



THE **CHESAPEAKE
CHEMIST**

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXV

MAY, 1979

NUMBER 5

Presented to

Harry B. Gray

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

June 6, 1979

TIMELESS TOPICS

The time has come for a new Editor to welcome himself aboard *The Chesapeake Chemist*. Few comments are necessary at this time, however, because the outgoing Editor made all the appropriate observations in the April issue.

Eli Freedman has earned the gratitude of the Maryland Section for his management of the editorial affairs of the *Chemist* these past three years, and we do not feel at all presumptuous in speaking for the Section to thank Eli for an admirable job. Eli has generously offered his continuing help in producing this publication, and a glance at our masthead will tell you that he continues to serve as a Contributing Editor.

Incidentally, all members of the Maryland Section are invited to contribute articles or letters to *The Chesapeake Chemist*, and we will publish them as space permits. Please be reminded, however, that brevity is desirable, and topics should be timeless in nature because of the long lead time required for publication. Dated materials (e.g. announcements of future events) will be published when they are submitted sufficiently early.

BELLE OTTO TALBOT ROOM AT GOUCHER

A computer room in the chemistry department of Goucher College was dedicated as the Belle Otto Talbot Room at the 52nd annual Goucher College Chemistry Club banquet held on April 26. The room, containing computer terminals for student use, has been furnished by chemistry alumnae.

Dr. Belle Otto Talbot, who became a fifty year member of the American Chemical Society this year, was on the faculty of Goucher College from 1928-1966, serving as Chairwoman of the chemistry department from 1959 to 1965. She was Editor of *The Chesapeake Chemist* when it was first published in 1945, and she remained in that position for eight years.

Dr. Talbot chaired the Maryland Section of the ACS in 1955, and has served on numerous committees of the Society, both local and national. She was the recipient of the Maryland Chemist Award in 1966.

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THE CHESAPEAKE CHEMIST

VOL. XXXV

MAY, 1979

NUMBER 5

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The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Eli Freedman, 2411 Diana Road, Baltimore, Md. 21209. Send advertising copy and inquires 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.

FIFTY YEAR MEMBERS

Three members of the Maryland Section celebrate their fiftieth anniversaries as members of the American Chemical Society this year. They are Dr. Carlton E. Brown of Frederick, Dr. Marguerite Schmidt of Baltimore, and Dr. Belle Otto Talbot of Towson.

These members have received pins and lifetime meeting badges from the ACS, and will be presented with fifty-year membership certificates at a Section meeting of their choice.

Dr. Belle Otto Talbot was recently honored by Goucher College with the dedication of a computer room in her name, an event which is reported elsewhere in this issue.

Dr. Carlton E. Brown grew up in Washington, D.C. and its Virginia suburbs. He received degrees in chemical engineering and chemistry from Lehigh University and earned a Doctor of Science degree in industrial hygiene from Harvard in 1931.

Dr. Brown's professional activities have centered around studies of pollution by airborne particulate matter. He was employed by the U.S. Bureau of Mines in Pittsburgh from 1931 - 1947, and from 1947 - 1968 he worked in the Defense Department's Biological Warfare Program at Fort Detrick in Frederick.

Biographical data for Dr. Schmidt were not available at press time.

FALL 1979 MARYLAND SECTION PROGRAM

<u>Date</u>	<u>Location</u>	<u>Speaker</u>	<u>Topic</u>
September 19	Maryland Science Center	Dr. Foil A. Miller (U. of Pittsburgh)	Great Mistakes in Science
October 17	W. R. Grace Research Center	Dr. Lawrence H. Dunlap (Armstrong Cork Co.)	Principles of Polymer Chemistry
		Dr. Richard M. Ikeda (DuPont)	Super Polymers
		Two Additional Speakers	
November 14	College of Notre Dame	Dr. Daniel Lednicer (Mead, Johnson & Co.)	Serendipity and the Discovery of New Drugs
		Dr. Ralph Blomster (U. of Maryland)	Folk Medicine
December 12	College of Notre Dame	Maryland Chemist Award	

