



THE

# CHESAPEAKE CHEMIST

MARYLAND SECTION  
AMERICAN CHEMICAL SOCIETY

VOL. XXXII

NOVEMBER, 1976

NUMBER 8



This month's dinner meeting will, literally, be "way out"; we will learn some fascinating things about outer space from two experts. This subject obviously has tremendous appeal, so we have dubbed the meeting "Family Night" and urge you to bring your family and friends. Details appear elsewhere in this issue, so I will mention only a few highlights.

The first speaker, William R. Corliss, will talk on "UFO's and Other Mysterious Phenomena in the Atmosphere." He has written 16 books and several dozen booklets, most dealing with outer space. His most recent book is *The Unexplained*, published in 1976 by Bantam Books. He has written for the National Aeronautics and Space Administration and is eminently qualified to discuss this fascinating subject with us.

The 8:30 speaker, Mr. Loyal Goff of NASA, will bring us up to date on the Viking mission to Mars, which has been so much in the news for the last several months. We will be hearing the very latest "scoop," since Mr. Goff has been very much involved with Viking. In fact, your Program Chairman contacted him at the Jet Propulsion Laboratory in Pasadena, California, the main data collecting point for Viking in order to invite him to the meeting.

This meeting will take place on November 17 at Martin's Eudowood. It is not hard to reach. You can take the beltway to Exit 29, go south on Providence Road, turn left at Goucher Boulevard and then left at Putty Hill Road. Go about 100 yards and turn left into Eudowood Plaza. Bear right just beyond the post office and you will see Martin's. If you are coming from south of Eudowood, it may be more convenient to go north on Loch Raven Boulevard, turn left at Goucher Boulevard, right at Putty Hill Road and then left into the Plaza.

See you on the 17th!

-- E.L.S.

## DEADLINE NOTICE

Editorial material intended for the Nth issue of *The Chesapeake Chemist* must be received by the 25th of month N-2. Time and tide and the printer wait for no person.

## COVER PHOTO

Our cover shows the Martian surface, as photographed by Viking II. It was provided by Mr. Loyal Goff of N.A.S.A. The largest rock near the center is about two feet long and one foot high. The slope of the horizon is due to the 8° tilt of the landed spacecraft.

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# THE CHESAPEAKE CHEMIST

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# BOOK REVIEW

*Seeds of Destruction - The Science Report on Cancer Research.*  
T. H. Maugh II and J. L. Marx. 251 pp. Plenum, 1975. \$17.50.

The authors of this book are on the Research News staff of *Science* and some of the material in this book has appeared in the pages of *Science* over the past several years. The book is divided into four main topics: Cancer Etiology, Cancer Biochemistry, Cancer Therapy, and Specific Cancers. It includes as an extra bonus a rather extensive (46 pages) and well-written glossary of terms. In fact, I think that the glossary and appendices will be the book's outstanding features for those readers who are not well versed in the jargon of cytology.

As a chemist - and the authors are chemists, too - I found the sections on chemical carcinogenesis to be very well done. The authors emphasize and elaborate the current theory that all chemical carcinogens are electrophilic reagents. I think that this is an important generalization and one which is not even mentioned in the book by Suss et al., *Cancer: Experiments and Concepts*, which is the text in the ACS short course on Chemical Carcinogenesis.

On the other hand, the section on cancer chemotherapy is not well-covered. There is only a brief mention of the mitotic cycle method for the rationalization of the activity and inactivity of anticancer drugs, and insufficient details are given on metabolic pathways to understand the concept of an anti-metabolite; perhaps they were afraid of scaring the reader. Also, the authors are addicted to the habit of dropping researchers' names here, there, and everywhere. While this is gratifying for those mentioned, I think that it impairs the narrative and has no place in a book like this.

On the whole, this is a fine survey of cancer research albeit at a high price, considering that much of the material has appeared elsewhere. I should note, however, that this book was the subject of a caustic review in the July-August *American Scientist*. Perhaps the cause of that reviewer's wrath was the awful blurb on the dust jacket. The language used there is designed to sell the book - but to the wrong clientele.

C.E.M.

TOWSON STATE UNIVERSITY

DEPARTMENT OF CHEMISTRY

SEMINAR PROGRAM - FALL 1976

All talks will be held at 12:30 p.m. in Room 554 of Smith Hall.

Tuesday - November 2

"NMR Chemical Shift Reagents as Structural Tools"  
Dr. Daniel Swern, Department of Chemistry, Temple University

Tuesday - November 9

"The Life Detection Systems of the Viking Landers"  
Dr. Grace Picciolo, Goddard Space Flight Center

Tuesday - November 30

"The Coming of Age of Graphite Furnace Atomic Absorption"  
Dr. Richard D. Beaty, Perkin-Elmer Corporation

Refreshments will be served before each seminar.

## YOUR COUNCILOR'S REPORT

The Council of the ACS met in San Francisco on September 1 from 8:30 AM to around 5:00 PM. Glenn Seaborg, Nobel Laureate and President of the Society presided over what proved to be an interesting if somewhat acrimonious meeting. Some eleven items were up for Council action and details of these can be found in C & EN. The following is a somewhat edited report of my voting record on items up for Council action.

