

# Program Ninth AAAS-Gibson Island Conference

17 June—24 August

## Frontiers in Chemistry

*Sumner B. Twiss, Director*

### PETROLEUM CHEMISTRY

*S. S. Kurtz, Jr., Chairman; P. D. Bartlett,  
Vice-Chairman*

17 June E. Bright Wilson, Jr., "Infrared and Raman Spectra." R. S. Mulliken, "Ultraviolet Absorption Spectra."

18 June G. W. Wheland, "Theory of the Chemical Bond and Resonance in Hydrocarbons." P. D. Bartlett, "Report of Committee on Future Policy of Conference on Petroleum Chemistry at Gibson Island." L. S. Kassel, "Isomerization Equilibria in High Molecular Weight Paraffins." *Discussion invited.*

19 June Henry Eyring, "Theory of Viscosity of Hydrocarbons." R. W. Schiessler, "Correlation of Structure With Physical Properties of Heavy Hydrocarbons."

20 June A. Farkas, "Use of Stable Isotopic Tracer Elements in Chemical Research." G. T. Seaborg, "Use of Radioactive Tracers in Chemical Research."

21 June O. Beeck, "Recent Developments in Spectrochemical Analysis."

### CATALYSIS

*H. H. Storch, Chairman; W. G. Frankenburg,  
Vice-Chairman*

24 June Frederick Seitz, "Crystal Growth and Factors Influencing Catalysis." A. T. Gwathmey, "The Directional Surface Properties of Single Crystals of Metals."

25 June J. A. Becker, Informal Round Table Discussion, "Adsorption of Alkalies on Metals, Its Effect on Electron Emission, and Application to Contact Catalytic Reactions." Ahlborn Wheeler, "Determination of Pore-size Distribution in Solid Catalysts."

26 June Howard L. Ritter, "Some Experimental Methods in the Determination of Pore-size Distributions." Thomas D. DeWitt, "A Critical Review of the Present Status of Multilayer Adsorption Theory." Robert B. Anderson, "Surface Area Measurements and Chemisorption of Carbon Monoxide on Fischer-Tropsch Catalysts."

27 June L. J. E. Hofer, "The Activity of Fischer-Tropsch Iron Catalysts as a Function of the Crystal Structure and Magnetic Properties of the Unconditioned Catalysts." W. A. Horne, "Catalysts in German Synthetic Fuel Industry." B. B. Corson, "Catalytic Alkylation and Dealkylation of Aromatics."

28 June Herbert C. Brown, "A Theory of Hydrocarbon Isomerization in Homogeneous Systems."

### ORGANIC HIGH POLYMERS

*C. S. Fuller, Chairman; C. C. Price, Vice-Chairman*  
1 July F. R. Mayo, "Copolymerization." P. D. Bartlett, "The Rate of the Steps in Vinyl Polymerization."

2 July Symposium on the Present Status of Molecular Weight Methods: F. T. Wall, "Osmotic Pressure." P. M. Doty, "Light Scattering." J. B. Nichols, "Ultracentrifuge." R. H. Ewart, "Viscosity." D. R. Morey, "Some Precipitation and Fractionation Phenomena as Related to Molecular Weights." H. M. Spurlin, "Effect of Association in Solution on Molecular Weight Results."

3 July W. H. Stockmayer, "Effects of Branching on Thermodynamic and Transport Properties of Polymer Solutions." L. R. Treloar, subject to be announced later.

4 July W. O. Baker, "Structure of Synthetic Rubber." W. B. Reynolds, "Some Observations on the Functions of Emulsifiers, Promoters and Modifiers in Emulsion Polymerization Reactions."

5 July P. J. Flory, "Physical Properties in Relation to Structure of Vulcanized Rubber."

### TEXTILES

*D. H. Powers, Chairman; W. A. Sisson, Vice-Chairman*

8 July Ross Whitman, "Curl in Woven Textile Fabrics: Its Cause and Control." Stanley Backer, "The Relation of Fiber and Fabric Structure to Wear Resistance and Durability."

9 July C. L. Mantell, "Some Notes on Cellulose Solvents and Their Application to Special Textile Finishes." F. T. Peirce, "Cloth Geometry and Its Application to Functional Design."

10 July H. W. Mohrman and R. J. Schatz, "The Effect of Textile Sizing Agents Upon the Physical Properties of Cotton Fabric Laminates." M. T. O'Shaughnessy and L. G. Ray, "Tensile and Torsional Properties of Textile Fibers."

11 July W. J. Hamburger, "Load-Deflection-Time Relationships in Textiles." H. Mark, "Structural Principles for Resiliency and Recovery in Fibers."

