



THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXI

MAY, 1965

NUMBER 5

Presented to

James R. Arnold

on the occasion of his

Remsen Memorial Lecture

sponsored by

*The Maryland Section of the American
Chemical Society*

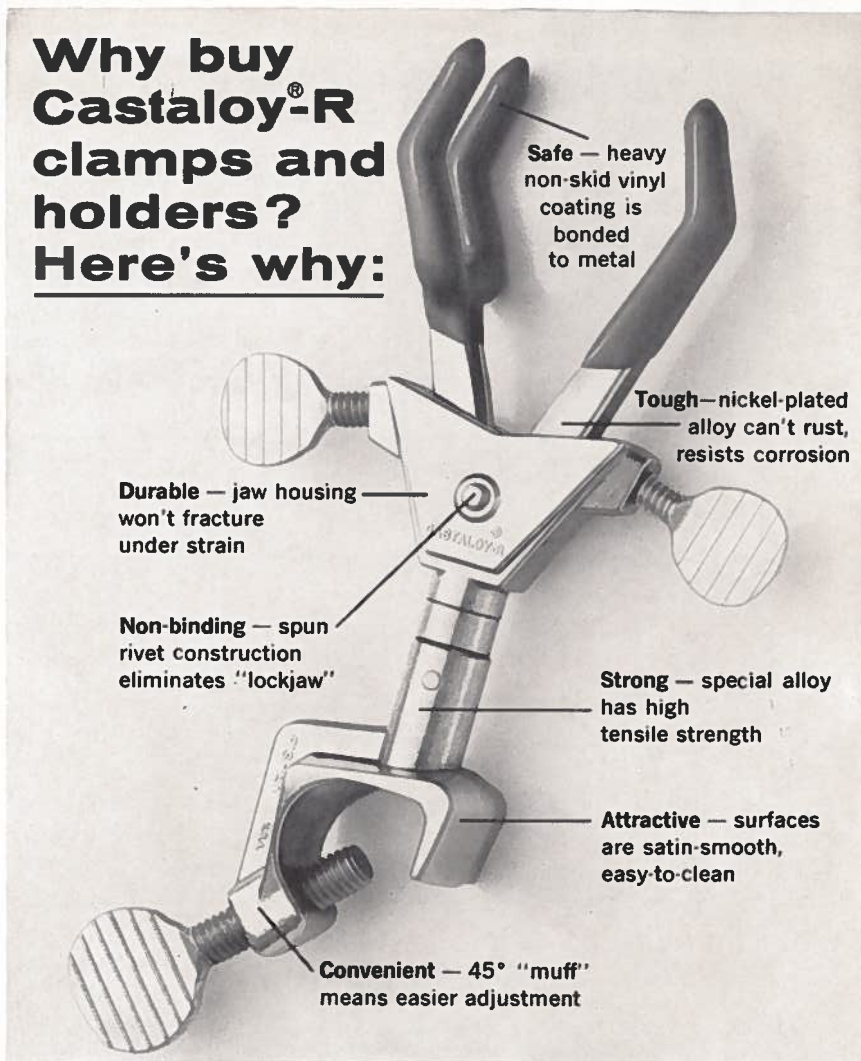
in memory of

Ira Remsen

Teacher, Investigator, Author, Administrator

June 4, 1965

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THE CHESAPEAKE CHEMIST

VOL. XXI

MAY, 1965

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89-J

TWENTIETH REMSEM LECTURE

DATE AND TIME:

Friday, June 4, 1965
at 8:30 P.M.

PLACE:

Shriver Hall
Homewood Campus
Johns Hopkins University

SPEAKER:

DR. JAMES R. ARNOLD
Professor of Chemistry,
University of California,
San Diego, California

SUBJECT:

"The Chemist and the
Solar System"
(See page 10)

DINNER:

Clipper Room, Shriver Hall
Cocktails 6:00 P.M.
Dinner 6:30 P.M.
(Reservations are necessary.
Use tear sheet on page 13.)

MIXER:

Light refreshments will be served
in Shriver Hall after the lecture.
Everyone is welcome.

