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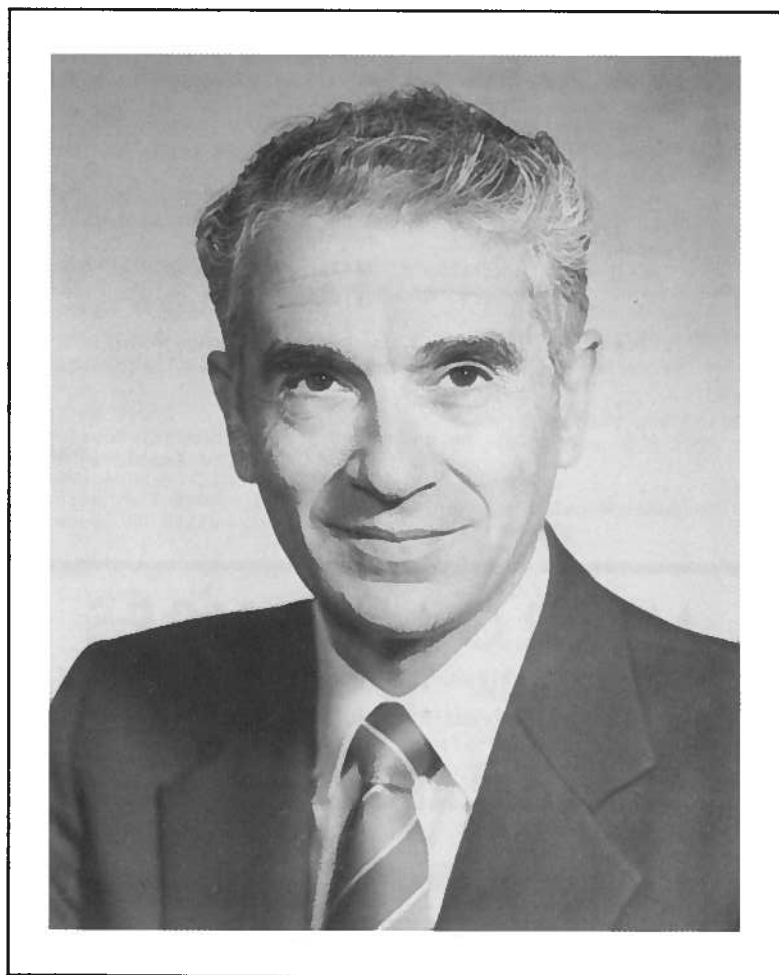
# CHESAPEAKE CHEMIST

MARYLAND SECTION  
AMERICAN CHEMICAL SOCIETY

VOL. XXXVI

DECEMBER, 1980

NUMBER 9



*THE MARYLAND CHEMIST OF THE YEAR*

MARYLAND SECTION BUSINESS

This issue of *The Chesapeake Chemist* contains the minutes of the meeting of the Executive Committee held on September 24. These minutes comprise brief descriptions of numerous items of business which interest the Section and many of its members, and many of these matters are not publicized elsewhere. Some of these things may interest or concern you.

Among other matters, we note that planning has already begun for the 1986 MARM to be held in Baltimore; nominations are requested for an award to an outstanding college chemistry teacher; a number of ACS audio courses are being planned or contemplated; and changes are being discussed in both local and national by-laws.

Your Executive Committee Members will be pleased to provide additional information to you, and will also be pleased to hear your opinions.

