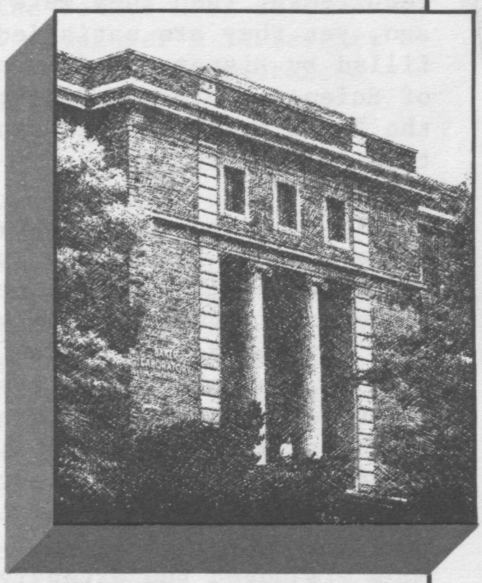
CORNELL CHEMISTRY



THE NEWSLETTER OF THE DEPARTMENT OF CHEMISTRY AND THE SOCIETY OF CORNELL CHEMISTS

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Baker Laboratory
Ithaca, New York 14853

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■ CHAIRMAN'S COLUMN

Snow and Leavis Twenty-five Years Later

In 1959 C. P. Snow, a distinguished novelist, who also was a first-class spectroscopist in his time, delivered the Rede Lectures at Cambridge University on "The Two Cultures". He warned that "..the intellectual and practical life of the whole of western society is increasingly being split into two polar groups." These groups were the Scientists and the Humanists, and between them there existed "a gulf of mutual incomprehension; sometimes hostility and dislike, but most of all lack of understanding."

Snow's analysis did not go unchallenged. It drew a particularly vitriolic rebuttal from F.R. Leavis, literary critic and Snow's colleague at Cambridge. Both Snow's original lecture and Leavis' aggressive essay are recommended reading,[1] and I would like to share with you some of my feelings on these essays.

In Snow's thesis I look for contradiction, sensing that some of his conclusions are dated. I enjoy the style of the unreasonable diatribe of Leavis; I like his verbal wickedness.

Certainly some of Snow's points are as valid today as they were in the late fifties. The scientific illiteracy of the literati persists; it is, in fact, proportionately greater in a world of accelerating technology. Scientists make little effort to tell their humanist or social scientist colleagues what they are doing. They lapse too easily into paeans to technological achievement instead of trying to communicate the scholarly and logical essence of their activities. The "gulf of incomprehension" may have been broadened in these twenty-five years by the jealousy arising from the increasing affluence of scientific research. The life style of a scientific research group is very different from that of scholars in Spanish literature or urban planning.

Recently, debates on general education at Harvard and Cornell revealed substantial good will between the Humanists and the Scientists, but brought into the open once

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[1] C.P. Snow, "The Two Cultures", Cambridge University Press, New York, 1964. F.R. Leavis "Two Cultures. The Significance of C.P. Snow", Pantheon Books, New York, 1963.

again some of Snow's concerns. Humanists seem to be more receptive to a science requirement than they were several decades ago, yet they are satisfied to have it fulfilled by History of Science or Philosophy of Science courses. Scientists insist on the "hard stuff", with associated laboratory coursework.

Yet in so many ways, Snow was wrong. He overestimated the innate, basic liberalism of the Scientists. We remember that the epidemic of student troubles in the late 1960's polarized academics around the world. The Scientists' position on this perturbation of our microsociety, as well as their response to global social concerns, if anything, was more conservative than that of their Humanist colleagues.

Snow misjudged the extensive illiteracy within science about other sciences when he attributed scientific illiteracy to the Humanists. Physicists' perceptions of as close a neighboring field as chemistry are sometimes peculiar, and vice versa. How many of us today could do what Mark Twain's Connecticut Yankee was imagined to do, to reconstruct our technology from our knowledge of basic science? Specialization can lead to ignorance.

Snow's characterization of Humanists and literary persons as natural Luddites, blindly suspicious and destructive of science and technology, has proven incorrect. In these times when we scientists are admonished for not having brought on the millenium that someone imagines we may have promised, when the deterioration of the environment is blamed on us, one might have expected all those natural Luddites to reveal themselves. Here would be a chance for them to jump on us, armed with their verbal skills, and join in our "persecution". No such thing has happened. Our colleagues in the humanities share our perception of the political and economic dimensions of the problem. They also know that if there is a broad attack on intelligence and clear logical thought, then we are all the targets of such an attack.

And they have taken to word processors and photo-copy machines just as much as we have.