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HARRY B. GRAY

Harry B. Gray, the thirty-fourth Remsen Lecturer, is W. R. Kenan, Jr. Professor at the California Institute of Technology. He first studied mechanisms of inorganic substitution reactions at Northwestern University with Fred Basolo and Ralph G. Pearson. He received the Ph.D. from Northwestern in 1960, following which he was an NSF Postdoctoral Fellow at the University of Copenhagen, where he worked with Carl J. Ballhausen on studies of the electronic structures of metal complexes. He next went to Columbia University, where he was professor of chemistry, and in 1966 he went to Caltech.

Dr. Gray has published 240 research papers and 10 books. His current research interests are in the areas of bioinorganic chemistry and inorganic photochemistry. He is a member of the American Chemical Society and the National Research Council. He also serves on the editorial boards of several journals. His awards and honors include the E. C. Franklin Memorial Award (1967), ACS Award in Pure Chemistry (1970), Shoemaker Award (1970), Phi Lambda Upsilon Fresenius Award (1970), election to membership in the National Academy of Sciences (1971), Manufacturing Chemists' Association Award for Excellence in Chemistry Teaching (1972), Harrison Howe Award (1972), Phi Beta Kappa Scholar (1973-74), election to foreign membership in the Royal Danish Academy of Sciences and Letters (1974), and the ACS Award in Inorganic Chemistry (1978).

Abstract of Dr. Gray's Talk

MECHANISTIC STUDIES OF SOLAR ENERGY STORAGE REACTIONS INVOLVING POLYNUCLEAR RHODIUM ISOCYANIDES

Studies of homogeneous photocatalysts for solar energy storage reactions such as water splitting are underway in my laboratory. One system that combines the light trapping apparatus and catalytic functions in a single molecule is tetrakis (1,3-disocyanopropane) dirhodium (I), called rhodium bridge. The photophysical properties of this dication in solution will be described. In acidic aqueous hydrohalic acid solutions, rhodium bridge forms a blue tetrarhodium species, which upon visible irradiation gives hydrogen and a dirhodium (II) product. The results of flash photolysis experiments aimed at the elucidation of the mechanism of this hydrogen-producing reaction will be presented.



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THE 34th REMSEN LECTURER



DR. HARRY B. GRAY

DATE AND TIME:

Wednesday, June 6, 1979
8:30 pm

PLACE:

Remsen Hall, Room 101
Homewood Campus of
The Johns Hopkins University

SPEAKER:

Dr. Harry B. Gray
California Institute of
Technology

SUBJECT:

"Mechanistic Studies of Solar
Energy Storage Reactions In-
volving Polynuclear Rhodium
Isocyanides"

COCKTAILS AND DINNER:

The Johns Hopkins University
Faculty Club

Cocktails: 6:00 pm
Dinner: 7:00 pm
Cost: \$8.00

Reservations are necessary for the
dinner, and should be made with

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It is not necessary to be a member of the American Chemical Society to attend either the dinner or the talk. You are also welcome to the lecture without attending the dinner.

EXECUTIVE COMMITTEE MINUTES

The Executive Committee of the Maryland Section of the American Chemical Society was convened at 7:40 P.M. on Wednesday, January 10, 1979, at the Knott Science Center, College of Notre Dame, Baltimore, Maryland, by the Chairman, Mr. Howard Cohen. The following persons were present: James Leslie, Joseph Cogliano, Robert Kreps, Edwin Penski, Alan Bednarczyk, Ron Kassel, Carl Minnier, Melvin Miller, Eli Freedman, Alvin Bober, Frances Hummel, David Herlocker, Merle Eiss, Charles Rowell, R. Caret, Harold Klapper and Fred Gornick.

The minutes of the meeting on November 29, 1978 were read and corrected: the price of the dinners will be \$7.50 and \$5.50 during 1979.

Treasurer Ron Kassel reported that the plan for the year is not yet complete, but will agree with the projection of \$7,800 for the budget. The grant of \$400.00 for student awards was approved by the National Society.