12 July S. Coppick, R. W. Little, and J. H. Church, "Chemical Behavior of Cellulose Under Influence of Retardants at Combustion Temperatures."

## CORROSION

*H. H. Uhlig, Chairman; K. G. Compton, Vice-Chairman*

15 July W. E. Campbell, "The Electrolytic Theory of Oxidation and Tarnish." J. B. Austin, "Fundamental Factors in the Oxidation of Metals and Alloys."

16 July Oscar E. Harder, "Alloy Compositions for High Temperature Applications." S. D. Heron, "Stress Corrosion of Materials Exposed to Gasoline Combustion Products."

17 July F. N. Rhines, "Internal Oxidation." Harry K. Ihrig, "Alternate Oxidation and Carburation."

18 July Marshall H. Brown, "Corrosion by Chlorine and Hydrogen Chloride at High Temperatures." Aaron Wachter, "Hydrogen Attack on Metals at High Temperatures and Pressures."

19 July G. A. Hawkins, "Corrosion by High Temperature Steam." W. O. Binder, "Recent Trends in Alloys for High Temperature Service."

## MEDICINAL CHEMISTRY

*H. A. Shonle, Chairman; E. H. Northey, Vice-Chairman*

22 July Speakers to be announced later, "Hypertension."

23 July John Lee, Glenn E. Ulyot, Edwin Fellows, Claude Winder, "Analgesics: Synthesis and Screening Tests."

24 July Speakers to be announced later, "Antibiotics."

25 July Antimalarials: Chemical Aspects. Robert C. Elderfield, "Review of the Chemistry of Recent Antimalarial Drugs Synthesized in the USA." Kenneth C. Blanchard, "Review of Foreign Progress on Antimalarials." Jackson P. English, "Metachloridine and Related Compounds."

26 July Antimalarials: Medicinal Aspects. James A. Shannon, "Clinical Evaluation." Richard S. Porter, "Screening Tests." L. H. Schmidt, "Pharmacology."

## VITAMINS

*N. B. Guarrant, Chairman; D. W. Woolley, Vice-Chairman*

29 July F. P. Zscheile, "Recent Developments in Carotene Research." G. W. Kidder, "Growth Factors Required by Protozoa." C. I. Bliss, "The Design and Analysis of Experiments for Measuring Vitamin Potency."

30 July E. L. R. Stokstad and B. L. Hutchings, "Chemistry and Biological Function of Folic Acid." Paul Day, "Studies on the Nutrition of the Monkey,

With Special Reference to the *Lactobacillus casei* Factor (Factor M, Factor Be)." William J. Darby, "The Response of Sprue and Pernicious Anemia to the Administration of Synthetic *L. casei* Factor (Vitamin M, Folic Acid)."

31 July B. Connor Johnson, "The Metabolites of Nicotinic Acid and Nicotinamide in Human and Swine Nutrition." W. A. Krehl and C. A. Elvehjem, "Niacin and Tryptophane Relationship."

1 August J. A. Reyniers, "Germ-free Life as Applied to Nutrition Studies." L. B. Pett, "Some Public Health Aspects of Malnutrition." D. W. Woolley, "Vitamin Antagonists."

2 August Ancel Keys and Olaf Michelson, "The Relation in Man Between Intake and Urinary Excretion of Thiamine and Riboflavin as Affected by Activity."

## FOOD AND NUTRITION

*H. J. Almquist, Chairman; Lawrence Atkin, Vice-Chairman*

5 August David M. Greenberg, "The Dynamics of Calcium and Phosphorous Metabolism." Philip L. Harris, "Some New Tocopherol Effects in Nutrition."

6 August F. J. Stare, title to be announced later. Daniel Melnick, "Physiological Availability of the Vitamins."

7 August H. E. Longenecker, "Nutritional Value of the Fatty Acids." Elsie Dawson, "Taste Panels."

8 August H. L. Fevold, "Food and Feed Value of Yeast." Bacon F. Chow, "Biochemical Studies on Protein Hydrolysates."

9 August L. C. Norris, "The Role of Folic Acid and Related Substances in Nutrition."

## CANCER

*H. P. Rusch, Chairman; A. M. Brues, Vice-Chairman*

12 August J. A. Miller and E. C. Miller, "The Metabolism and Carcinogenicity of p-Dimethylaminoazobenzene and Its Derivatives in the Rat." L. O. Jacobson, C. L. Spurr, G. F. Dick, and E. S. Guzman Barron, "Chemotherapeutic Studies in Lymphoma."

