simone Ellen Jacobs  
Stanley Aaron Kline

Peter Max Kunzmann  
Kain-Sze Kwok  
Peter Noel Lewis  
Kent Edgar Opheim  
Lorenzo Fred Pelosi  
Karen E. Burke Platzner  
Rebecca A. Kuhlmann Taylor  
David Robinson Wanlass  
William Irving White

## Chairman's Column

This year has gone by so rapidly that it scarcely seems time for another Newsletter. On the Cornell scene the happiest news at this moment is that the University budget will be balanced for the coming fiscal year. Achieving this task has called for considerable belt tightening, but hopefully the worst is over. The Chemistry Department has managed to maintain quality in both teaching and research, although our manpower has decreased somewhat. However, the current trend in Washington does not bode well for science. It seems quite clear that the support of science, in general, and of basic research, in particular, has a very low priority in the eyes of the current administration. This is unfortunate for both science and the country.

Virtually all graduate training programs are being phased out: this includes most fellowships, traineeships and training grants. In the case of our department this means support for 25 to 30 graduate students and several postdoctorals. The difficulties associated with the loss of training programs are compounded by a proposed cut in research funds at the National Institutes of Health and roughly a constant chemistry budget at the National Science Foundation. The prevailing feeling seems to be "What has basic research done for this country lately?" The number of dollars involved is actually relatively small in terms of the national budget, but unfortunately research budgets can be cut without too much immediate effect, other than to the people involved in basic research. As you are well aware, the time lag between basic and applied research is typically 10 to 20 years so that if important basic research is curtailed now it will be many years before the general public is aware of the damage which has been done. Our only hope at this juncture appears to be a direct appeal to members of Congress, and I urge you to write your Senators and Congressmen about the importance of maintaining a strong basic research effort in this country.

On a more positive note, the number of jobs available to our

graduates seems to be slightly higher this year, and I hope this means a brighter future as far as the employment market goes. In the case of our own department, the size of the faculty has remained essentially constant over the past few years, and this pattern will continue in the foreseeable future. However, a small influx of new faculty is continually occurring on a replacement basis as people retire or leave. New faculty members, of course, are essential for the vigor and health of our department.

With Spring in the air (almost), I will sign off until the next Newsletter.

Gordon G. Hammes

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CORNELL SOCIAL HOUR

ACS Spring Meeting

TUESDAY, April 10, 1973

FAIRMONT HOTEL

Dallas, Texas  
at 5:30 p.m.

Terrace Room

PS  
ARTHUR WESLEY BROWNE



ARTHUR WESLEY BROWNE, "AWB", "BROWNIE"

Known and remembered by more Cornellians than most other Cornell professors, A. W. Browne taught many thousands of students in the introductory chemistry courses from 1903 well up into the 1940's. Mention chemistry to Cornellians of those years and they are sure to say "Oh yes, I took Browne's lectures in 19-- and remember those liquid air experiments". Having heard them myself in 1917-18 and having been associated with him subsequently, not only in Baker Lab but also otherwise, I could go on-and-on about this friendly, colorful, out-going and many-sided "campus character", who inevitably generated a wealth of stories.

Born in Brooklyn in 1877, A. W. Browne received his B.A. and M.A. degrees from Wesleyan University in 1900 and 1901. He came to Cornell for graduate study under Professor L. M. Dennis in inorganic chemistry and was awarded his Ph.D. in 1903. Appointed Instructor at Cornell that same year, he rose to Assistant Professor in 1906 and to Professor of Chemistry in 1910. As far as I can recall, he never took a sabbatical leave but taught continuously through to his retirement in July, 1945. He succumbed to a heart attack on December 15, 1945, just after having addressed a student group, an exit I'm sure he would have desired.

Professor Browne early established a fine reputation as a talented experimental chemist, eager to apply new theories to his research. Beginning with his Ph.D. thesis research, he rapidly expanded his investigations to a wide range of hydrogen-nitrogen systems. The highly explosive and temperamental  $\text{HN}_3$  and its salts challenged his interest and ingenuity. His lab had cabinets constructed of 2-inch planks with peepholes, in which elaborate chains of glass apparatus were manipulated by remote control involving strings and levers. Sheet-iron armor and goggles protected the investigator. I lectured just across the hall and became accustomed

to the sharp explosions of liquid  $\text{HN}_3$ , running across to check the shaken student. John Olin, one of Browne's students, later applied his work on lead trinitride to the manufacture of percussion caps for military use. Work on the negative  $\text{N}_3$  group was extended by AWB to analogues such as  $\text{CNO}$ ,  $\text{SCN}$ , etc, which he liked to refer to as "halogenoids" because of similarities to the halogen atoms. Much concerned with oxidation-reduction, Browne siezed upon the then new ideas of the electronic structure of atoms and early suggested that the terms electronation, de-electronation, electronators and de-electronators were appropriate for describing oxidation-reduction phenomena. This was regarded at the time with skepticism and neglected for many years, later to be reborn in electron-donor-acceptor terminology. In AWB's later years he retained his great enthusiasm for teaching but allowed his research to lapse.

