THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXVII JANUARY, 1971 NUMBER 1

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IN THIS ISSUE

The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Dr. William Galetto, McCormick and Co., 204 Wight Ave., Cockeysville, Md. 21030. Phone 666-3155. Address advertising inquiries and plates to Merle I. Eiss, Sinai Hospital of Baltimore, Inc., Belvedere Ave. at Greenspring Ave., Baltimore, Maryland 21215.

DR. RICHARD J. KOKES

CHAIRMAN'S MESSAGE

Greetings and best wishes for a Happy New Year!

What will this year bring us? The signs are strong that the new year will be a trying one. We've all heard horror tales of lay-offs and cut backs that clearly show chemistry is no longer the darling of those who control the purse-strings. (Indeed, I feel chemistry never was their darling.) Chances are that this trend will continue. What should we do? Should we advocate that the ACS become a union? Should we discourage kids in college from majoring in chemistry? Should we urge graduate schools to limit the number of PhDs? The views are as varied as the individual you ask but the concern on these topics is universal.

We are a professional society. A society is defined as follows: "an organized group working together and periodically meeting because of common interests, beliefs or profession." Accordingly, our periodic meetings are central to our continuing existence. Since we are professionals these meetings should carry an unequivocally chemical flavor. They should deal with topics in the forefront of chemistry, not necessarily broad in nature. Since our membership includes industrial and academic chemists, our meetings should deal with technology, research and teaching. If we attend all these meetings, we as professional chemists will get a broader view of our profession. More than this, however, we'll be able to talk with chemists with different outlooks than ours. We'll get to know the special problems of special areas of chemistry. Maybe we'll even be able to see some mutually acceptable answers to the above questions. Then button hole your officers or our councilors and let's make our views known to the national office. Let's get together at our meetings so we can act together.

DIGITAL COMPUTERS IN CHEMICAL INSTRUMENTATION

Course—Sponsored by the Department of Chemistry, Purdue University

Time—June 9 to June 26, 1971

Objectives—The course is designed to provide a sound introduction to the use of the small digital computer in the laboratory. The principles and practices involved in the application of digital techniques will be discussed. Fifteen days of intensive lectures will deal with the elements of digital logic, digital data acquisition techniques, and the use of the on-line digital computer in chemical instrumentation. In addition, there will be ample opportunity for laboratory experience with the designing of digital logic circuits, interfacing chemical instrumentation to the digital computer, and programming the small digital computer.

Fee—The total tuition-laboratory fee is $625.00.

Inquiries—General inquiries should be directed to the Division of Conferences and Continuation Services, Purdue University, Memorial Center, Lafayette, Indiana 47907. Phone: Area Code 317, 749-2533.

Technical questions should be directed to Prof. S. P. Perone, Chemistry Department, Purdue University, Lafayette, Indiana 47907.

6th MIDDLE ATLANTIC REGIONAL MEETING

There are scheduled 60 sessions with over 340 papers being presented. Of the 60 sessions a large preponderance are being given within the framework of symposia. One symposium on Thursday afternoon is being held in honor of Dr. E. Emmett Reid who has had a long and distinguished career in chemistry at the Johns Hopkins University. On Wednesday evening, February 3, a dinner is being given in honor of Dr. Reid and will be held at the Faculty Club at the Johns Hopkins University. On Thursday evening, February 4, Dr. Charles Overberger, former president of the American Chemical Society, a 1968 Witco award winner in Polymer Chemistry, will speak at a banquet at the Baltimore Hilton. The title of his address is "The Present and Future of Primary Publications." Dr. Overberger will also participate in one of the symposia of the Polymer Division.

On Wednesday evening, February 3, there is scheduled a regional counselors meeting. Thursday afternoon, February 4, there will be a Professional Relations Workshop under the leadership of Mr. Charles Counts of the National Office. On Saturday, February 6, an ACS short course entitled, "Column Selection in Gas Chromatography," will be given at the Baltimore Hilton.