But I think the way in which Snow was most seriously in error was in his estimate of the extent to which specialization and separation in fact are real or important. "Two polar groups" he calls us, and reinforces his dichotomizing with anecdotal comment. Perhaps that was and is so, in the glorious enclosure of Cambridge, or Cornell. But step into the outside world. When I listened to the debate of the Ithaca community on the possible closing of some public schools, I perceived no partitioning between scientists and nonscientists according to the rationality, (better said irrationality), of their argument. I do not hear or feel any greater sensitivity among one or another group of colleagues to their childeren, spouses, and parents. To put it another way - if scientists are supposed to be more rational, then they have done a very good job of compartmentalizing their rationality to their working hours. And I doubt if the conductor of a local choral group that is putting on Mozart's Requiem can distinguish the disciplines of his singers. Really, the disunities, public and private, are trivial. Creative activity in science and the arts has much in common.

What can one say of Leavis' denunciation, best tasted in the original? He doesn't like Snow, to put it mildly. Was it because Snow slighted Leavis' favorite, D. H. Lawrence, in a list of exemplary writers? Or was Snow in some way discourteous or disloyal to that Cambridge aristocracy, the denizens of the High Table? One's voyeuristic interest in these origins is as timeless as Leavis' polemic style. When one seeks a program, a positive statement in what he writes, he points us to intelligence, humanity, and a third realm, which I think is a broader sense of knowing and understanding. If we could but detach that third realm from his bitter, idiosyncratic elitism, I think we could get everyone to value it.

Roald Hoffmann

Professor **Barry Carpenter's** research group is exploring a number of problems in organic and organo-metallic chemistry. These problems range from the most basic "pure" research to some quite applied studies. An example from each end of the spectrum will serve to illustrate.

B. Carpenter

Perhaps the most "fundamental" of the investigations concerns the theoretical model used by organic chemists to describe the way in which reactions occur. In this model one constructs a multidimensional graph describing how the energy of a molecule of specified composition changes as bonds are stretched and bond angles altered. In a simple example, if there were just two of these geometrical dimensions the third dimension would be used to describe the energy change and the graph would then have the appearance of a hilly landscape where the peaks and valleys describe molecular geometries having high and low energy. Where there are "wells" in this surface, that is, places where the energy is at a minimum in all of the geometrical dimensions, one can identify the existence of stable molecules. Organic chemists have traditionally thought that once such a surface has been constructed, one then knows everything one needs to know about the reactions that interconvert the molecules of the specified composition. In particular it has always been assumed that the energy that one must supply to make reactions occur can be identified with the energy required to climb out of the energy "wells". Similarly, it has been assumed that the preferred pathway for interconversion of two molecules will always be the one passing over the lowest hill-top. Recent work in Dr. Carpenter's laboratory suggests that there can be circumstances where neither of these assumptions is valid.

First, there is some evidence that when two energy wells are very close together on the surface, that it might be possible for a reaction to occur by "tunneling" between them. The phenomenon of tunneling, despite its nominal analogy with a process that can occur in the macroscopic world, is in fact a direct result of the wave-like properties of matter on the atomic or subatomic scale. It has been recognized as being relatively common behavior for electrons and somewhat rarer for protons, but the work of Dr. Carpenter's group suggests that particles as large as carbon atoms can undergo the process.

The second challenge to the classical model of reactivity has come as a result of some experiments that were completed only this summer. This work has led Dr. Carpenter and his group to speculate that the dynamics of motion across the energy surface can play an important role in the outcome of a reaction. This has been known for some time by physical chemists working with small molecules in the gas phase, but Dr. Carpenter and his coworkers are beginning to suspect that it might be true for relatively large molecules reacting in solution as well. If this speculation can be confirmed, it might require a considerable amount of reinterpretation of previously reported reactions.

The project closest to the applied end of the spectrum is a recently initiated joint venture with Dr. Robert Schwarcz at the Maryland Psychiatric Research Center to study the cause and, ideally, treatment of an inherited neurological disorder known as Huntington's Disease. This work will involve the design, synthesis, and testing for efficacy of a series of compounds intended to inactivate specific enzymes in a branch of the pathway for metabolism of the amino acid tryptophan. This particular pathway has been identified as a possible site for the genetic defect in Huntington's Disease, and the research will attempt to simulate both the disorder and its correction.

■ FACULTY NEWS

Benjamin Widom, Goldwin Smith Professor of Chemistry, presented the Flygare Memorial Lecture at the University of Illinois on October 18, 1984, in honor of the late Willis H. Flygare. The lecture was entitled, "The Structure of Liquid Surfaces" and was the first of a series honoring the pioneer molecular spectroscopist, who was a professor of chemical physics at the University of Illinois from 1961 until his death in 1981.

Roald Hoffmann, John A. Newman Professor of Physical Science and Chairman of the Department of Chemistry, is one of six scientists elected in 1984 as Foreign Members of the Royal Society, London. His contributions to theoretical chemistry, particularly the "extended Hückel theory" were cited by the Society.