MARYLAND SECTION FUTURE PROGRAM

Date	Location	Speakers	Topic
January 21	Univ. of Md. Balt. County	Isidore Adler Univ. of Maryland	Geochemical Exploration of the Planets
February 18	College of Notre Dame	John T. Yates NBS  Bernard P. McNamara CSL, APG	Surface Chemistry  Chemical Toxicology
March 18	U.S. Naval Academy	To be announced  William H. Zoller Univ. of Maryland	Chemical Defense  Atmospheric Chemistry
April 15	College of Notre Dame	Robert J. Huggett Virginia Inst. of Marine Science  To be announced	Trace Metals in Coastal Plain Estuaries  Chemical Research to Feed the Expanding Billions
May	Johns Hopkins	Rensen Award	

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# THE CHESAPEAKE CHEMIST

VOL. XXXVI

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Lou Sacchetti  
Maria Kirk

Simon Courtade  
Sister Vincent

ALTERNATE COUNCILORS

Merle Eiss  
Robert L. Caret

Alvin Bober  
Clara Adams

COMMITTEE CHAIRPEOPLE - 1980

Awards and National Nominations.....  
Joyce J. Kaufman  
The Johns Hopkins University  
338-7417

Chemical Education....Sr. Mary Vincent  
The College of Notre Dame of MD  
435-0100

Program.....Elwin C. Penski  
877-2923 or 671-3953

House.....Nolan Phillips  
J. M. Huber Corp.  
Havre de Grace, MD 21078  
385-0159

Member Assistance.....Joseph Cogliano  
W. R. Grace & Co.  
531-5711

Public Relations.....Robert L. Caret  
Towson State University  
321-2670

Membership.....Robert W. Kreps  
412-B Hidden Brook Drive  
Glen Burnie, MD 21061  
760-9631

Publicity.....Richard H. Smith  
Western Maryland College  
848-7000 or 876-2055

Rensen Award.....Dean Robinson  
The Johns Hopkins University  
338-7430

Finance.....Alvin Bober  
655-5254

COUNCILORS

Donald Jones..Western Maryland College  
848-7000 ext 493 or 876-2055

David Roswell.....Loyola College  
323-1010 ext 235

Charles Rowell.....U. S. Naval Academy  
267-3302

Timothy Parr.....Westinghouse  
747-4195

*The Chesapeake Chemist* is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Raymond C. Petersen, 9329 Joey Drive, Ellicott City, Md. 21043. Send advertising copy and inquiries to Merle I. Eiss, McCormick and Co., Inc., 204 Wight Avenue, Hunt Valley, Md. 21031. The Maryland Section is not responsible for opinions expressed herein. Editorials express the opinions only of their authors. The Editor is responsible for all unsigned material.

## AUDIO COURSE

TOPIC: APPLIED PROBLEM SOLVING THROUGH CREATIVE THINKING

SPONSOR: The Maryland Section of ACS is the sponsor and is subsidizing this course. The ACS is providing the tape at no charge.

WHY THIS COURSE WAS CHOSEN: This is one of the most popular of the ACS audio courses.

WHO SHOULD TAKE THE COURSE: Scientists and engineers who need to improve the way they recognize, analyze and solve problems.

CONTENT: Designed for both individual and group use, the course emphasizes proven techniques for the solution of problems requiring creative thinking. Through a variety of interesting and challenging exercises presented in the lectures and manual, the course shows participants how to make use of powerful new group ideation techniques for solving problems. Evaluation of ideas, group judgment techniques, selling an idea to management and implementing it, and enhancing creativity through the use of the subconscious are some of the other important topics discussed. In addition to problem solving through creative thinking, the course covers successful methods for the solution of analytical and judgmental problems.

AUTHOR OF TEXT AND TAPE: Dr. J. David Reid, recently retired after 45 years with the U.S. Department of Agriculture, was a pioneer in the development of "permanent press" fabrics. He is the author of 206 scientific publications and holds over 40 U.S. and foreign patents. He is on the faculty of the Creative Problem Solving Institute.

DISCUSSION LEADER: A prominent research manager from the Baltimore area will be selected to lead the discussions.