The strength of the Polymer and Organic Division should be noted. There are presently scheduled double sessions throughout the three days in the Polymer Division and double sessions scheduled for two of the three days in the Organic Division. Not only are the number of papers being presented a large fraction of the total, but the quality of the papers, as judged by the authors, is outstanding.

Two new features are being tried. In the Organic Division a two day symposium (four sessions) has been scheduled featuring hour long talks and discussions by invited professors from the major universities in our region. In the Division of Molecular Spectroscopy a similar presentation of one hour lectures on the fundamentals of some newer aspects of spectroscopy will occur. These two programs should provide a unique experience that has not been found at many scientific meetings.

The 6th MARM will have an international flavor with the presentation of papers by and attendance of people like Dr. Imai of Japan, Dr. Hermann of Germany and others from Puerto Rico and Formosa. We are very pleased about this.

The Two-Year College Chemistry Conference will hold its Third Eastern Regional Conference in conjunction with us. They plan Friday afternoon, evening and Saturday programs.

SIXTH MARM TO FEATURE ORGANIC SYMPOSIUM

The organic section of the Sixth Middle Atlantic Regional Meeting has scheduled a two-day organic symposium featuring hour-long talks by invited professors representing some of the major universities in the Middle Atlantic. The chairman of the Organic section, Dr. Marvin J. Hurwitz announced that the morning session on February 3rd would present talks from Bryn Mawr and the University of Pennsylvania; while the afternoon session would be devoted to presentations from Princeton University. The morning session of February 4th will have contributions from Penn State University and Temple University. The afternoon session of February 4th—the closing session—will have speakers from Johns Hopkins, University of Delaware, and University of Maryland. That session will be held in honor of Dr. E. Emmet Reid, a distinguished chemist who was for most of his career on the chemistry faculty at Johns Hopkins University.

The subject matter of the talks of the symposium will be of the Professor's own choosing. This should make for a very varied and exciting two-day session.

The professors represented are: Dr. Frank Mallory, Dr. Edward R. Thornton, Dr. Michael R. Cava, Dr. Paul Schleyer, Dr. Maitland Jones, Dr. Taylor, Dr. George Hamilton, Dr. Daniel Swern, Dr. David Dalton, Dr. Emil White, Dr. Howard Kwart, Dr. Staley.

MOLECULAR SPECTROSCOPY SYMPOSIUM

The Symposium of the Molecular Spectroscopy Division will be devoted to the presentation of one-hour lectures on the fundamentals of some newer aspects of spectroscopy. It is intended to provide the attendee with a learning experience that is generally not available at scientific meetings. Each lecturer was selected because he is both an expert in the field and is known to present an interesting and informative lecture in his field. The lectures will be concerned with Laser-Raman (Robert Hannah, Perkin-Elmer Corporation, Norwalk, Conn.), Infrared Fourier Transform Spectroscopy and Its Latest Applications (Peter R. Griffiths, Sadtler Research Laboratories, Philadelphia, Pa.), Fourier Transform NMR (Edwin D. Becker, National Institutes of Health, Bethesda, Md.), Electron Spectroscopy for Chemical Analysis (W. A. Wolstenholme and M. Barber, AEI Scientific Apparatus, Inc., White Plains, N.Y.) and Mössbauer Spectroscopy (Leopold May, The Catholic University of America, Washington, D.C.).

6TH MARM BANQUET

Thursday, February 4, 1971

Cocktails—Cash Bar—6:30 P.M.

Dinner—$7.00—7:30 P.M.

Baltimore Hilton Hotel

Speaker: C. G. Overberger—"The Present and Future of Primary Publications"

ANNOUNCEMENT OF 1971 CHARTER FLIGHT TO EUROPE

The Polymer Division of the ACS is planning a round trip charter flight by Jet from New York to Amsterdam for the summer of 1971. The flight is timed to coincide with the completion of the XXIII International Congress of Pure and Applied Chemistry (IUPAC) to be held in Boston, July 25-30, 1971. Any regular or affiliate member of the Polymer Division of the ACS may participate in this flight as well as spouse, children, and parents living at the same address. A total round trip cost of $190 or less is anticipated. As in past years, all funds not committed to the actual cost of the flight will be refunded to the participants.