PARKING:

Free space is available in the park-
ing lot adjacent to Shriver Hall.

THE COVER

Facsimile of the scroll to be
presented to the 20th Remsen Lec-
turer, Dr. James R. Arnold.



DR. JAMES R. ARNOLD

James R. Arnold was born in Metuchen, N.J., in 1923, the son of a lawyer and archeologist. He graduated from Princeton University in 1943, and continued his graduate work there, receiving the Ph.D. in 1946. During this time, he was associated with the Manhattan (atomic bomb) project for two years.

On completing his doctorate training, Arnold went to the University of Chicago as a postdoctorate Fellow in its newly formed Institute for Nuclear Studies. In 1947, he moved to Harvard University as a National Research Fellow. In 1948, he returned to the University of Chicago to begin work with W. F. Libby on the radio-carbon dating program, after which he became a member of the faculty there. In 1955, Arnold joined the chemistry department of Princeton University. His appointment as an Associate Professor of Chemistry at La Jolla began on September 1, 1958. He was appointed Professor in 1960 and was Chairman of the Department of Chemistry from 1960 to 1963.

(Continued on page 13)

MARYLAND SECTION NEWS



GOVERNMENT

FORT DETRICK

DR. HOUSEWRIGHT HEADS SOCIETY FOR MICROBIOLOGY

Indicative of the respect and esteem in which he is held by his professional colleagues, Dr. Riley D. Housewright was recently elected president of the American Society for Microbiology (ASM) for 1965-66.

With a membership of more than 8,000 professionals in the microbiological field, the ASM promotes the scientific knowledge of bacteriology and related subjects through discussion, reports and publications.

Scientific Director for the U. S. Army Biological Research Laboratories, Fort Detrick, Maryland, since 1956, Dr. Housewright joined the staff at Detrick in 1943 as a medical consultant with the War Research Service, Federal Security Agency.

The American Society of Microbiology held its annual meeting in Atlantic City the last week in April. Among those attending were Dr. Housewright and Dr. Harold Glassman, Assistant Scientific Director. More than 50 additional interested personnel attended from Fort Detrick.

At a recent meeting of the Maryland Branch of the American Society for Microbiology, the following officers were elected: Dr. Helen B. Funk, Goucher College, Towson, president; Dr. James T. Duff, MI Division, Fort Detrick, president elect; Dr. George S. Warner, Baltimore, vice president; and Dr. Charles

W. Griffin, Baltimore, secretary-treasurer.

More than 150 medical officers, medical doctors, nurses, dentists, veterinarians and pharmacists, representing all branches of the Armed Forces and including the Public Health Service, were guests of the U. S. Army Biological Laboratories Thursday, 11 March 1965, for a special briefing.

The field trip to Fort Detrick was part of a two-week training course for medical officers of the Armed Forces, sponsored by the Navy at the National Naval Medical Center, Bethesda, Maryland. Commander Leon P. Eisman, Commanding Officer of the Medical Unit here, coordinated the visit.

Edward Cherry attended a meeting of the Potomac Division of the American Phytopathological Society at Beltsville in early March.

Dr. William Daniels, PrD Division, attended the first annual Louis Pasteur Science Lectures at Georgetown University, April 9-11.

RESA Sponsored Lecture: — The Scientific Research Society of America, Fort Detrick Branch, sponsored a lecture on "Physiological Problems of Manned Space Flight" at Hodson Hall, Hood College on March 31, 1965. The guest lecturer was Dr. Fred B. Benjamin, Office of Manned Space Flight, National Aeronautics and Space Administration. Dr. Benjamin discussed some of the problems associated with the survival of man during space travel.

Fort Detrick was well represented at meetings of the Federation of American Societies for Experimental Biology in Atlantic City, April 9-14. Among those presenting papers were Dr. Harold A. Neufeld and Lt. John E. Dalidowicz, Chemistry Branch, Physical Sciences Division. Also among those attending the meetings were Drs. Edward J. Schantz, Leonard Spero, William G.

Wheeler, George G. Wright, Kiyoshi Higuchi, Milton W. Slein, Lt. Bernard R. Hecht, and Clarence F. Smith.