Franklin A. Long, Professor of Chemistry, Emeritus, won the ACS's Charles Lathrop Parsons Award for 1985. The Parsons Award is granted periodically by the ACS Board of Directors to recognize outstanding public service by a member of the Society. An article about Professor Long and his accomplishments appeared in the June 4, 1984 issue of C&E News.

■ Molecular Messengers Conference

Jerrold Meinwald, Goldwin Smith Professor of Chemistry, organized a conference on "Molecular Messengers in Nature" in May while he was at the Fogarty International Center at the National Institutes of Health. A group of over one hundred and fifty biologists, biochemists, and organic chemists gathered on the Bethesda, Maryland campus of NIH to discuss natural chemical communication systems. A major aim of the conference was to promote interaction between scientists from a wide range of disciplines. The hope of the organizing committee was to elicit lectures, poster presentations, and discussions that would not only inform participants about the status of important research areas, but also indicate promising directions for future exploration, and perhaps even stimulate the initiation of new individual or collaborative research programs.

J. Meinwald

Discussed during the conference were several themes, including (1) the isolation and chemical characterization of messenger molecules, (2) the synthesis and biosynthesis of these substances, (3) molecular receptors and transduction mechanisms, (4) behavioral and developmental responses to chemical signals, and (5) some present and potential applications of chemical ecology to agriculture as well as to the study of medically important disease vectors and of host-parasite relationships.

Professor Meinwald comments, "The planning of this conference was in itself an educational experience. Three pre-conference lectures (by Dr. Thomas Eisner on 'Better Living Through Chemistry, Insect Style,' Dr. Howard Berg on 'Bacterial Chemotaxis: How a Cell Copes with Being Small,' and Dr. Duilio Arigoni on 'The Steric Course of Some Biological Methylations') did much to help create an audience for the conference itself. At the meeting, much exciting science was presented. While insects and plant/insect relationships played a central role, bacteria, fish and mammals (including man) were among the subjects of discussion. The high quality of the lectures and posters was gratifying. Beyond this, there was much informal discussion and interchange among participants."

■ New Publications

Several members of the Chemistry Department have produced new books in the last four years. Most of them are text books for use in undergraduate or graduate level college chemistry courses, while others are reference books for use by researchers and planners. Here we describe, briefly, each of those publications.

B. K. Carpenter Determination of Organic Reaction Mechanisms, John Wiley, New York, 1984. For advanced students in Organic Chemistry, the purpose of the book is to familiarize the reader with the techniques available for studying reaction mechanisms in organic chemistry. Includes isotopic labeling, chirality and stereochemistry, kinetics, isotope effects, methods in acid-base chemistry, interpretation of activation parameters, and direct detection of reactive intermediates.

F. A. Long Appropriate Technology and Social Values-A Critical Appraisal, (Co-editor with Alexandra Oleson of the American Academy of Arts and Sciences), Ballinger, Cambridge, Massachusetts, 1980. Scientists, scholars, and public officials from advanced and developing nations offer a critical appraisal of appropriate technology and examine how its relevance can be judged against the economic circumstances, available resources, technological expertise and social values of a given nation.

S. T. Marcus Experimental Chemistry, with Michell J. Sienko and Robert Plane, Sixth Edition, McGraw-Hill, New York, 1984. This laboratory manual was written to accompany the textbooks Chemistry and Chemistry: Principles and Applications, but can just as well be used with any standard, college-level, general chemistry textbook.

F. W. McLafferty Tandem Mass Spectrometry, (F. W. McLafferty, ed. and author of Introduction and History), John Wiley, New York, 1983.

Mass Spectral Correlations (Co-author with R. Venkataraghavan), Second Edition, ACS, Washington, D.C. 1982.

Registry of Mass Spectral Data, Second Edition, John Wiley, New York, 1982.

Reference books used by researchers in many fields of science.