The dates for this flight will be as follows:

EASTBOUND, July 31—New York JFK to Amsterdam

WESTBOUND, August 22—Amsterdam to New York JFK

Round trip reservations are made by mailing $100 deposits per seat. All checks should be made payable to *ACS POLYMER 1971 CHARTER*. The mailing address is: Dr. Charles A. Garber, Structure Probe, Inc., 535 E. Gay St., West Chester, Pa. 19380.

The **Institute for Scientific Studies** has announced the First Winter Institute in Chemistry to be held on Sanibel Island, Florida.

The courses will consist of morning lectures and evening workshops. Afternoons are free for informal discussions. The courses offered are:

Chemical Kinetics, Jan. 25-30, 1971.
Director—Sidney W. Benson

Organic Synthesis, Feb. 1-5, 1971.
Directors—Barry M. Trost
Edwin Vedejs

Advanced Mass Spectrometry, Feb. 8-12, 1971.
Director—Fred W. McLafferty

Information may be obtained by writing to:

Institute for Scientific Study
P. O. Box 284
New Paltz, N. Y. 12561

MARYLAND SECTION NEWS

FOOD & DRUG ADMINISTRATION

Mr. Maurice L. Strait has been appointed Deputy Regional Director, FDA, Region III. He is in charge of the Baltimore office. He joined FDA in 1948 as an inspector and has held a number of positions including those of Deputy District Director of the Kansas City and New York City offices before taking charge of the Baltimore facility.

BALTIMORE SOCIETY FOR PAINT TECHNOLOGY

Dr. Leroy W. Shuger, Vice President of the Baltimore Paint and Chemical Corporation, Baltimore, Maryland, was awarded the Herman H. Shuger Memorial Award by the Baltimore Society for Paint Technology and the Baltimore Paint, Varnish and Lacquer Association. The Shuger Award is given annually to that individual who has performed outstanding service to the paint industry.

JHU

Professor John P. Doering was chosen as a Distinguished Young Scientist of 1970 by the Maryland Academy of Sciences.

On November 19, 1970, **Dr. Alex Nickon** spoke at the 30th Frontiers in Chemistry Lecture Series at Case-Western Reserve University on the topic "Stereochemistry of Acid Cyclizations of 1,5-Dienes." He also presented colloquia this fall at Ciba Pharmaceutical Laboratory, American Cyanamid's Lederle Laboratory, East Carolina State University and Rice University.

Professor Robert G. Parr presented a lecture at Seton Hall University, South Orange, New Jersey on November 10, 1970. The title of his talk was "The Problem of Understanding Vibrations of Diatomic and Polyatomic Molecules".

On November 11, 1970 **Professor Parr** spoke at Princeton University on "Vibrational Force Constants from Electron Densities."

JHU

In October, at the Department of Chemistry, Northwestern University, in the lecture series, "Newer Methods and Procedures in Chemical Synthesis," **Dr. G. H. Posner** gave a talk entitled "Organo-copper Reagents in Synthesis."

UNIVERSITY OF MARYLAND

The Third A. G. DuMez Memorial Lecture, presented on Friday, December 11, by the University of Maryland School of Pharmacy featured "Advances in Medicinal Chemistry."

Dr. Edward E. Smissman, School of Pharmacy, University of Kansas Distinguished Professor and Chairman, Department of Medicinal Chemistry delivered the lecture honoring the memory of the former dean of the Maryland Pharmacy School.

Dr. Smissman who was awarded the Ph.D. from the University of Wisconsin, served on the faculties of the schools of pharmacy at the University of Illinois, 1952 to 1955, and at the University of Wisconsin, 1955 to 1960. In 1960 he went to the University of Kansas as Professor and Chairman of the Medicinal Chemistry Department, and in 1964 was conferred the Distinguished University Professorship.

A stimulating educator and in demand as a lecturer, Dr. Smissman has appeared before the staffs of most leading American pharmaceutical and chemical manufacturers and at American and Canadian universities.