MOTION	MY VOTE	COUNCIL ACTION
I. Office of Secretary	No	Yes
II. Fair Election Procedures	No	Yes
III. Amendment of ACS Constitution	No	No
IV. Professional Relations Report	Recommit	Recommit
V. Program Review - Record Vote in Council	Recommit	Recommit
VI. CAS Products for National Affiliates	Yes	Yes
VII. Procedure for Amending the Constitution and Bylaws	Yes	Yes
VIII. Required Approval or Rejection of Original Petitions	Recommit	Recommit
IX. Allotment to Sections & Divisions	Yes	Yes
X. Establishment of a Division of Chemical Safety	Yes	Yes
XI. Funds Apportionment Amendment to the ACS Constitution	Yes	Yes

I would like to comment further on some of these items.

Item I: I spoke and voted against the establishment of the Office of Secretary chiefly because I felt that it is poor public relations to establish non-elective, appointed offices in the administration of the Society. Dennis Chamot, Councilor from the Division of Professional Relations, articulated this viewpoint very well before the Council and I agreed with him. On the other hand, the ACS is both a Society and a Corporation and from this viewpoint the Treasurer was needed.

Item II: I spoke against this item also since I felt that it was directed against a very few abuses, its language was too vague and its enforcement will cause too many problems for the Society.

There was considerable discussion on the report of the Committee on Professional Relations, especially concerning the termination of chemists at two universities. The Council had voted to accept (receive, approve or whatever??) the report on the first case, but certain comments from the floor led to a vote of recommitment on the second case and finally to a reconsideration and recommitment of the first case. I made the motion for the reconsideration of Case I since I believed that the situation was more complicated than it had originally appeared. Do you believe that the ACS should get involved in academic disputes or should it leave them to the AAUP and other more experienced groups?

Finally, please note that we have a new Division, Chemical Safety. I hope that if you have people concerned with this important aspect of chemistry in your organization, you will encourage them to join this new group. The staff liaison for this group is Halley Merrell who also works with the LSAC. I know that with Halley as liaison this Division will be making a real contribution to the Society.

Carl E. Minnier  
Essex Community College

# NOVEMBER MEETING

WILLIAM R. CORLISS

William Corliss received a B.S. from Rensselaer Polytechnic Institute (1950), and an M.S. from the University of Colorado (1953), both in physics. For the next ten years he worked for Pratt and Whitney Aircraft Company, General Electric, and the (former) Martin Company, where he was Director of Advanced Programs. Since 1963, Mr. Corliss has been a free lance writer. In addition to 16 books, he has also written several dozen booklets (8000 - 15000 words each) for the Federal Government on topics like electric power generation, computers, space radiation, and telecommunications. He has also written articles for *International Science and Technology* and *Mosaic*, a publication of the National Science Foundation.

His major works are:

- PROPULSION SYSTEMS FOR SPACE FLIGHT*, McGraw-Hill, New York, 1960, 300 pp. Also translated into French.
- RADIOISOTOPIC POWER GENERATION*, Prentice-Hall, Englewood Cliffs, 1964, 304 pp. (With D.G. Harvey)
- SPACE PROBES AND PLANETARY EXPLORATION*, Van Nostrand, Princeton, 1965, 542 pp.
- SCIENTIFIC SATELLITES*, Government Printing Office, Washington, 1967, 822 pp.
- TELEOPERATORS AND HUMAN AUGMENTATION*, Government Printing Office, Washington, 273 pp. (With E.G. Johnsen)
- MYSTERIES OF THE UNIVERSE*, T.Y. Crowell, New York, 1967, 216 pp. Also republished in England and translated into French and Spanish.
- TELEOPERATOR CONTROLS*, Government Printing Office, Washington, 1968, 162 pp. (With E.G. Johnsen)
- ENCYCLOPEDIA OF SATELLITES AND SOUNDING ROCKETS*, Goddard Space Flight Center, Greenbelt, 1970, 328 pp.
- MYSTERIES BENEATH THE SEA*, T.Y. Crowell, New York, 1970, 170 pp.
- HUMAN FACTORS APPLICATIONS IN TELEOPERATOR DESIGN AND OPERATION*, Wiley, New York, 1971, 252 pp. (With E.G. Johnsen)
- HISTORY OF NASA SOUNDING ROCKETS*, Government Printing Office, Washington, 1971, 158 pp.
- MAN AND ATOM*, E.P. Dutton, New York, 1971, 411 pp. (With Glenn T. Seaborg)
- HISTORY OF THE GODDARD NETWORKS*, Goddard Space Flight Center, Greenbelt, 1972, 295 pp.
- THE INTERPLANETARY PIONEERS*, Government Printing Office, Washington, 1972. Three volumes; 130, 305, 152 pp.
- THE UNEXPLAINED*, Bantam Books, New York, 1976, 338 pp.