Fort Detrick personnel were well represented this year in the round of county school science fairs and at the Maryland Junior Science and Humanities Symposium.

Very much in evidence, also, were the award winners among children of Fort Detrick personnel. Fort Detrick has a right to be proud of its record of participation in this yearly event. The interest shown by our scientists encourage able students to pursue careers in science.

Awards were presented to winners of the Frederick County Science-Math Fair by Dr. Harold N. Glassman, representing the Maryland Branch of the American Society for Microbiology, and by Dr. Peter J. Gerone, representing the Scientific Research Society of America.



INDUSTRIAL

W. R. GRACE & COMPANY

Thomas G. Gibian, President of the Research Division, W. R. Grace & Co., announced today the appointment of Walter K. O'Loughlin and Preston L. Veltman as Vice Presidents of the Research Division. Mr. O'Loughlin will continue to supervise government contract operations related to the Company's central research program. Dr. Veltman maintains responsibility for research liaison among all Divisions within the Grace Chemical Group. Both executives report directly to the President of the Division.

Mr. O'Loughlin joined W. R. Grace & Co. in 1951 as Manager of Technical Development for the Davison Chemical Division. He became Director of New Product Development for the newly es-

tablished central research facilities at Clarksville, Maryland, in 1957 and later assumed responsibility for the direction of the Research Division's Economic Evaluation Department. In his present role, he is responsible for the negotiation and administration of all contracts covering government sponsored research.

An Engineer by profession, Mr. O'Loughlin holds four patents in the organic process field. He is a past Chairman of the Maryland Section of the American Institute of Chemical Engineers and holds memberships in the American Chemical Society, the Armed Forces Chemical Association and the Commercial Chemical Development Association. Mr. O'Loughlin is also a Director of the American Contract Bridge League.

Educated at the Catholic University of America, Mr. O'Loughlin holds a Master of Science degree in physical chemistry.

Dr. Veltman has been with the Company's Washington Research Center since its inception in 1957, during which time he has directed research in the fields of inorganic, catalytic and agricultural chemistry as well as process and new product development. His twenty-four years of technical experience in research and engineering also include nine years of service with the Davison Chemical Division as Manager of Research, six years as Manager of Catalytic Research with the Texas Company and a stint as Plant Engineer for the Manhattan Project at Los Alamos, New Mexico.

Dr. Veltman holds several patents and has coauthored technical articles on varied subjects in the research and production fields. He is a member of the American Chemical Society and the American Institute of Chemical Engineers. He is also a member of the Maryland Bio-Medical Engineering Society.

Dr. Veltman received his Bachelor and Master of Science degrees from the Michigan College of Mines and his Doctorate in physical chemistry from the University of Wisconsin.

(Continued on page 8)

MARYLAND NEWS

(Continued from page 7)

Dr. M. Gali Sanchez has been appointed Vice President in Charge of Inorganic and Nuclear Research for W. R. Grace & Co.'s Research Division. His new responsibilities are indicative of the increased role the Company is playing in the nuclear chemistry field.

Under the present arrangement, work in the nuclear and inorganic areas will be carried out in newly-created research sections. George E. Ashby will manage the Division's Nuclear Research Section. The Inorganic Research Section will be under the direction of Dr. R. G. Rice. Both will report to Dr. Sanchez.

Dr. Sanchez has headed the Company's research efforts in the inorganic field since 1962. Previously he supervised research programs in various fields of physical chemistry, particularly in nuclear, solid-state and colloid chemistry at the Washington Research Center and the Company's Davison Division, which he joined in 1952.

Dr. Sanchez holds numerous patents in the nuclear and chemistry fields and is co-author of several technical papers. He is a member of the American Chemical Society, the Faraday Society and the American Society for Testing Materials.

Mr. Ashby joined the Research Division in 1957. Since that time he has been active in analytical and physical research, specializing in solid-state physics and in the techniques of X-ray diffraction, electron microscopy and spectroscopy. He is a graduate of the University of Maryland, with a B.S. in physics and pursued graduate study in the same field at George Washington University.