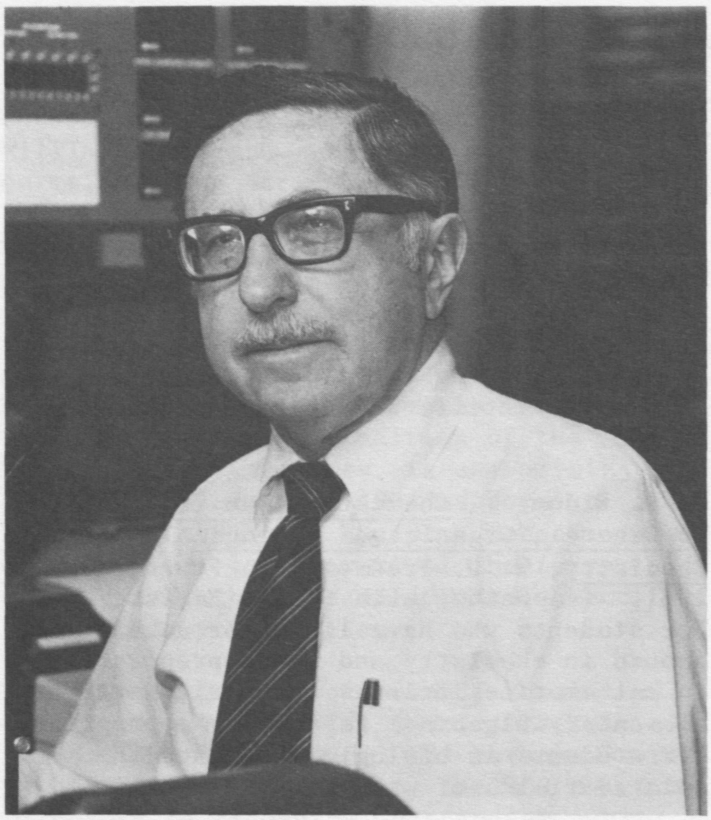
J. E. McMurry Organic Chemistry, Brooks/Cole, Monterey, California, 1984. A textbook which uses the most advanced illustrative techniques along with the best pedagogical concepts to cover the basics of a rapidly growing field of science, including the scientific advances of the last decade.

J. A. Widom Chemistry: an Introduction to General, Organic and Biological Chemistry, W. H. Freeman, San Francisco, 1981. (Co-author with Stuart Edelstein). For students who have little or no background in chemistry and whose preparation in mathematics includes only arithmetic and elementary algebra. Especially appropriate for students in biological and health-related fields of study.

D. A. Usher "Origins of Life", Chapter 32 of Biochemistry, ed. Zubay; Addison-Wesley, 1983. (Co-author with J. P. Ferris). Previous chapters (1-31) of the book emphasize that life is a study of complex organic molecules that are self-organizing and self-replicating. The ultimate driving force for these processes is solar energy. This chapter deals with how complex biomolecules initially formed and how life processes spontaneously resulted from their interaction.

C. F. Wilcox, Jr. Experimental Organic Chemistry - Theory and Practice, Macmillan, New York, 1984. This text is the eighth edition of "Laboratory Experiments in Organic Chemistry," originally written by R. Adams and J. Johnson, and (for editions 5,6 and 7) by C. F. Wilcox, Jr. In the present version, Dr. Wilcox has added new material, deleted some, and made other changes. The purpose of this laboratory text is to help the organic chemistry student understand both the underlying theories behind the reactions studied, and the separation methods used to purify the products.

■ GEORGE H. MORRISON: CHEMIST, TEACHER, EDITOR



G.H. Morrison

Professor George H. Morrison has been editor of ANALYTICAL CHEMISTRY since January, 1980. During the past five years he has written, each month, insightful editorials on subjects of interest to the chemical community as a whole, and especially to analytical chemists. He shares with all of you the following excerpts from his recent editorials.

"As analytical chemists we are particularly affected by the sad state of chemical instrumentation for academic research. While many chemists in various disciplines share the use of these instruments in departmental facilities to obtain analytical data (NMR, IR, MS, GC, LC, AA) for their research, the analytical chemist is often involved in exploring the further development of these techniques and requires dedicated pieces of equipment for his research....Here obsolescence is particularly critical as we strive to put ourselves out of business by intensive research to advance the field."

Vol. 56, No. 11, Sept. 1984

"Another deterrent to entering academe is the high cost of setting up a research program in the university environment. Today's young analytical chemists require expensive modern instrumentation which most often has to be obtained by writing very competitive research proposals to governmental agencies. New investigators with no prior track record are at a definite disadvantage. In contrast, industry and government have no problem in providing the new PhD employee with the latest and best in hardware."

Vol. 53, No. 2, Feb. 1981

"One of the greatest challenges analytical chemists face is applying their expertise to the study of unusual materials and the examination of exotic samples. There is a small community of scientists who are particularly fortunate to be able to combine their scientific skills and their interests in the arts in careers in art authentication, conservation, and restoration. Using a wide variety of old and new analytical techniques, they are able to examine diverse art treasures, such as paintings, metal, stone, wood, and ceramic objects, and textiles of past cultures, to verify authenticity or expose fraud. Of more lasting importance is the development of materials and techniques to preserve artifacts that have been damaged by the ravages of time and the environment. ....One project can take years of painstaking work."

Vol. 55, No. 8, July 1983

"Analytical chemists have always risen to the challenge of the major scientific and technological thrusts in the past and have contributed significantly to such important programs as nuclear energy, semiconductor and microelectronics developments, and lunar and planetary exploration.

To date chemists in general, and analytical chemists in particular, have been spectators waiting to see where they fit into this rapidly emerging field of biotechnology. There is no doubt that ingenious methods of measurement will have to be developed and that the need already exists. We should be eager to evaluate the needs and join the team in this latest technological revolution."