13 August Jack Schultz, "Nuclear Differentiation and the Origin of Tumors." C. Carruthers, "Some Chemical Changes Induced by Methylcholanthrene in the Transformation of Mouse Epidermis to Squamous Cell Carcinoma."

14 August W. C. Hueper, "The Significance of Industrial Tumors in Cancer Research." A. M. Brues, "Carcinogenic Effects of Some Radioactive Compounds That May Be a Problem in Certain Future Industries." P. S. Henshaw, "Carcinogenic Effect of Pile Radiations in Rats and Mice."

15 August S. Spiegelman, "The Synthesis and

Maintenance of Intracellular Enzymes." L. C. Strong, "The Induction of Germinal Mutations by a Carcinogenic Chemical." W. E. Heston, "Paths of Gene Action in Mammary Tumor Development in Mice."

16 August W. U. Gardner, "Steroid Hormones in the Induction of Cancer."

#### INSTRUMENTATION

R. D. Webb, *Chairman*; C. O. Fairchild, *Vice-Chairman*

19 August A. Keith Brewer, "The Mass Spectrometer: Its Principle of Operation and Its Application to Practical Analytical Problems." H. L. Andrews, R. C. Machler, and A. J. Williams, Jr., "Recording Methods in Spectrochemical Analysis."

20 August Gordon Brown, C. E. Mason, A. C. Hall, A. F. Sperry, and G. A. Philbrick, "Theories of Automatic Control."

21 August Gordon B. Sayre, "Applications of Modern Plastics in Instruments." V. Lawrence Parsegian, "A New Galvanometer." W. F. Swann, "New Photographic Materials and Methods."

22 August Charles F. Kettering, subject to be announced later. John J. Grebe, "Application of Control Principles to Human Endeavor."

23 August R. B. Sosman, "Pyrometric Control of the Open-hearth Furnace."

#### HISTORY

The Gibson Island Research Conferences were inaugurated on a substantial, continuous basis in 1938 by Dr. Neil E. Gordon. They have been sponsored by the American Association for the Advancement of Science since this time. Gifts by industrial companies whose laboratories have been represented at the Conferences have enabled the AAAS to purchase the Conference property. This property consists of a large residence and auxiliary building located on a wooded 3.6-acre lot on the highest hill on the Island. The property provides accommodations for about 56 persons in addition to the Conference room and library. All meals are taken at the Gibson Island Clubhouse.

#### LOCATION

Gibson Island is situated in Chesapeake Bay, about 23 miles south of Baltimore. It is approximately 1,000 acres in area, and is connected with the mainland by a causeway. Transportation to and from Baltimore is afforded by the Lakeshore Bus Company, which operates on a limited schedule. The Island offers opportunity for many sports: golf, tennis, both salt- and fresh-water bathing, fishing, and sailboating.

#### PURPOSE

The purpose of the Gibson Island Conferences is to stimulate research endeavor in universities, research foundations, and industrial laboratories. This purpose is achieved by an informal type of meeting consisting of scheduled lectures and discussion of topics of current research interest.

The first meeting of the week is held Monday morning at 10 o'clock. Other morning sessions through Friday usually last from 9:30 to 12:00. The second session of the day is generally held in the evening from 7:30 to 10:00, Monday through Thursday. There are no Friday evening sessions, and Conference members are expected to check out Friday afternoon.

#### ATTENDANCE

Those interested in attending are instructed to send in their applications to the Director, on or before March 15. Each applicant must state the institution with which he is connected, and the type of work in which he is most interested.

The Director will submit the names of those requesting attendance to the chairman of the respective Conferences. The chairmen, in conjunction with a program committee, will go over the names and select the members in an effort to distribute the requests as fairly as possible among the various institutions represented. Names selected by the program committee will be returned by the chairmen to the Director, who will notify the selectees; at that time, each one who is to attend will be requested to register by mail. On receipt of the registration fee of \$3.00, made payable to the American Association for the Advancement of Science, a registration card will be sent, giving admission to the Island and use of all guest privileges, including a room reservation. Rooms are \$3.00 or \$3.50 per day per person, and board is a la carte. On proof that the member is paying his own personal expenses, he may be granted a reduction of \$1.00 per night on his room rent. This information should be given at the time the person makes a request for attendance. All registration fees will be returned and room reservations canceled, providing notice of inability to attend is received at least 15 days before the Conference.

Accommodations may be available for a limited number of women who wish to accompany their husbands. All such requests should be made at the time of the request for attendance, for these particular limited accommodations will be assigned in the order received.

All requests for attendance, or any additional information, should be addressed to Dr. Sumner B. Twiss, Chemistry Department, Wayne University, Detroit 1, Michigan.