Dr. Rice has had fifteen years' experience in the chemical industry with both governmental and private organizations. Before joining Grace in 1962, he was Technical Director of the Advanced Products Department for the General Dynamics Corporation. With Grace, he has supervised research in

the fields of fine-size technology, phosphonitrilic and oxidation chemistry.

He is a member of the American Chemical Society, the Society of Plastics Engineers and Sigma Xi. He holds, among three degrees, a Ph.D. in organic chemistry from the University of Maryland.

C. R. Braun has been appointed Executive Vice President of Nuclear Fuel Services, Inc. He will be located at Company headquarters in Baltimore, Maryland. A majority owned subsidiary of W. R. Grace & Co., Nuclear Fuel Services is engaged in the reprocessing and fuel fabricating segments of the nuclear fuel cycle.

Mr. Braun has twenty-five years' experience in the application, design and manufacture of central power plant equipment for the electrical utility industry. Ten of these years were devoted to assignments related to the nuclear field.

Directly prior to joining the Grace organization he was Director of Marketing and Planning for the Allis-Chalmers Atomic Division. In 1952, on leave of absence from industry, he served as head of the Power Department of the National Production Authority, for which he was awarded a Department of Commerce Certificate of Service.

Mr. Braun attended the U.S. Naval Academy, received his Engineering degree from Iowa State University and pursued graduate study at the University of Wisconsin. He is a member of the American Nuclear Society, the Atomic Industrial Forum and American Society of Chemical Engineers.

COPY DEADLINE

Material submitted for publication in the September issue of the *Chesapeake Chemist* must be received by the Editor not later than August 10.

MINUTES OF MEETING OF EXECUTIVE COMMITTEE

The Executive Committee of the Maryland Section of the American Chemical Society met in Bennett Hall on Monday, February 22, 1965, at 8:00 P.M. with the following members present: Steinberg, Parr, Berkowitz, Cogliano, Zaczek, Felton, Bober, Willis, Stamberger, Lee, Hoshall, Rosenblatt, Miller, White, Kaufman, and McGuire.

The minutes of the December 4, 1964 meeting were read and approved.

The treasurer's report was approved after a discussion of the budget vs. expenses.

Dr. Steinberg talked briefly about the various periodicals sent to him which he feels committee should review, such as *PR Catalyst*, *Local Section Listening Post*, etc.

Chairman Steinberg led a discussion on the merits of spending an estimated \$40.00 a month on posters announcing monthly meetings. Col. White will meet

with Miss Ann Morgan, Dr. Miller and the printer regarding the possibility of less expensive printing.

The Executive Committee unanimously approved the appointment of Dr. Lewis M. Berkowitz as Treasurer to replace Mr. Edwin M. Glocker who has resigned.

Auditing Committee Chairman Felton reported that the Section's accounts are in order.

Chairman-Elect Miller reported that because of attendance, a new location accomodating fewer people for the Remsen lecture is being considered. However, Shriver Hall has been reserved for this year's lecture.

Dr. Miller brought up the use of Eudwood Plaza for monthly meetings next year. All agreed that we should continue meeting there. Dr. Miller consulted with the Board relative to meeting dates and any suggested lecturers for next year. He also suggested we might try several split meetings during the year.

The lecture series came up for discussion. Many suggestions were made relative to topics and speakers.

Mr. Bober reported on the Meeting-in-Miniature. Everything is progressing on schedule.

Dr. Zaczek reported he had quite a number of volunteers for jobs. He suggested that these interested parties be given a job of some sort now while their interest is at its peak.

Dr. McGuire reported that the annual Science Fair will be held at Hopkins on March 26-27. We will participate as usual.

Dr. Kaufman requested a larger hospitality budget this year because of much greater attendance at meetings. It was agreed upon.

Dr. Kaufman also suggested that we need the services of a professional secretary to aid some of the committee members in handling the paperwork within their committees. The University of Maryland and the Maryland Academy of Science are possible sources of help for solving this problem.

(Continued on page 10)

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(Continued from page 9)

Dr. Steinberg suggested we raise dues from \$2.00 to \$3.00 on the present mailing. A discussion followed with pros and cons being voiced. A vote was postponed at this time.