The Chairman announced that all bills have been paid to date; forms to authorize signatures of the new officers must be filled in and sent to the Union Trust bank. Mr. Cohen feels that it is more satisfactory if all four major officers are permitted to sign checks for the Section. Mr. Freedman suggested that the Business Manager of *The Chesapeake Chemist* should also be permitted to sign checks. The following committee reports were made:

Program. Dr. Miller announced that the September 19, 1979 meeting will be different from our customary program. There will be a tour of the Maryland Academy of Science and one speaker. The Directors of the Academy will conduct the tour. The meeting of October 17 will be Industrial Chemistry. Dr. Miller may ask the President of the American Chemical Society to give the plenary address. There will be two speakers at the November meeting: Dr. Blomster, of the University of Maryland, Baltimore campus, will speak on Folk Medicine, and Dr. Lednicer, Chairman of the Medicinal Division, will speak on Serendipity and the Discovery of New Drugs. The December meeting will be the Annual Maryland Chemist's Award address. The Executive Board will meet on May 2, September 26, and November 28, 1979.

Education. Sister Mary Vincent had no report.

House. Mr. Penski. Dr. Leslie commented that Dr. Eichorn was very pleased with the Award meeting in December; he suggested that a pointer would be helpful to the speaker.

Member Assistance. Mr. Cogliano had no report; Mr. Cohen has had one request for help in locating a position.

Public Relations. Dr. Leslie has no report.

Membership. The material has arrived from the National Society; Mr. Kreps has sent cards to those persons on the list who may be interested in joining the Section.

Remsen Award. Mr. Cohen reported, in the absence of Dr. Dean Robinson; the budget has allocated \$1,500 for this meeting. The expense last year was \$1,294.17. Johns Hopkins paid \$392 toward support of this meeting. The Chairman asked if we should continue this program. It is expensive, and the parking at the University is difficult. Dr. Bednarczyk felt the \$500 award should be continued; perhaps the Johns Hopkins University would be willing to share more of the cost, and give more recognition to the Maryland Section. Perhaps they would be willing to share the transportation cost of the speaker. Local dues help pay for the Remsen Award, which is a Maryland tradition. The consensus of opinion was that the program should be maintained, but that we should try to negotiate with Dean Robinson to share expenses. Mr. Freedman suggested that the Award should be mentioned in C&E News.

Finance Committee. Mr. Bober had no further report; the budget was presented in November.

Chesapeake Chemist. Mr. Freedman asked the Business Manager, Mrs. Eiss, to report; the first five issues in 1978-79 have averaged \$378 per issue. Special approval is needed for the March issue, since pictures of the High School chemistry achievement winners should be published. Dr. Leslie moved, and was seconded by Mr. Kreps, that the pictures of the achievement winners be run in the March issue again this year. The motion was carried.

It is very difficult to get itemized bills for the publication; Merle has requested them, so that an effort can be made to reduce the cost.

Student Awards. Dr. Minnier reported that twenty letters have been sent to Maryland High School chemistry departments; seventeen responses have been received, with eleven pictures of winners. Letters of invitation to the March meeting will be sent this week. Dinner will be at the Faculty Club of the Naval Academy, and the lectures given at Michelson Hall, room 117. Both speakers have been contacted, and arrangements made for meeting them. Transportation for the students has been arranged. Dinner will cost about \$7.50. The Naval Academy will handle publicity for the meeting.

MARM. Dr. Gornick reported that each member of the steering committee has been called. 985 persons attended the spring meeting at Hunt Valley; \$2,900 should be received by the Section as its share of the surplus after expenses. The final report is nearly complete, and should be distributed to every member of the committee. Since the surplus was unusually large, the price of registration should perhaps be reduced. The MARMs are becoming very good, and very similar to National meetings. Symposia are excellent, and above the calibre of the speakers sent to local meetings.

