



THE

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MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXX

MAY, 1974

NUMBER 5

Presented to

Elias J. Corey

on the occasion of his

Remsen Memorial Lecture

sponsored by

*The Maryland Section of the American
Chemical Society*

in memory of

Ira Remsen

Teacher, Investigator, Author, Administrator

May 15, 1974

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Next Meeting
 September 18, 1974

Have A Pleasant
 Summer.

The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Howard J. Cohen, Glidden-Durkee, Div. of SCM Corp., 3901 Hawkins Point Road, Baltimore, Md. 21226. Phone 633-6400. Address advertising inquiries and copy to Kent R. Zeller, McCormick & Co., Inc., 204 Wight Ave., Hunt Valley, Md. 21031.

Elias J. Corey, Sheldon Emory Professor of Chemistry at Harvard University, was born on July 12, 1928, in Methven, Massachusetts. He received his S.B. in 1948 and his Ph.D. in 1951 from the Massachusetts Institute of Technology. His doctoral research was supervised by Professor John C. Sheehan. He was awarded the honorary A.M. degree from Harvard in 1959 and the honorary D.Sc. from the University of Chicago in 1968.

Upon completion of his doctoral work, Professor Corey joined the faculty of the University of Illinois as Instructor in 1951. He was promoted to Assistant Professor in 1953 and to Professor in 1956. Dr. Corey joined the faculty at Harvard University in 1959 and served as Chairman of the Chemistry Department from 1965-68. He was appointed Sheldon Emory Professor in 1965.

Dr. Corey has served on the Alfred P. Sloan Foundation Board on Physical Sciences (1967-73) and the Robert A. Welch Foundation Scientific Advisory Board (1968-present). He has been a member of the Editorial Board (1961-68) and the Advisory Board of Organic Syntheses (1968-present) as well as the Editorial Board of the Journal of Organic Chemistry (1962-65). He has held Guggenheim Fellowships (1957-58 and 1968-69) and an Alfred P. Sloan Fellowship (1955-57). He was elected to the American Academy of Arts and Sciences in 1960 and to the National Academy of Sciences in 1966.

Professor Corey received the American Chemical Society Award in Pure Chemistry in 1960, the Fritzsche Award in 1967 and the Award for Creative Work in Synthetic Organic Chemistry in 1971. The Rochester Section bestowed upon him the Harrison Howe Award in 1970 and the Puget Sound Section gave him its Pauling Award in 1973. He has also received the Intra-Science Foundation Award (1967), the Ciba Foundation Medal (1972) and the Evans Award of the Ohio State University (1972). Most recently, Professor Corey was given the \$10,000 Dickson Prize by Carnegie-Mellon University for the most outstanding contribution to science in the United States during 1973.

His research interests are in structural and synthetic organic chemistry. He has made numerous contributions to natural products chemistry,

theoretical organic chemistry, organometallic chemistry, sulfur chemistry, and enzyme chemistry, as well as to asymmetric synthesis and computer-assisted analysis of synthetic problems.

Dr. Corey married the former Claire Higham in 1961. They have three children, David, John and Susan.

PROSTAGLANDINS

The prostaglandins are a family of chemical substances found in mammalian cells in minute quantities. They produce a wide spectrum of responses in various body organs and tissues. In humans they play a controlling role in a very large number of physiological events. For example, they have been implicated in the functioning of heart, lungs, kidneys, blood vessels, muscles, digestive system, and brain. They take part in the regulation of body temperature, in the inflammatory process, and in generating sensations of pain. Prostaglandins are directly involved in the mechanism of action of common aspirin and related drugs. Prostaglandins have also been found in primitive marine creatures, a highly unexpected and remarkable development in many respects.

The first chemical synthesis of primary prostaglandins was accomplished at Harvard in 1968. Since that time, a large number of synthetic routes to prostaglandins have been devised and demonstrated both at Harvard and in other laboratories. The natural forms of prostaglandins are now readily available by synthesis. The chemistry of prostaglandins has been extensively studied with the result that many interconversions of the members of this family are now possible and many new derivatives have become accessible. The fundamental synthetic knowledge which has been gained forms a technological base which is now being applied by the pharmaceutical industry to the search for modified prostaglandins with sufficient specificity of action to permit specific medical application.

This lecture will deal with various facets of the prostaglandin story and will center about the studies at Harvard on chemistry and synthesis of prostaglandins.