Vol. 55, No. 13, Nov. 1983

■ New Instrumentation

The purchase of instruments for the Chemical Instrumentation Facilities is funded by a partnership of sources. Members of the faculty write grant proposals to government agencies, such as the National Science Foundation or the National Institutes of Health. If an agency decides the proposal is worthwhile, it usually grants Cornell Chemistry one-half the total cost of the instrument, with the other half to be raised as "matching funds" from other sources. Those other sources could be from within the university or grants from industry or foundations.

Two new Nuclear Magnetic Resonance instruments have been purchased for the Department with funds from an initial grant of $300,000 from the National Institutes of Health to **Bruce Ganem,** Professor of Chemistry, and to **Robert Barker,** Professor of Biochemistry, Molecular and Cell Biology, and Provost of Cornell University. Additional contributions from the University, the Biotechnology Institute, the Veterinary Equine Drug Testing Program, the College of Arts and Sciences, the Materials Science Center, the Boyce Thompson Institute for Plant Research, and the Department of Chemical Engineering helped meet the total cost of $600,000. Baker Laboratory's NMR facility will be equipped with both Varian XL-400 and XL-200 Superconducting High-Resolution Fourier-Transform instruments with fully computerized data-acquisition, data-transfer, and information storage systems. The XL-400 spectrometer will be the first of its kind in New York State. The new instruments will complement a facility which now contains a Bruker WM-300 300 MHz NMR, a JEOL FX-90Q 90 MHz NMR, a Varian CFT-20 80 MHz NMR and a Varian EM-390 90 MHz NMR.

With a grant of $123,000 from the Chemical and Biological Instrumentation Programs of the National Science Foundation, and with matching funds from the University, the Department of Chemistry has purchased an Electron Spin Resonance (ESR) Spectrometer. **Timothy Wachs,** Director of Chemical Instrumentation Facilities, reports the ESR spectrometer will be a significant addition to the Department's instrumentation capabilities, enabling researchers to study molecular dynamics in liquids, analyze molecular dynamics and phase transitions in liquid crystalline media, study non-metal to metal transitions in solutions and in disordered solids, elucidate transition-metal alkoxide chemistry, and characterize metalloprotein structure and function.

Also recently purchased was a Fourier Transform-Infrared System which will facilitate research in gas phase and dilute solution kinetics and mechanisms, photochemically generated transients, biopolymer structures in dilute aqueous solution, solid state emission and solid state absorption and reflectance. The FT-IR was purchased with a $124,000 grant from the National Science Foundation, $53,000 from a Biomedical Research grant, and other funds from the University. The FT-IR can be attached to a Gas Chromatograph and a Liquid Chromatograph and can record spectra from TLC plates. It is very versatile, and will be used in most of the research programs in the Chemistry Department, as well as in related biological and physical science programs.

The facility for Laser Spectroscopy in the Department of Chemistry has recently acquired several new laser systems which are being used to generate tunable vacuum ultraviolet wavelengths in the range from 60-200 nm. According to chemistry professor **Paul Houston,** such laser sources, which have higher spectral brightness than even the best available synchrotrons, can be used to probe the products of unmolecular decompositions, photodissociations, and bimolecular reactions. In addition they can provide information about the energy distributions of molecules scattered from surfaces or excited by inelastic collisions. The research programs in which these new instruments will be used are aimed at increasing our understanding of the chemistry of the atmosphere, the details of catalysis, and the mechanisms of combustion. The new instruments are housed in an expanded Laser Facility in the basement of Baker Laboratory. They have been purchased through two separate grants from the Department of Defense Instrumentation Program, while operating expenses have been provided in part by a grant from the Dow Chemical Company.

■ Chemical Microscopy

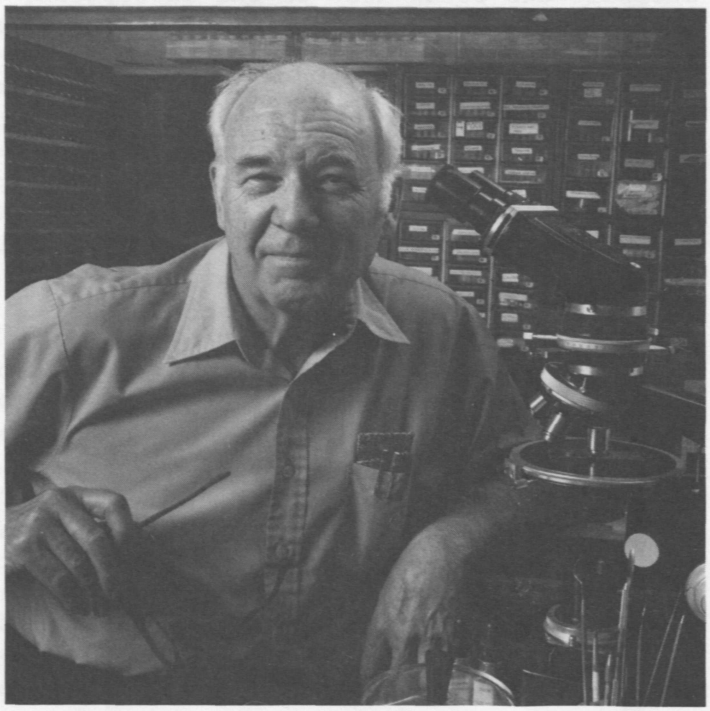
Last January, a special offering of the one week course, "Polarized Light Microscopy" was made under the sponsorship of McCrone Research Institute. The course was given in the Olin Chemical Engineering Building by **Dr. Walter McCrone,** one of the last of the Cornell PhDs in the area of chemical microscopy and currently the Emile M. Chamot Visiting Professor of Chemical Microscopy.