Dr. DuMez was dean of the Maryland Pharmacy School from 1926 until his death in 1948. A leader in raising standards for pharmaceutical education, Dean DuMez, keenly perceptive of the needs of pharmacy, was instrumental in establishing graduate studies at the pharmacy school. For his contributions and service he was awarded the highest national pharmacy award, the Remington Medal.

AUDREY CHEEK, DULANEY HIGH TEACHER WINS ACS AWARD

Miss Audrey J. Cheek, chairman of the science department of Dulaney High School, has won the American Chemical Society's $1,000 James Bryant Conant Award in High School Chemistry Teaching sponsored by E. I. duPont de Nemours and Co., Inc. Announcement of her selection was made in Chicago at a general session of the society's 160th national meeting.

Miss Cheek became a chemistry teacher at Dulaney in 1960, after several years as an industrial chemist. She was named chairman of the school's science department in 1967.

Acclaimed by her colleagues as an outstanding teacher, Miss Cheek is credited with the ability to communicate complex concepts with exceptional clarity. She is said to arouse student interest with remarkably simple examples and demonstrations of sophisticated chemical phenomena. She has been particularly successful in using molecular models of her own design.

The Conant Award will be presented to Miss Cheek at the society's 161st national meeting in Los Angeles next March. She will be one of six teachers receiving the award from six geographic districts. District 2, which includes Maryland, also embraces Delaware, the District of Columbia, Ohio, New Jersey, Pennsylvania, and West Virginia.

Miss Cheek was born in Baltimore City and attended the public schools there. She received the A.B. degree in chemistry from the University of North Carolina at Greensboro in 1953 and then went to work for the U.S. Industrial Chemicals Corp. in Baltimore City as a chemist.

In 1955 she joined the research staff at the Crown, Cork, and Seal Co., where she worked on coatings and linings for packages and closures. From 1957 to 1959 she was with the Gunther Brewing Co., where she worked on improved shipping and packaging containers. In 1959 she became a research chemist at the Pemco Corp., and also an assistant in chemistry at the newly formed Catonsville Community College.

It was the latter position which helped her realize that teaching was her true profession. As a result, she started at Dulaney High School in September, 1970.

Miss Cheek holds the master of education degree in school administration, obtained from Loyola College in 1965. For the past two years she has been pursuing an evening course at the Johns Hopkins University leading to the master's degree in the liberal arts, with modern science as her specialty.

During her years at Dulaney, Miss Cheek has been a science club sponsor, student council adviser, and a coordinator of the Baltimore City-County Science Seminars. For the past five years she has taught chemistry to elementary school children as part of the summer "Have Fun With Science" program sponsored by the Maryland Academy of Sciences.

(reprinted from the Jeffersonian, September 17, 1970.)

IF YOU CHANGE YOUR ADDRESS . . . Please do not notify the Editor of the *Chesapeake Chemist*, but send your new and old addresses to: The American Chemical Society, 1155 Sixteenth Street, N.W., Washington, D. C. 20036. The Maryland Section will then be notified.

THE BAROMETER STORY

By Dr. Alexander Calandra,
Washington University

(Reprinted from Chemical Bond)

Some time ago I received a call from a colleague who asked if I would referee the grading of an examination question. He was about to give the student a zero for his answer to a physics question, while the student claimed he should receive a perfect score and would do so if the system were not set up against the student.

The question was "Show how it is possible to determine the height of a tall building with the aid of a barometer." The student's answer was: Take the barometer to the top of the Building, attach a long rope to it, lower it to the street and then bring it up, measuring the length of the rope. The length of the rope is the height of the building."

Now this is a very interesting answer, but should the student get credit for it? I pointed out that the student really had a strong case for full credit, since he had answered completely and correctly. On the other hand, if full credit were given, it could contribute to a high grade, which is supposed to certify that the student knows some physics, but the answer did not confirm this. I suggested that the student have another try at answering the question. I was not surprised that my colleague agreed, but I was surprised that the student did.