DATE: Saturday, 31 January 1981

TIME: 9:00 AM - 5:00 PM

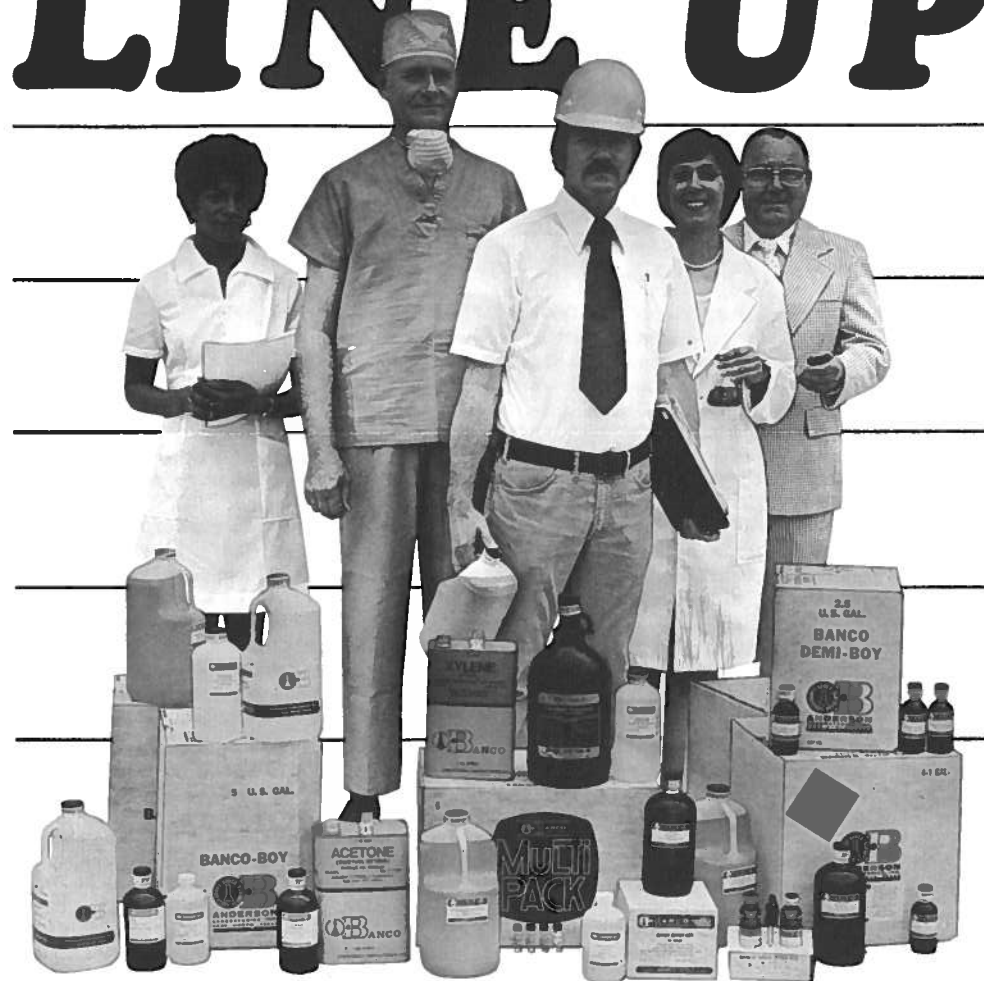
PLACE: Audio Visual Center  
Quality Inn (Exit 26-S of I-695)  
1015 York Road  
Towson, Maryland

COST: \$28.00 members, \$18.00 students, \$5.00 unemployed ACS members. Registration of students and unemployed may be limited to prevent an excessive loss to the Section. Preference will be given to those who register first. Cost includes lunch, two coffee breaks, and a 200 page manual (costing \$18.00 if bought alone).