The course consisted of a lecture and lab format, and covered a variety of areas including optics, crystal morphology, microchemical tests, and particle and fiber identification. The lectures were augmented by many demonstrations under the microscope which were presented to the audience through the use of a color video camera and monitor system. Overwhelming interest in the course, and the limited laboratory space available, resulted its being offered again in early summer.

A Chemical Microscopy Class in Baker Laboratory

These courses were undertaken by Dr. McCrone, in cooperation with several members of the Chemistry Department, in an effort to reintroduce the subject of Chemical Microscopy within the undergraduate syllabus. A very much abbreviated version of the course was included within the spring term of Chemistry 303, the final course in the integrated laboratory sequence. The inclusion of this subject area was well received by the students, and will be expanded, if possible, into other suitable areas of the laboratory program.

Similar experiments, again with lectures by Dr. McCrone, are being included in Chemistry 302 this Fall.



W.C. McCrone

During the past several months, an effort has been made to set up an area within Baker Laboratory where Chemical Microscopy may be taught. Some of the original oak microscopy benches, designed by Chamot and originally installed in Baker Laboratory on the third floor, have returned from the Chemical Engineering Building and have been set up in one of the physical chemistry laboratories on the ground floor. Also recovered was the extensive collection of standard samples and slides, and a modest library of reference works. To further assist this project, the Undergraduate Instrumentation Committee has budgeted a sum of money to purchase microscopes and related materials. The A. H. Meyers Foundation donated $400, which was used to purchase a set of Refractive Index Standards, and the Olympus Corporation (Precision and Analytical Instruments Division) donated twelve Polarizing Light Microscopes.

■ GRADUATE FIELD OF CHEMISTRY

The International Paper Company Foundation has made a Graduate Research Fellowship in honor of J. Stanford Smith available to Cornell University, to be used to support a graduate student doing research in chemical ecology. This Fellowship honors the late J. Stanford Smith, former chairman of International Paper Company. Mr. Smith was also the Executive-in-Residence at the Cornell Graduate School of Management for two semesters in 1981 and 1982. The award was made, in part, to help further the collaborative research in the field of chemical ecology which Dr. Thomas Eisner (Jacob Gould Schurman Professor of Biology) and **Dr. Jerrold Meinwald** (Goldwin Smith Professor of Chemistry) have pursued together for over two decades. The field of chemical ecology is relatively new, and is concerned with understanding the interplay between organisms and their environment at the molecular level.

The recipient of this year's fellowship is **Mr. Robert Jacobs,** a graduate student working in Dr. Meinwald's laboratory. Mr. Jacobs is a native of Wilkes-Barre, Pennsylvania, and received his B.S. from King's College (Wilkes-Barre) in 1981. He is interested in the synthesis of biologically active compounds; his thesis research is largely concerned with the synthesis of two novel insect repellants which are produced by a carrion beetle. Mr. Jacobs plans to pursue an industrial research career which will combine his organic chemical and biological interests, after his doctoral research is completed.