I gave the student six minutes, with the warning that the answer should show some knowledge of physics. At the end of five minutes he had not written anything. I asked if he wished to give up, but he said no, he had many answers; he was just thinking of the best one. In the next minute dashed off this answer; "Take the barometer to the top of the building and lean over the edge of the roof. Drop the barometer, timing its fall with a stopwatch. Then using the formula $S = \frac{1}{2} at$, calculate the height of the building."

At this point I asked my colleague if he would give up. He conceded and I gave the student almost full credit, but I recalled that he had said he had other answers to the problem so, I asked him what they were.

"There are many ways of getting the height of a tall building with the aid of a barometer," said the student. "For example, you could take the barometer out on a sunny day and measure the height of the barometer, the length of the shadow of the building, and by the use of simple proportion determine the height of the building.

"Fine," I said, "And the others?"

"If you want a more sophisticated method, you can tie the barometer to the end of a string, swing it as a pendulum, and determine the value of "g" at the street level and at the top of the building. From the difference between the two values of "g," the height of the building can, in principle, be calculated."

"If you don't limit me to physics solutions, there are many other answers, such as saying to the superintendent of the building, "If you will tell me the height of this building, I will give you this barometer."

At this point I asked the student if he really didn't know the answer. He admitted that he did, but that he was so fed up with college instructors trying to teach him to think and to use critical thinking, instead of showing him the structure of the subject matter, that he decided to take off on what he regarded mostly as a sham.

6th MARM

February 3, 4 & 5

COPY DEADLINE

Copy for the *Chesapeake Chemist* should be forwarded to the Editor not later than the tenth of the month preceding publication.

SIXTH MARM TO FEATURE EASTERN ANALYTICAL SYMPOSIUM, INC.

"In order to broaden the scope of the Symposium in the sense of including the very latest developments in the fields of Analytical Chemistry and Spectroscopy, it has been decided that the EAS will include in its next program (November 10, 11, & 12, 1971) a maximum of three half-day sessions of submitted papers. Each speaker will be allowed 30 minutes for his presentation; 25 minutes for the talk and 5 minutes for questions and answers. All those interested in presenting papers at this meeting should send *four (4) copies of a 300 word abstract to:* A. Z. Conner, Hercules Inc., Research Center, Wilmington, Delaware 19899
IN ORDER FOR ABSTRACTS TO BE REVIEWED FOR CONSIDERATION THEY MUST BE RECEIVED BY MAY 1, 1971."

22ND PITTSBURGH CONFERENCE

The 22nd Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy will be held at the Cleveland Convention Center from February 28 to March 5, 1971. The agenda of sessions and registration information is available from William G. Fateley, 4400 Fifth Avenue, Pittsburgh, Pennsylvania 15213.

FEBRUARY MEETING
Wednesday 17th
DRUGS AND BIOCHEMISTRY

COVER
Baltimore Civic Center
Site of
6th MARM

ACS SHORT COURSES

Feb. 6. Column Selection in Gas Chromatography; Harold M. McNair and Walter R. Supina. Baltimore, Md.

Feb. 27–28. GC/MS/Computer Techniques; Francis W. Karasek, William H. McFadden, and Walter E. Reynolds. Cleveland, Ohio.

Feb. 27–28. Interfacing the Minicomputer; Raymond E. Dessy and David G. Larsen. Cleveland, Ohio (new course).

To obtain complete information and registration forms, write to Education Department, ACS, 1155—16th St., N.W., Washington, D.C. 20036, and specify course and location. To register by phone, call (202) 737-3337, ext. 258.

EMPLOYMENT NEWS

The Maryland Section of the American Chemical Society, wishing to lend a helping hand in the current employment depression is initiating a column, in which chemists may indicate their availability free of charge. The ads would be free to all members of the section. Unemployed members would receive first priority, employed members desiring a change second, and students who are not members would receive third priority. Such priorities would be invoked only if and when there were more ads submitted than there was space available.

For such a service to be used it is necessary to provide a mechanism whereby an "advertiser" may remain anonymous. While the details of this have not been worked out it should not pose any serious problem. Please send your resumes to:

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