REGISTRATION: All payments must be made in advance. Check must be sent before 14 January 1981 to:

Sister Mary Vincent  
Notre Dame College  
4701 North Charles Street  
Baltimore, Maryland 21210  
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Dr. M. Gali Sanchez was born in Almeria, Spain in 1925. His early education was interrupted by the Spanish Civil War. Having migrated to France in 1939, his education was again disrupted by the Second World War. He and his family migrated to Cuba where in 1942 Gali was able to resume his formal training. In 1944, he received his "Bachillerato" in Sciences from Instituto Vedado in Havana, and in 1951 received a Doctor of Science degree from the University of Havana in Physical-Chemical Sciences. He did additional post-graduate work in physics at the Johns Hopkins University under a university scholarship. While attending school, Gali worked as a laboratory assistant and instructor. In 1951, he migrated to the United States and became an American citizen in 1955.

In 1952, Dr. Sanchez joined the Davison Chemical Corporation in Baltimore as a research chemist where he had an opportunity to work in his areas of interest: surface phenomena, colloids, catalysis, and solid state. Davison was acquired by W. R. Grace & Company in 1954.

After transferring to the Central Research Division of Grace he worked in various fields of R&D and held administrative and management positions. During the period 1955-1971, he was: Research Supervisor, Director of the Inorganic Research Department, Vice-President of Inorganic and Nuclear Research, Vice-President of Research, General Manager of the Research Division, and President of the Corporate Research Division. In mid 1971, a serious illness forced him to relinquish his administrative duties and he remained on sick leave for an extended period.

Since his return to full duty, he has limited his activities to scientific and technical matters working directly with a small group of scientists and technicians. Presently Dr. Sanchez is Vice-President in the Industrial Chemicals Group of W. R. Grace & Company, and works at the company's Washington Research Center in Columbia.

Dr. Sanchez is the inventor of over sixty U.S. patents and about twenty pending cases. He has authored ten scientific papers. His contributions range over a wide spectrum of industrial research activities. He is a member of the American Chemical Society, the Electrochemical Society, the Faraday Society, and a Fellow of the American Institute of Chemists.

Gali is very involved in community youth activities. He is a director of the Greater Severna Park Athletic Assoc. and President of the Anne Arundel Youth Soccer League. His favorite hobby is coaching youth soccer. He and his wife, the former Reland M. Bassette, reside in Severna Park. They have five children.

#### PARTICULATE AUTOMOTIVE EMISSIONS CATALYSTS

A review of developments in the reduction of automobile exhaust pollutants through the use of particulate catalysts will be given. This will include early developments circa 1960 in the state of California, the increasing severity of the problem nationwide, and the eventual passage by Congress of the Clean Air Act. The gradual evolution of various measures to abate the emissions of carbon monoxide and hydrocarbons will be traced including early engine modification and eventual introduction of the catalytic converter.

The presentation will touch on the interrelated activities of three major industries which led to the introduction in 1975 of the catalytic converter. The oil industry's efforts to supply unleaded gasoline, the automobile industry's incorporation of the catalytic converter into the exhaust system, with

*cont. on p 8...*

## THE MARYLAND CHEMIST AWARD

#### DATE:

Wednesday, December 10, 1980

#### PLACE:

Knott Science Center  
The College of Notre Dame  
of Maryland  
North Charles Street  
Baltimore

#### SPEAKER AND TOPIC:

THE MARYLAND CHEMIST  
AWARD ADDRESS  
8:30 pm  
Dr. M. Gali Sanchez  
W.R. Grace and Company  
"Particulate Automotive  
Emissions Catalysts"

#### COCKTAILS AND DINNER:

Doyle Building Dining Room  
College of Notre Dame

Cocktails 6:30 - 7:15

Hot buffet dinner (7:15) \$8.00  
per person, except spouses, re-  
tired chemists and students may  
attend the dinner for \$6.00

Reservations should be made by  
sending checks to

Elwin C. Penski  
2515 Jerusalem Road  
Joppa, Maryland 21085

before December 1, 1980.

We must order the exact number  
of dinners by December 3, 1980.