Old Business. The discussion of the Section bank account was continued. Dr. Miller mentioned that the Program Chairman, who is also the Chairman-elect, must be permitted to sign checks since he is authorized to sign contracts for speakers, meeting places and other meeting expenses. The Executive Committee approves these expenses. Mr. Cohen feels that the system should be changed. The officers should be bonded. Mrs. Eiss moved that the Treasurer plus two other officers should be authorized to sign checks. The Treasurer will continue to sign the checks, but in case of emergency, either of the other officers may sign them to pay necessary expenses. After some discussion, it was mentioned that this is the present situation; the motion was therefore withdrawn.

New Business. Mr. Cohen announced that he has received a list of representatives in science from the Congressional Science Councillors. Volunteers are needed; Mr. Howard Fawcett is coordinator of this program. Mr. Sarbanes might be interested in being called about this, since there are science jobs available at Aberdeen Proving Grounds.

Dr. Minnier announced that Public Relations is a very difficult problem in this area. Perhaps we could get sample tapes from the National Office, and contact local radio stations. A college radio station might be interested; local newspapers might then be more willing to publish notices of meetings. We invite very fine persons to come, but no attention is paid to them.

The meeting was adjourned at 9:45 P.M.

Respectfully submitted,

F. C. Hummel, Secretary

LETTER TO THE CHAIRMAN

April 4, 1979

Dear Mr. Cohen:

On behalf of the Office of Science, I should like to thank you and the Maryland Section of the American Chemical Society for the outstanding experience your organization provided to our students and teachers who attended your March meeting at the United States Naval Academy. When high school students attend meetings of professional societies, one often wonders what their response will be. You would be most pleased at their comments and perhaps amazed, as I was, at how much they gleaned from the lectures. Of course, the tour and meal were very popular.

Please convey my appreciation and personal thanks to Alvin Bober. It was a pleasure meeting and working with him. He certainly went out of his way to accommodate all of us.

One of my reasons for attending the meeting was to introduce our office to your organization. Our chemistry teachers need to be aware of the Maryland Section of the American Chemical Society and can certainly derive benefit from its activities. If I can be of any assistance in facilitating this, please do not hesitate to contact me.

Sincerely yours,

Benjamin F. Poscover
Supervisor of Secondary Science

Baltimore County Public Schools

REPORT ON THE AMERICAN CHEMICAL SOCIETY COUNCIL MEETING
APRIL 4TH - HONOLULU, HAWAII

The Council meeting was a relatively short business-like meeting. The following is a summary of the main items on which action was taken or information given.

- Mary L. Good and Albert C. Zettlemoyer were nominated for the office of President-Elect.
- The Council decided overwhelmingly to let stand the decision of the Council Policy Committee not to set aside the election for Director in Region VI. The result of this election had been contested.
- Transferred the administration of project SEED to the Education Commission from the Committee on Public Affairs.
- Adopted two By-law changes involving:
 - Deletion of Residual Duties of Certain Committees
 - Timing of Election Procedures.
- Voted by 161-147 to increase ACS dues by \$3.00 (Both Maryland Councilors were opposed).
- Voted 218-58 to amend the ACS Constitution and By-laws to permit Husband-Wife Dues to be decreased by the amount of one subscription to C&E News (Both Maryland Councilors voted affirmatively).
- Voted to submit to the membership for approval a new section 3 to Article II of the ACS constitution on International Activities.

10

THE CHESAPEAKE CHEMIST

- Voted to recommit for action at the September Council Meeting amendments concerning funds apportionment to local sections.

Funds apportionment to local sections and divisions will be one of the main topics on the agenda for the Fall Council Meeting in Washington, D.C.

If you want further information or have any feelings about items that will appear before the Council at future meetings, please let us know.

Respectfully submitted,

Donald E. Jones
David F. Roswell

April 10, 1979

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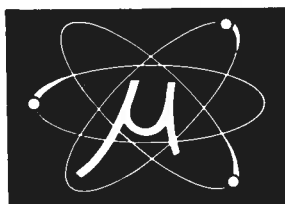
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