THE REMSEN MEMORIAL LECTURE



DR. ELIAS J. COREY

DATE AND TIME:

Shaffer Hall, Homewood Campus, The Johns Hopkins University.
Wednesday, May 15, 1974 at 8.30 p.m.

SPEAKER:

Dr. Elias J. Corey, Sheldon Emory Professor of Chemistry, Harvard University.

SUBJECT:

"Prostaglandins".

COCKTAILS AND DINNER:

Johns Hopkins University Faculty Club, East Dining Room.
Cocktails 6.00 p.m.
Dinner 6.30 p.m.
Price: \$7.50 (open bar)

Reservations are necessary for the dinner, and should be made with Dr. Allen Bednarczyk, McCormick and Co., Inc., 204 Wight Avenue, Hunt Valley, Md. 21030, Phone 667-7480, 667-7470, by May 10, 1973.

SOCIAL HOUR:

Refreshments will be served in the Garrett Room, Eisenhower Library, after the lecture. All are welcome.

PARKING:

Free parking is available in the lot adjacent to Shriver Hall.

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MARYLAND CHEMIST AWARD

The Maryland Chemist Award was established in 1962 to recognize and honor each year, a member of the Maryland Section for outstanding achievement in the field of chemistry. The achievement may be in pure or applied chemistry, chemistry, chemical engineering or chemical education. The award is presented annually at one of the regular meetings of the Maryland Section.

Recipients to date have included:

| | |
|------------------------------|-----------------------------|
| 1962 Dr. E. Emmet Reid | 1968 Dr. George L. Braude |
| 1963 Dr. W. Mansfield Clark | 1969 Dr. Leslie Helleman |
| 1964 Dr. Alsoph H. Corwin | 1970 Dr. Paul H. Emmett |
| 1965 Dr. John C. Krantz, Jr. | 1971 Dr. Giles B. Cooke |
| 1966 Dr. Belle O. Talbot | 1972 Dr. Arnold M. Seligman |
| 1967 Dr. Walter S. Koski | 1973 Dr. Lester D. Kuhn |

The nominee must be a member of the American Chemical Society and a member of the Maryland Section. The meritorious achievement of the nominee shall have been accomplished within the five years previous to that in which the award is given. A previous recipient of the award is not eligible for renomination. If in a particular year there is no nominee deemed by the Award Committee to meet the qualifications required, the award shall not be made.

Nominations may be submitted in any format but must include, in addition to the name and present position of the nominee, your specific reasons as to why this Section Member should be so honored.

Nominations should be submitted to any of the undersigned not later than September 1, 1974.

Dr. David W. Herlocker
Member, Awards Committee
Department of Chemistry
Western Maryland College
Westminster, MD 21157

Dr. Gary Posner
Member, Awards Committee
Department of Chemistry
The Johns Hopkins Univ.
Baltimore, MD 21218

Dr. William G. Galetto
Chairman, Awards Committee
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----- TEAR OUT DINNER RESERVATION FORM -----

There is enclosed \$ _____ (\$7.50 per person)* for dinner reservations at Faculty Club East Dining Room, Johns Hopkins University, for the following persons.**

Name (Please print or typewrite) Affiliation

* Please make checks payable to Maryland Section, ACS and mail together with reservation form to Dr. Allen Bednarczyk, McCormick and Co., Inc., 204 Wight Avenue, Hunt Valley, Md. 21031, or phone 667-7470, 667-7480.

** Return by Friday, May 10, 1974.

A LICENSE TO STEAL

Last November the U.S. Court of Claims, in a 4-3 decision, upheld the right of the National Library of Medicine (NLM) to continue its large scale distribution of photocopies of articles from medical journals published by the Williams & Wilkins Co. of Baltimore without payment of royalties. While W&W is a commercial publisher, this adverse decision has serious implications for all publishers, especially the American Chemical Society, the nation's largest scientific publisher.

The majority decision noted that the matter ought to be resolved by Congress in a revision of the outmoded 1909 copyright law. Such a revision, while urgently needed, seems a year or more away. Until then, the majority decision remains a license for the Government to steal the intellectual property of W&W and its authors.

It is important to note what is not involved. All of us copy articles from journals with a clear conscience. Such copying is generally accepted as permitted by the "fair use" doctrine. Small scale copying by individuals is not the issue. Narrowly, the issue is the large scale, virtually wholesale, copying of journals by one library, the NLM. In 1970, for example, NLM made 86,000 Xerox copies, amounting to 930,000 pages. One judge remarked that this copying was "... on a scale so vast that it dwarfed the output of many small publishing companies." W&W did not ask NLM to stop this copying, but merely to pay a royalty on it (roughly estimated at \$1000 to \$1500 in 1967).