Late reservations may be made by calling 879-8589 (local to Baltimore) or 671-2243 between 8:00 am and 4:30 pm weekdays, or 877-2923 evenings after 7:00 pm, on or before December 2, 1980.

It is not necessary to be a member of the American Chemical Society to attend. You may attend the lecture without attending the dinner.

#### MARYLAND CHEMIST AWARD

The Maryland Chemist Award was established in 1962 to recognize and to 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, chemical engineering or chemical education.

Previous recipients have been:

1962 Dr. E. Emmet Reid  
1963 Dr. W. Mansfield Clark  
1964 Dr. Alsoph H. Corwin  
1965 Dr. John C. Krantz, Jr.  
1966 Dr. Belle O. Talbot  
1967 Dr. Walter S. Koski  
1968 Dr. George L. Braude  
1969 Dr. Leslie Helleman  
1970 Dr. Paul H. Emmett  
1971 Dr. Giles B. Cooke  
1972 Dr. Arnold M. Seligman  
1973 Dr. Lester P. Kuhn  
1974 Dr. Joyce J. Kaufman  
1975 Dr. Benjamin Witten  
1976 Dr. Richard L. Hall  
1977 Dr. Henry C. Freimuth  
1978 Dr. Gunther L. Eichhorn  
1979 Dr. Emil H. White

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all the attendant engine modifications required, and the chemical industry's development, manufacture, and supply of the necessary catalysts to allow compliance with the emission standards set by EPA.

Emphasis will be given to the development, properties, and performance of first generation automobile exhaust catalysts, as well as some of their shortcomings. Finally, the development and introduction of second and third generation catalysts to cope with the stricter emission standards set by the EPA will be covered. This will include improved oxidation catalysts as well as "three-way catalysts" capable of reducing the emissions of carbon monoxide, hydrocarbons, and oxides of nitrogen.

The presentation will trace the preparation of these advanced catalyst systems from raw materials to finished catalysts, as well as their properties and functional performance. Special attention will be given to the development of spherical supports with a bimodal pore size distribution and the important role played by macroporosity in durability and stability in actual use under severe operating conditions over a life of 50,000 miles. The presentation will conclude with a brief outline of expected future developments and trends in this field.

#### COUNCILOR'S REPORT - LAS VEGAS

The Council Meeting in Las Vegas was a well attended but very sedate meeting. There were only a handful of items up for action and these were dealt with rather easily. In spite of that the meeting lasted almost six hours.

The meeting began with a series of reports from ACS officers, both past and present. One interesting item was the fact that ACS has an all-time high of 119,043 members.

During committee reports the following items were voted on:

- 1) Three proposals calling for 50% reimbursement of travel expenses (travel only) for all councilors to all meetings were defeated.
- 2) An amendment to the fair elections procedure which would have allowed local sections or divisions to support a person for office until he was actually nominated was defeated.
- 3) A plan to support divisions with money from dues and meetings and expositions. The support would involve approximately \$181,000/year with one third from dues and two thirds from meetings and expositions. This plan was adopted.
- 4) A plan to increase support to local sections by tying an automatic escalator to all aspects of the local section annual allotment was defeated. Although the majority felt that local sections needed support, this approach was not the preferred one.
- 5) A plan to tie national dues to income or age was discussed. Nothing was presented for action, however, the Council was in general agreement that some type of income to dues plan was a good idea. This item will come up at the Spring meeting.
- 6) A bylaw amendment changing the word chemistry to chemical science in the membership requirements was adopted. This bylaw change would permit holders of degrees in geochemistry, chemical physics, etc., to become members without any further formality. The terminology chemical science was chosen to allow for flexibility and to prevent spelling out each individual discipline.

In all cases the Maryland Councilors voted together and with the majority.

The Spring Council meeting may prove to be an interesting one. There will be items up for action on local section apportionment, eligibility for and length of service on society committees, privileges of affiliates, and probably several more topics.