J. Meinwald, R.J. Dinus (International Paper Company), and R. Jacobs.

■ PhD Graduates May-August 1984

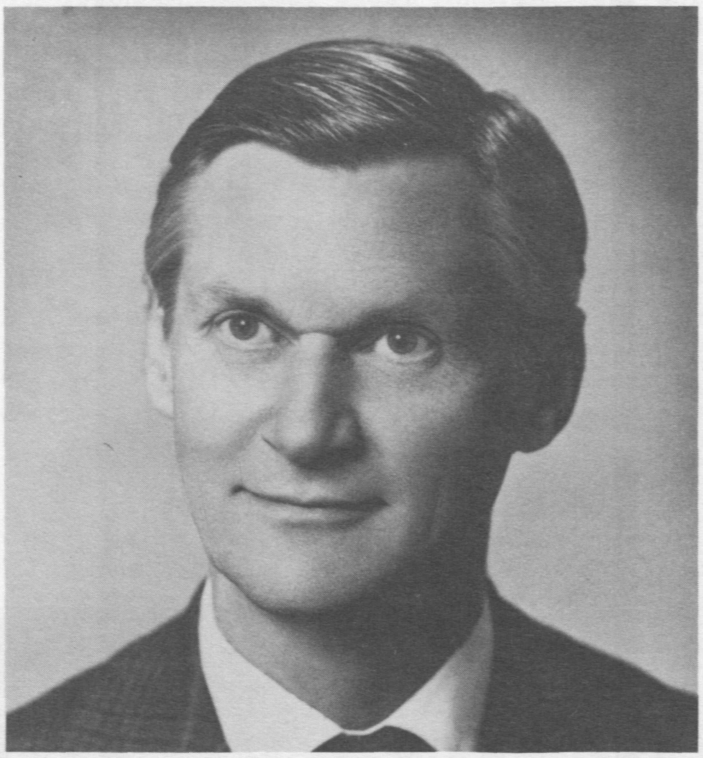
Jean Cognet	Inst. de Biol. Phys. Chim.	Paris, France
Alan a. Galuska	Aerospace Corp.	Los Angeles, California
Stephen G. Grubb	Exxon Research and Eng.	Annandale, New Jersey
David J. Klinger	Bell Laboratories	Murray Hill, New Jersey
Catherine J. Page	E.I. du Pont de Nemours	Wilmington, Delware
Katrina S. Replogle	E.I. du Pont de Nemours	Wilmington, Delware
Leslie J. Schwartz	Assoc. Prof. of Chemistry	St. John Fisher College
Douglas B. Stauffer	Postdoc with F.W. McLafferty	Cornell University
Shen-Shu Sung	Postdoc with P. Jordan	Brandeis University
Chia-Yu P. Teng	Postdoc with R. Danheiser	Mass. Inst. of Technology
Robert L. Whetten	Exxon Research and Eng.	Annandale, New Jersey

■ BAKER LECTURER FALL 1984

Alan R. Battersby, F.R.S., Professor of Organic Chemistry at the University of Cambridge, delivered the 1984 Baker Lecture Series August 28 though September 27. Professor Battersby's theme was "Discovering the Chemistry of Nature's Biosynthetic Pathways."

A specialist in synthesizing the so-called pigments of life, such as heme, chlorophyll and vitamin B-12, Dr. Battersby spoke about the key intermediates on the biosynthetic pathways, many of which are unstable or available only in minute quantities.

Dr. Battersby holds degrees from the University of Manchester, the University of St. Andrews, the University of Bristol and the University of Cambridge. A Fellow of the Royal Society of London, he also was elected a Member of the Deutsche Akademie der Naturforscher Leopoldina and has been awarded honorary degrees by Rockefeller University and the University of St. Andrews.



A.R. Battersby

■ THE BAKER LECTURES 1926-1984

Mr. George Fisher Baker was an important financial figure and philanthropist of the early 1900's who became interested in Cornell University through his friendship with George C. Boldt, then Chairman of the Cornell Board of Trustees.

Mr. Baker made his first substantial gift to Cornell University for the Medical College in New York City in 1912. He made further large gifts of money to Cornell during the First World War for the construction of men's residence halls. In 1920 he donated $1,500,000 for the construction of a new chemistry laboratory to replace Morse Hall, which had burned on February 13, 1916. Early in 1923, Professor L. M. Dennis, in letters to President Farrand and to DuPratt White, then Chairman of the Cornell Board, enthusiastically urged the establishment of an endowed lectureship "to invite the most eminent chemists of the world" to lecture at Cornell.

He predicted that such a lectureship would be "of tremendous importance to the development of chemistry at Cornell" and mentioned Mr. Baker as a possible donor. Two years later, in the fall of 1925, Mr. Baker gave $250,000 to be used to carry out Professor Dennis' plan and suggested that, if possible, the lectureship be put into operation the next semester. Professor Dennis must have anticipated Mr. Baker's gift, for he was able to persuade Professor Ernest Julius Cohen, who had succeeded van't Hoff at Utrecht, to come to Cornell for the following term. Professor Cohen delivered the first Baker lecture on February 25, 1926 in room 107 Baker Laboratory. His subject was "Physicochemical Metamorphosis."

Since that first lecture, seventy-four distinguished chemists have delivered lectures in the series, (no lectures were held from 1940 to 1947), with fourteen Nobel Laureates among them.

With thanks to W.T. Miller

Coover, Harry W., PhD'44, has retired as director of Research and Development, Eastman Chemicals Division, Kingsport, Tennessee. Dr. Coover was awarded the 1985 ACS Earle B. Barnes award for Leadership in Chemical Research Management, sponsored by Dow Chemical Company.

Gassman, Paul G., PhD'60 has been awarded the James Flack Norris Award in Physical Organic Chemistry. He has been a professor of chemistry at the University of Minnesota since 1974.