The greatest danger in such unrestricted photocopying is not to the publisher's balance sheet, important though that is. As pointed out by Robert W. Cairns, Executive Director of the ACS, this decision may "... sound the death knell of scientific journals as we know them today.

Editorials are intended to stimulate intelligent discussion. They reflect only the opinions of the author, not necessarily those of the Maryland Section, the ACS, or The Chesapeake Chemist.

It admits libraries to the publishing of scientific literature without making them adequately responsible for the costs that support it."

Here lies the real issue. Who should pay for the cost of journal publication? Traditionally, most journals were published by scientific societies. Subscription rates were kept low to encourage individual ownership and the costs were subsidized by dues. As costs rose, so did subscription rates; inevitably, the number of subscribers declined. (Ever-increasing specialization is another cause for falling subscriptions.) Unrestricted photocopying will only exacerbate an already unstable situation.

Many users, obviously benefiting from the availability of cheap photocopies, are unwilling to face this reality. Other solutions have been proposed, page charges and government subsidies being the two most often mentioned. Even when page charges were honored 100%, they covered only half the cost of a page, and now they are paid only about 2/3 of the time. And nobody wants their payment to be a mandatory prerequisite to publication. Government subsidy may be the inevitable solution, but its perils are many. Besides, even if ideal, it will be years before Congress approves it.

The present system of scientific publishing in the U.S. must change radically because of the splintering and proliferation of disciplines and the advance of communication technologies. But creaking and outmoded as it is now, the system works. Pirates, even well-intentioned ones operating under a legitimate flag, should not be allowed to wreck it unwittingly.

--EF

PARTIAL SPEAKER'S LIST FOR 1974-75

The following list represents the ACS monthly meeting programs for the 1974-75 year. The dates, locations and several speakers are firm; however, some of the subjects [where marked (*)] are tentative. If you have any comments or suggestions regarding the program, please forward them to Dr. Allen Bednarczyk, McCormick & Co., Inc., 204 Wight Ave., Hunt Valley, MD 21031.

| Date | Time | Speaker/Subject | Location |
|----------------|-----------|--|--------------------|
| Sept. 18, 1974 | 5:30 P.M. | Dr. Klaus Biemann - MIT GC/MS | Martin's Eudowood |
| | 8:30 P.M. | Dr. Fred McLafferty - Cornell University DEVELOPMENTS IN ORGANIC MASS SPECTROMETRY | |
| Oct. 16, 1974 | 5:30 P.M. | Dr. David Hoy - David Hoy Associates - LECTURES AND DEMONSTRATIONS OF EXTRA-SENSORY PERCEPTION (ESP) | Notre Dame College |
| | 8:30 P.M. | | |
| Nov. 20, 1974 | 5:30 P.M. | Prof. Roald Hoffmann - Cornell University THEORETICAL ASPECTS OF PENTACOORDINATION | Martin's Eudowood |
| | 8:30 P.M. | | |
| Dec. 18, 1974 | 8:30 P.M. | MARYLAND CHEMIST AWARD | Notre Dame College |
| Jan. 15, 1975 | 5:30 P.M. | WORLD FOOD CRISIS* Dr. Richard L. Hall - McCormick & Co., Inc. FOOD SAFETY | Martin's Eudowood |
| | 8:30 P.M. | | |
| Feb. 19, 1975 | 5:30 P.M. | GAS CHROMATOGRAPHY* LIQUID CHROMATOGRAPHY* | Martin's Eudowood |
| | 8:30 P.M. | | |
| Mar. 19, 1975 | 5:30 P.M. | ACCUPUNCTURE* ORGAN TRANSPLANTS/BIOCHEMISTRY OF REJECTION* | Martin's Eudowood |
| | 8:30 P.M. | | |
| Apr. 16, 1975 | 8:30 P.M. | * | U.M.B.C. |

*Tentative

NOTE: All meetings will have an open bar.

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MARYLAND SECTION NEWS

JOHNS HOPKINS UNIVERSITY

Dr. Alsoph H. Corwin has the following publications: "Substituent Effects on Porphyrins and Metalloporphyrins", Earl W. Baker, Carlyle B. Storm, George T. McGrew and Alsoph H. Corwin, *Bioinorganic Chemistry B*, 49 (1973).