Alvin Bober  
Donald E. Jones

David Roswell  
Charles Rowell

#### EXECUTIVE COMMITTEE MINUTES

The Executive Committee of the Maryland Section, American Chemical Society, was called to order by the Chairman, Dr. Melvin Miller, on Wednesday, September 24, 1980, at 7:40 P.M. at the Knott Science Center, Notre Dame College, Baltimore. The following members were present: A. Bober, H. Cohen, M. Eiss, D. Hoster, F. Hummel, D. Jones, M. Kirk, H. Klapper, M. Miller, E. Penski, R. Petersen, D. Roswell, C. Rowell, L. Sacchetti, E. Silversmith, Sister Vincent.

Since the minutes of the April meeting had been published in the May issue of the *Chesapeake Chemist*, they were not read, but were accepted as published.

*Chairman's Report.* The 1986 MARM will be held in Baltimore; the General Chairman will be R. L. Caret; no Program Chairman has been appointed yet. It will be held at the Baltimore Hilton, on either March 4 or May 12, 1986. This represents a change from earlier announcements which gave the date as 1985.

Dr. T. McNeese and Dr. N. Zączek have audited the books and found them to be in order.

Mr. Klapper's new address is 3313 Terrapin Road

Phone: 653-3351 Pikesville, MD 21208

Carol Frischman of ACS Local Section Activities office has announced that the deadline for soliciting Program Development Funds is November 15, 1980.

Kansas City Section would like suggestions for their Award in Agricultural and Food Chemistry by September 1, 1980.

The Department of Public Affairs, ACS, would like us to identify names of local officials who have scientific or engineering backgrounds. No names were suggested.

The 1981 MARM awards committee would like suggestions for the E. Emmet Reid Award for outstanding teachers in college chemistry.

Responses to the above announcements may be made to Dr. Miller.

*Program Chairman.* The program for the year is now complete; Mr. Penski distributed copies of the arrangements for the meetings to come; the name of M. Gali Sanchez, Vice President of W. R. Grace, has been presented for the Maryland Chemist Award, for his work in second-generation catalysts for automobiles.

*Treasurer.* Mr. Klapper distributed copies of the summary of expenses for the present year; the Section is in good financial condition. The only bills outstanding are for the Councilors' expenses to Las Vegas, and the dinner at W. R. Grace.

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**Awards.** Mr. Cohen suggested that the Chairman of the Maryland Section Distinguished Service Award committee be Dr. Don Jones, the recipient of the Maryland Section Service Award for 1980. This was approved.

**Education and Safety.** Sister Vincent hopes to have a seminar on Computers in Chemistry in January, using ACS tapes; a workshop on High Pressure Liquid Chromatography sponsored by Beckman Instruments is being considered for March 14, 1981; a possible co-sponsor on Inductively Coupled Plasma, sponsored by Allied Research, is being considered. The subject of having vendors present during a short course or during the cocktail hour was then discussed. There was some opposition, and no decision was reached.

Dr. Miller has worked with the Maryland Association of Science Teachers, and will help give a seminar on Chemical Safety at the fall convention, in collaboration with Dr. Rebbert of Mt. St. Mary's College on October 17, 1980.

Dr. Jones mentioned the new federal regulations on waste generated by small businesses and colleges, which are to be published in the near future.

**Member Assistance.** Mr. Cogliano sent a report that he will act as a clearing house for employers who need to fill vacancies as well as for persons looking for work.

**Publicity.** Dr. Smith has resigned as Publicity Committee Chairman. Dr. Jones has been mailing the posters on an interim basis.

**Finance Committee.** Mr. Bober suggested that we start to prepare estimates for the 1981 budget.

**Student Activities.** Mr. Bober feels that the previous programs have been excellent. Mr. Penski suggested that it might be desirable to have a program for high school teachers instead of for students this year. Suggestions are in order for additional persons to work on this committee.