Professor Browne was a gifted teacher and lecturer, with a strong bent for using the spectacular to drive home the points he made. His command of English was of a high order and he was fond of rolling his rr--s in expressive German phrases. Utilizing a large lecture table crowded with apparatus, he would give elegant demonstrations which always worked well. For many years his lecture assistant, Freddy Morgan, added to the show. AWB rejoiced in having the main lecture room filled to overflowing and his powerful bass voice needed no amplification. He employed the large blackboards most effectively, writing in large clear script and always facing his audience so they had unobstructed view of what he was writing. His perfect circles, drawn using his elbow as the center, were famed. And, seizing chalk in each hand, he would rapidly construct perfect diagrams of apparatus by simultaneously drawing both sides of flasks, connecting tubing, etc. His liquid air lectures were prime examples of showmanship, and many students who secretly pocketed pieces of frozen raw eggs got a lasting appreciation of energy transfer. He would use a frozen mercury hammer to nail together a heavy wooden box, in which he later would blow up an oxygen-hydrogen mixture. His colleagues sometimes scoffed at his frequent use of rather corny puns, but the students greatly enjoyed the opportunity to groan at them. His last lecture of the course

always ended in a blaze of colored fire.

Brownie's activities outside of the laboratory were many, often involving informal association with student organizations. He had a burly, strong physique and a quick springy walk with his elbows carried well out. Although he was not interested in organized athletics, he was devoted to all forms of exercise and feats of strength. He delighted to lure new graduate students into contests of Indian wrestling and marathon round-trip walks to Trumansburg, Aurora or other distant points. He disdained automobiles and never owned one. On winter evenings he frequented Beebe Lake to practice his skill as a figure skater, and at one time he maintained his own ice in his yard on upper State Street.

AWB had a resonant bass voice of remarkable range, capable of rendering "Asleep in the Deep" to perfection. His sense of absolute pitch was phenomenal and he was pleased to prove this any time. He particularly enjoyed group singing and was a prized member of a succession of vocal quartets and choruses. A mixed-quartet which he anchored featured the Sunday services of the Congregational Church for many years. He was addicted to barber-shop quartet singing. The "Halogenoid Quartet", consisting of AWB, Archie Hoel, Hal Lacey, and myself, performed at many a chemistry affair and was promptly dubbed the "Hell-of-a-Noise" quartet. Rehearsals at Brownie's home always ended with massive portions of ice cream and cake. He was a valued member of the Savage Club.

A complex, vigorous personality, AWB was the perfect extrovert. As such he easily made contact with students, and all who knew him retain vivid memories of his many enthusiasms.

Any recollections or pictures of Professor Browne which you care to contribute to my files will be gratefully received.

A. W. Laubengayer

Faculty Members

(Spring Term 1973)

A. C. Albrecht	M. J. Goldstein	R. F. Porter
S. H. Bauer	G. G. Hammes	R. R. Rye
P. Bente	R. Hoffmann	H. A. Scheraga
C. A. Brown	R. E. Hughes	F. R. Scholer
J. M. Burlitch	F. A. Long	A. R. Schultz
W. D. Cooke	G. M. Loudon	M. F. Semmelhack
V. du Vigneaud	H. C. Matraw	M. J. Sienko
E. L. Elson	F. W. McLafferty	D. A. Usher
R. C. Fay	W. T. Miller	W. I. White
M. E. Fisher	F. A. Momany	B. Widom
G. A. Fisk	G. H. Morrison	J. R. Wiesenfeld
J. H. Freed	R. A. Plane	C. F. Wilcox

Emeritus Faculty

A. T. Blomquist	J. R. Johnson
J. L. Hoard	A. W. Laubengayer
M. L. Nichols	

New Faculty Members

(Fall Term 1973)

E. L. Muettterties

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FIRST CLASS MAIL