Dr. Masato Koreeda has the following publication: "Exciton Chirality Method as Applied to Conjugated Enones, Esters, and Lactones", M. Koreeda, N. Harada and K. Nakanishi, *J. Amer. Chem. Soc.* 96, 266 (1974).

Dr. Robert G. Parr has the following publications: "New Alternative to the Dunham Potential for Diatomic Molecules", Gary Simons, Robert G. Parr and J. Michael Finlan, *J. Chem. Phys.* 59, 3229 (1973); "Simple Bond-Charge Model for Bending Force Constants of Linear Symmetric Triatomic Molecules", N. K. Ray and R. G. Parr, *J. Chem. Phys.* 59, 3934 (1973); and "A Variation-Perturbation Treatment of the Molecular Interaction Energy in H_2^+ ", T.-S. Nee, R. G. Parr and S. Y. Chang, *J. Chem. Phys.* 59, 4911 (1973).

Dr. Gary H. Posner has the following publication: "A New Class of Mixed Cuprate(I) Reagents, $Het(R)CuLi$, Which Allow Selective Alkyl Group Transfer", G. H. Posner, C. E. Whitten and J. J. Sterling, *J. Amer. Chem. Soc.* 95, 7788 (1973).

Dr. Emil G. White has the following publications: "Chemically Produced Excited States. Energy Transfer, Photochemical Reactions, and Light Emission", *J. Amer. Chem. Soc.* 95, 7050 (1973); "The Deamination of Bridgehead Amines via the Nitroso- and Nitroamide Approach", E. H. White, R. H. McGirk, C. A. Aufdermarsh, Jr., H. P. Tiwari and M. J. Todd, *J. Amer. Chem. Soc.* 95, 8107 (1973); and "The Synthesis of *Cypridina* Etioluciferamine and the Proof of Structure of *Cypridina* Luciferin", T. P. Karpetsky and E. H. White, *Tetrahedron*, 29, 3761 (1973).

BALLISTIC RESEARCH LABORATORIES

Recent papers and presentations:

"Specific Heat of X14 Propellant," Richard Ward, *AIAA J.* 12, 107 (1974).
"Specific Heat of Cellulose Nitrate," L. J. Decker, Richard Ward, & Eli Freedman, *Thermoch. Acta* 8, 177 (1974).

"Quantitative Stabilizer Analysis Using HPLC," Omar Doali and Arpad Juhasz. "Data Acquisition System for a Mass Spectrometer," J. J. Rocchio. Both presented at the Pittsburgh Conference on Analytical Chemistry.
"Use of Pyrotechnics to Reduce Base Drag," Richard Ward. Presented at the Eighth Symposium on Pyrotechnics and Explosives.

Eli Freedman has been appointed the coordinator for the Army Material Command's program on the fundamentals of combustion.



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MEMBERSHIP CHANGES

The following people have recently joined the American Chemical Society or transferred into the Maryland Section from some other state. We welcome them to the Maryland Section and invite them to attend the monthly meetings and participate in the other activities of the Maryland Section.

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Annapolis, Md. 21401
Toni S. Brafa
Baltimore, Md. 21208

Warren Stanley Briggs
Columbia, Md. 21044

David George Clifford
Aberdeen, Md. 21001

Donnalynn Marie DiSpirito
Annapolis, Md. 21404

Paul W. Goebel, Jr.
Monrovia, Md. 21770

Robert Howard Goldsmith
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Erwin Hoess
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Dennis Lee Williams
Aberdeen Proving Grd., Md. 21010

Robert Michael Young
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Roderick Whiter Young
Frederick, Md. 21701

David Francis Tomkins
Manchester, Md. 21102

Edwin T. Yates
Phoenix, Md. 21131

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SIXTH NORTHEAST
REGIONAL MEETING
OF THE
AMERICAN CHEMICAL SOCIETY
ON THE CAMPUS OF
THE UNIVERSITY OF VERMONT
BURLINGTON, VERMONT

AUGUST 18-21, 1974

The Editor and Staff of the *Chesapeake Chemist* thank all those who contributed to the Chemist during the past year, and wish all the members a pleasant summer.

"Whew," said the golfer as he returned home on a rainy day. "What a miserable round."

"Why?" said his wife. "You've played in a thunderstorm before."

"Yeah, but Charlie was struck by lightning on the tenth tee and from then on it was: Hit the ball and drag Charlie, hit the ball and drag Charlie."

The Chesapeake Chemist Dr. Yale Howard Caplan
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