**Congressional Science Counselors.** Dr. Gornick is currently not a member of the Maryland Section. Dr. Norbert Zaczek will be asked to serve as science counselor to Ms. Mikulski.

**Councilors' Report.** Dr. Roswell announced that since the report had been published in *The Chesapeake Chemist*, and that some of the reports had been published in C&E News, he would not report further. Changes in By-laws are being considered. Mr. Bober feels that Council is too large (400 persons). He also feels that committees should be spread among more persons; some individuals are on seven or eight committees. The present ratio of Councilors to membership is too high and should be re-apportioned.

Dr. Roswell is more concerned about committee personnel than about the number of Councilors. Good ideas are not accepted readily. This issue will be discussed in Atlanta - how long should a person be permitted to serve on a committee?

Mr. Bober suggested that we form an ad hoc committee to present ideas to the Council. Dr. Roswell summed up the reports; he mentioned that the time involved for Council work is very large. The committees meet all day Sunday, sometimes on Monday and Tuesday, and the Council meets all day Wednesday. There have been suggestions that the Society hold on governing session per year from the scientific meetings.

**Chesapeake Chemist.** The November issue is now being typed. Merle Eiss reported that prices have gone up, and advertising has gone down. If advertisers are not found, the cost of publishing the Chemist will increase from \$1000.00 to \$2400.00 for a year. She asked for \$1200 to meet expenses until June; it

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was moved and seconded that this be approved; the motion carried. She has located a replacement who is willing to act as Business Manager when she becomes Chairman-elect.

**Old Business.** The December Executive Committee meeting will be December 1. Dr. Roswell read the report of the Nominating Committee, which was published in the September issue of *The Chesapeake Chemist*.

**New Business.** The Treasurer asked for guidelines on how much should be spent by the Section for National meetings. This has been a very expensive year, with the meetings in Houston, Texas and Las Vegas, Nevada. The Treasurer should be informed about any trip which is to be made on Society business. We need a new budget. Mr. Bober again requested an estimate of all Committee expenses for next year.

Dr. Silversmith now has the Archives at his home. He announced that Morgan State University will host on April 11, 1981 the Intercollegiate Student Chemists, from New Jersey, Pennsylvania, Delaware, and Maryland schools. He would like support for the meeting from the Maryland Section. Dr. Roswell moved that we supply \$300.00 for the meeting; it was seconded and passed.

Mr. Penski presented a draft proposal for changes in the By-laws: the Chairman-elect should serve for two years, before serving as Chairman. This would provide an opportunity to attend the Local Section Leaders training meeting and to learn the problems involved in the job before trying to serve. The proposal was discussed; the past chairmen agreed that this might be desirable. It will be considered formally at a future Executive Committee meeting.

The meeting was adjourned at 9:30 P.M.

Respectfully submitted, F. C. Hummel, Secretary

## Towson State University

### SPRING 1981 CHEMISTRY EVENING COURSES

**CHEM 1905.361 CHEMISTRY FOR DANGEROUS DRUGS**  
Meets Tues. 7-10p.m., Feb. 9 - June 6.  
Instructor: Frank R. Milio, Assoc.  
Professor of Chemistry, Towson State  
University

**CHEM 1905.367 FORENSIC CHEMISTRY.** Meets  
Thurs. 7-10p.m., Feb. 9 - June 6.  
Instructor: John J. Tobin, Chief  
Chemist, Md. State Crime Lab

We also offer the following courses in the evening in the Spring of 1981:

Chemistry for Non-Scientists, General Chemistry I, General Chemistry II, Chemistry for Allied Health Sciences II, Organic Chemistry I, and Organic Chemistry II.

For Course Information, Call 321-3058  
For Registration Information, Call 321-2022

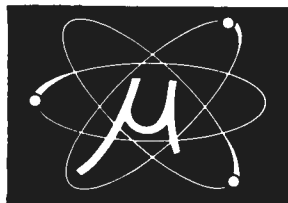
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