The meeting was adjourned at 11:15 P.M.

Respectfully submitted,
F. T. Parr, Secretary

THE CHEMIST AND THE SOLAR SYSTEM

The origin and history of the solar system are subjects of great interest to its inhabitants, about which we know as yet very little. Using the tools of celestial mechanics, Laplace and others showed that the system as we see it can be stable for very long periods if not indefinitely. Radioactive dating methods have given us a consistent age of about 4.6 billion years (aeons) for the meteorites and the earth. The isotopes of lead and of xenon, in particular, have helped us to follow some features of the evolution of the system. Spectroscopy has given us information on the composition of the sun and of planetary atmospheres. Astrophysicists know much about the evolution of the sun itself. There is a great deal of important geophysical information.

But the major puzzles remain. Accepting the notion that the system began as a cloud of gas and dust, contracting in its own gravitational field, how did some of this dust and gas accumulate into objects of planetary size? How did the atmosphere of the planets develop? Was there an early heating cycle? The study of meteorites has contributed an abundance of data on these questions, and we may some day know definitely what they mean.

Professor James R. Arnold
Department of Chemistry
University of California,
San Diego

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THE CHESAPEAKE CHEMIST

MARYLAND SECTION AMERICAN CHEMICAL SOCIETY AWARDS COMMITTEE

15 May 1965

SUBJECT: Maryland Section Award, 1965

THRU: Editor, Chesapeake Chemist

TO: All Members, Maryland Section, ACS

1. Reference: Letter to All Members, Maryland Section, ACS, same subject, April 1965 Issue of Chesapeake Chemist.
2. This is your last chance. Nominations for subject award must be submitted to the undersigned not later than 28 May 1965.

E. A. METCALF
Chairman, Awards Committee
906 Wellington Road
Baltimore 12, Maryland

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MAY 1965

MEMBERSHIP CHANGES

NEW MEMBERS

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Laska, Leonard Arnold, 1303 Edgewood Rd., Edgewood, Md. 21040

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Magee, Jr., William Smith, Box 193, Edgewood, Md. 21040

Renard, David Edward, P. O. Box 1066, Edgewood, Md. 21040

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Dannenberg, Arthur M., Jr., Johns Hopkins School of Hyg., 615 North Wolfe St., Baltimore, Md. 21205

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Silverstone, Harris J., Dept. of Chem., Johns Hopkins Univ., Baltimore, Md. 21218

Tideswell, Norman Wilson, 225 Duke of Gloucester St., Annapolis, Md.

Waravdekar, Vaman S., Box 43, R R No. 1, Ijamsville, Md. 21754

Warth, Albin H., 29 York Ct., Baltimore, Md. 21218

MATHESON COMPANY, INC.

Frederick M. Belmore, President of The Matheson Company, Inc., announced the formation of a subsidiary, Matheson Scientific of Maryland, Inc. The newly-formed company has an office and warehouse at 10727 Tucker Ave. in Beltsville, Md. Matheson Scientific of Maryland will distribute laboratory supplies, scientific instruments, glassware and reagent chemicals as a part of the Matheson Scientific nationwide distribution system. Mr. Howard C. Carson has been named Branch Manager of the new operation and Mr. William J. Regrut Office Manager.

DR. JAMES P. ARNOLD

(Continued from page 5)

Arnold's research interests have been in the fields of geochemistry, radio-

chemistry, and valence theory. He discovered the cosmic-ray-produced isotopes Be⁷ and Be¹⁰ in nature, and applied these to some geochemical problems. He is currently engaged in studies of cosmic-ray produced natural radioactivities in meteorites, on the history of meteorites, and on cosmic dust.

He is a consultant to NASA and has been Associate Editor of the Journal of Chemical Physics and Chairman of the Sub-committee on Radiochemistry of the National Research Council.

Arnold is a member of the American Association for the Advancement of Science and the American Chemical Society. He was elected to the National Academy of Science in 1964.

CLIP AND MAIL THIS FORM TODAY

Twentieth Remsen Memorial Lecture MARYLAND SECTION American Chemical Society Friday, June 4, 1965

Cocktails 6:00 P.M.