## STRANGE NATURAL PHENOMENA

A survey of the scientific literature of the last 200 years has uncovered an incredible number of apparent scientific anomalies; that is, phenomena and artifacts that are at variance with currently accepted scientific hypotheses. Thousands of these anomalies have been collected and published in a series of privately-published sourcebooks.

Following short reviews of the major categories of data accumulated in the series on archeology, geology, astronomy, biology, and psychology, the sourcebook material acquired in the field of geophysics will be scrutinized more carefully. Major categories here are luminous phenomena, anomalous weather, atmospheric optical effects, earthquake phenomena, unusual sounds, etc. The subject of luminous phenomena will be developed in more detail, including ball lightning, aurora-like phenomena, mountain-top glows, and, in particular, the Indian Ocean light wheels, for which over 100 eye-witness accounts have been collected from the scientific literature.

## DATE:

Wednesday, November 17, 1976

## PLACE:

Eudowood Gardens Lecture Room  
Eudowood Plaza, Joppa Road near  
Goucher Boulevard.

## SPEAKERS AND TOPICS:

5:30 PM  
Mr. William Corliss  
"Strange Natural Phenomena"

8:30 PM  
Mr. Loyal Goff  
National Aeronautics and Space  
Administration  
"VIKING '75 Observations of Mars"

## SOCIAL HOUR:

There will be a social hour after the meeting. Refreshments will be served.



MR. LOYAL GOFF

## COCKTAILS AND DINNER:

Eudowood Gardens Dining Room  
Cocktails 6:30-7:15  
Cash Bar  
Hot buffet dinner (7:15) \$6.25 per person. Retired chemists, students and their spouses may attend the dinner at \$4.25 each. Reservations are necessary for the dinner and should be made with

ACS RESERVATIONS  
c/o Dr. Ernest Silversmith

USE THE CONVENIENT FORM THAT APPEARS ELSEWHERE IN THIS ISSUE

(Or phone: 444-3216, 8-4 weekdays;  
358-0619 evenings and weekends)

It is not necessary to be a member of the American Chemical Society to attend the dinner or the talks, and the talks may be attended without attending the dinner. You are invited to bring your wife and friends to both the dinner and the meeting.



MR. WILLIAM CORLISS

## LOYAL GOFF

Mr. Goff was born in Humeston, Iowa, on August 18, 1915. After completing high school in Fontanelle, Iowa, he attended the College of Mortuary Science in St. Louis and was a practicing embalmer until his entry into the U.S. Navy in 1942. In the Navy he was trained as an aviation medicine and low pressure chamber technician which initiated an interest in research.

Following separation from the Navy, Mr. Goff worked as a laboratory technician at the National Institute of Health in Bethesda, Maryland, and attended night school at George Washington University. In 1947 he transferred to the University of Maryland as a research associate in zoology and continued his part-time education leading to a B.S. in chemistry in 1952.

Upon graduation he returned to NIH as a physiologist and spent the next three years studying respiratory problems in self-contained diving. This led to his appointment as Project Officer for Stress and Applied Physiology at the Office of Naval Research. In 1960 he joined the Graduate Research and Training Program at the National Science Foundation where he remained until joining NASA in 1966. The next four years were spent in planning biological experiments for Earth-orbiting missions. In 1970 he was selected for the position of Viking Program Scientist which he now holds.

Mr. Goff was married in 1938 and resides with his wife, Valda, in Bethesda. They have two sons, Michael, who is a graduate student at Maryland, and Mark, who is a recent graduate of Florida State University.

## VIKING '75 OBSERVATIONS OF MARS

Every new technological advance enabling the acquisition of significant new data from Mars has altered our mental image of what Mars is really like. These images range from a lush planet populated by intelligent beings, to an uninhabitable, moon-like body. From observations over the past 50 years, and particularly from Mariner '71 data, we knew it had a very dynamic and varied physical history, perhaps not unlike that of Earth. Simulation tests also suggested that although the environment is extremely inhospitable, at least low forms of life could exist there. This was the status of our image at the inception of Viking.

The Viking mission objectives were to examine the planet's environment in great detail from orbit, and, from the surface, to do visual and chemical analysis of the Martian surface and atmosphere, its seismic activity and physical properties.

All parts of spacecraft have worked well and there have been satisfactory solutions to all of the problems encountered thus far. A considerable body of knowledge has been accumulated about the physical and chemical nature of Mars and its near environment.

It is expected that the spacecraft will survive beyond the time of superior conjunction in November and plans have been formulated to continue observations of the planet through a full Martian year.

**"WHEN DID YOU LAST ATTEND AN ACS MEETING?"**

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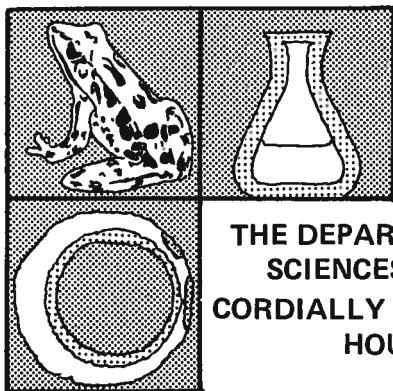
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Return by November 12

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