Mandelkern, Leo, PhD'49, was named Robert O. Lawton Distinguished Professor of Chemistry at Florida State University. He has also received the 1984 Mettler Award for Thermal Analysis for his contributions in using thermal analysis methods to understand the structure, morphology and properties of crystalline polymers. In addition, he was the recipient of this year's Florida Award of the ACS Florida Section.

Pasternack, Robert F., PhD'62, has been named the Edmund Allen Professor of Chemistry at Swarthmore College.

Pawel, George W., BChem'11 has been in touch with us recently from his home in Oak Ridge, Tennessee. In his letter, Mr. Pawel mentioned a picture of the BChem'11 class. Lauby was able to come up with a picture, which we reproduce here, hoping that any of you, who might be able to identify the unnamed individuals, will get in touch with us right away.

Smith, G. Warren, PhD'66, has become Vice-President of Academic Affairs at Southeastern Louisiana University. He was previously Dean of Sciences and Technologies at the Clear Lake, Texas campus of the University of Houston.

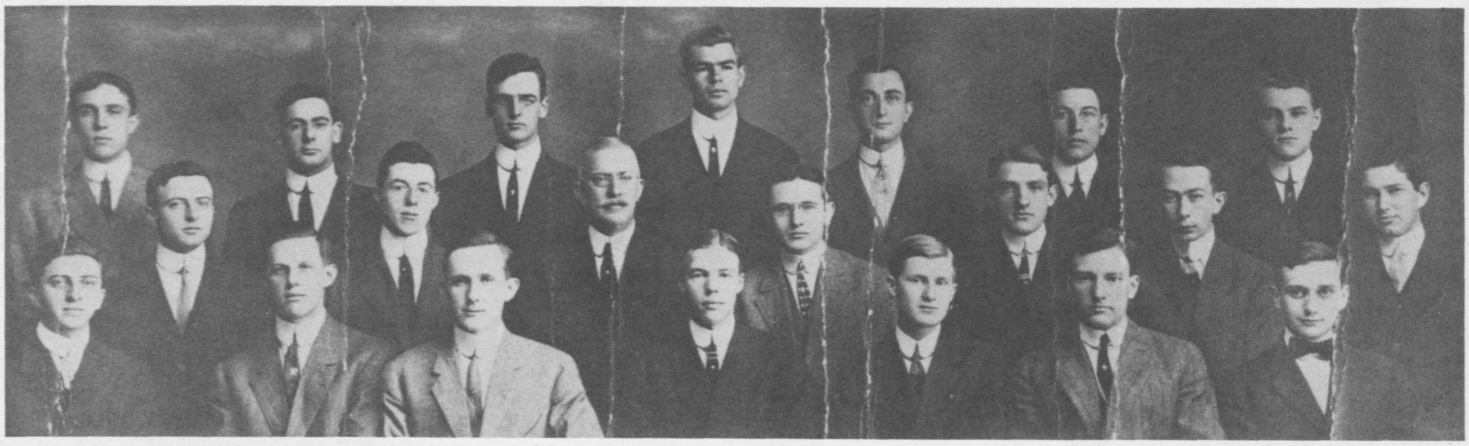
Wannamaker, T. Elliot, PhD'35, writes that he is President of Manoa, Inc., in Orangeburg, South Carolina. He, like so many others, enjoys Lauby's column very much.

Wheeler, Edward, S., PhD'52, wrote us to let us know he is Vice-President for Technology (and has been for nine years) at Lapp Insulator, one of the world's major manufacturers of high voltage insulators. He lives in Batavia, New York.

Willits, Charles O., PhD'33, has been corresponding with us from his home in Medford Leas, New Jersey. He takes an active interest in the world of chemistry today, and is always eager for Lauby's column.

■ SOCIETY OF CORNELL CHEMISTS

Once again we ask you to support the cost of printing and mailing the Newsletter with your voluntary, annual dues of $10 for the calendar year 1984. Please make checks payable to "Cornell Chemistry" and send them to Society of Cornell Chemists, Baker Laboratory, Cornell University, Ithaca, NY 14853.



R.F.Davis, C.A.Scharschu, W.J. Waler, J.K. Rewalt, H.Schagam, E.A.Hovey, H.R.Gundlach T.J. Wilson, H. Eastwood, Prof. Dennis, Unknown, J.J. Patterson, G.D.Kratz, D.R.Evans G.W. Pawel, Unknown, J.P. Maider, H. Latourette, W.J. O'Brien, J.M.Fay, R.C. Lowang

■ FACULTY MEMBERS FALL 1984

H. D. Abruna
A. C. Albrecht
B. A. Baird
J. M. Burlitch
J. C. Calado*
B. K. Carpenter
J. C. Clardy***
D. B. Collum
W. D. Cooke
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