Dinner 6:30 P.M.

Clipper Room, Shriver Hall

Lecture at 8:30 P.M. Shriver Hall

Johns Hopkins University, Homewood Campus

Dr. F. M. Miller

University of Maryland, 636 W. Lombard Street, Baltimore, Maryland 21201

Dinner Reservations:

Names of persons in my party: _____

I enclose check for \$_____ (\$4.00 per person) for _____ reservations* for cocktails and dinner.

Number of persons requesting:

Roast Beef _____
Imperial Crab _____

Return by May 28, 1965. Make checks payable to Maryland Section — ACS.

My Name _____

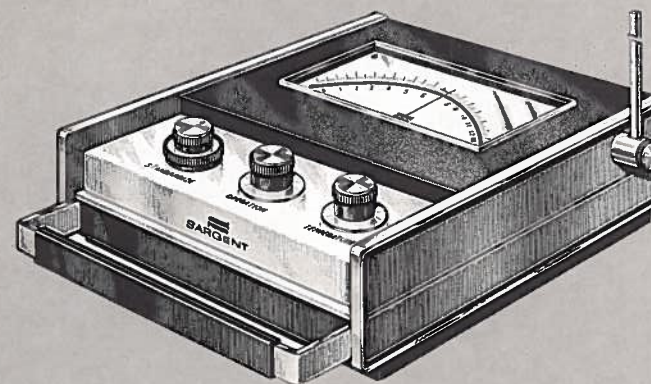
Address _____ Phone _____

*Due to space limitations, only 100 reservations can be accepted on a first come, first served basis.

**MARYLAND SECTION, AMERICAN CHEMICAL SOCIETY
TREASURER'S REPORT
For the year ended December 31, 1964**

Income 1964			
Allotment from American Chemical Society		\$ 2,728.25	
Commission on new members		32.50	
Local Section dues		1,258.00	
The <i>Chesapeake Chemist</i> (advertising)	\$ 3,926.41		
Subscriptions	3.96	3,930.37	
Meetings		934.30	
Donations		300.00	
Lecture series		762.00	
Interest (savings account)		286.21	
Ticket sales for 50th Anniversary Dinner		815.00	
TOTAL REVENUE			<u>\$11,046.63</u>
Expenses 1964			
Administrative:			
Office supplies and expenses	\$ 320.66		
Clerical	285.25	605.91	
Committees' expenses		1,116.09	
Meetings:			
Rental of space	25.00		
Rental of films and equipment	15.20		
Speakers' expenses	362.68		
Miscellaneous	135.10	537.98	
The <i>Chesapeake Chemist</i>			
Printing	3,964.15		
Postage	162.19		
Clerical	150.00		
Stationery	35.00		
Miscellaneous	25.00	4,336.34	
Awards, Presentations, Contests:			
Remsen Award	362.00		
Maryland Section Award	55.00		
Science Fair Awards	323.37		
Fifty-Year Membership Awards	75.00		
Past Chairman Award	21.86	837.23	
Fiftieth Anniversary		3,331.10	
Lecture Series		283.14	
Dinner Meetings		545.94	
Executive Committee Meetings		89.27	
Miscellaneous		6.00	
TOTAL EXPENSES			<u>\$11,689.00</u>
EXCESS of EXPENSE over INCOME			<u>(\$ 642.37)</u>
Assets:			
Cash on hand and in banks		\$ 6,439.67	
Accounts receivable		244.74	
Prepaid bulk mailing permit		58.06	
TOTAL ASSETS			<u>\$ 6,742.47</u>

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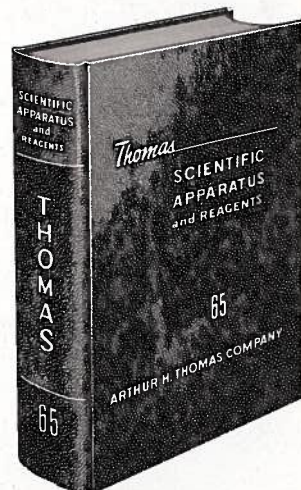
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