Meetings and Societies

Program of the Gordon Research Conferences

The Gordon Research Conferences for 1958 will be held from 9 June to 29 August at Colby Junior College, New London, N.H.; New Hampton School, New Hampton, N.H., and Kimball Union Academy, Meriden, N.H.

Purpose. The conferences were established to stimulate research in universities, research foundations, and industrial laboratories. This purpose is achieved by an informal type of meeting consisting of scheduled lectures and discussion groups. Sufficient time is available to stimulate informal discussions among the members of a conference. Meetings are held in the morning and in the evening, Monday through Friday, with the exception of Friday evening. The afternoons are available for recreation, reading, or participation in discussion groups, as the individual desires. This type of meeting is a valuable means of disseminating information and ideas to an extent that could not be achieved through the usual channels of publication and presentation at scientific meetings. In addition, scientists in related fields become acquainted and valuable associations are formed that often result in collaboration and cooperative efforts between different laboratories.

It is hoped that each conference will extend the frontiers of science by fostering a free and informal exchange of ideas among persons actively interested in the subjects under discussion. The purpose of the program is not to review the known fields of chemistry but, primarily, to bring experts up to date on the latest developments, to analyze the significance of these developments, and to provoke suggestions concerning the underlying theories and profitable methods of approach for making new progress.

In order to protect individual rights and to promote discussion, it is an established requirement of each conference that no part of the information presented is to be used without specific authorization of the individual making the contribution, whether in formal presentation or in discussion. Scientific publications are not prepared as emanating from the conferences.

Registration and reservations. Attendance at the conferences is by application. Individuals interested in attending the conferences are requested to send their applications to the director at least 2 months prior to the date of the conference. *All applications must be submitted on the standard application form,* which may be obtained by writing to the office of the director. This procedure is important because certain specific information is required in order that a fair and equitable decision on the application may be made. Attendance at each conference is limited to approximately one hundred individuals.

The director will submit the names of those requesting authorization to attend the Conference Committee for each conference. This committee will review the names and select the members in an effort to distribute the attendance as widely as possible among the various institutions and laboratories represented. A registration card will be mailed to those selected, as soon as possible. Advance registration by mail for each conference is required, and registration is completed on receipt of the card and a deposit of $15 (checks are to be made payable to the Gordon Research Conferences). The deposit of $15 will be credited against the fixed fee for the conference if the individual attends the conference for which he has applied. A registration card not accompanied by the $15 deposit will not be accepted.

The board of trustees of the conferences has established a fixed fee of $100 for each conference. This fee was established to encourage attendance for the entire conference and to increase the special fund that is available to each conference chairman for the purpose of assisting conferees who attend a conference at total or partial personal expense with their travel or subsistence expenses, or with both. This fixed fee will be charged regardless of the time a conferee attends the conference—that is, for periords of from 1 to 4½ days. It is divided as follows: registration fee, $40 ($15 for administration and $25 for the special fund); room and meals, $60 (including gratuities), for 5 days. An additional charge of $1 per night per person will be made for a room with private bath or for a single room, of which there are a limited number available. These rooms will be assigned in the order that applications are received.

Members attending a conference are expected to live at the conference location because one of the objectives of the conferences is to provide a place where scientists can get together informally. It is to the advantage of all participants to attend a conference for the entire week. If special circumstances warrant living elsewhere, a registration fee of $50 is charged.

The fixed fee will cover registration, room (except room with private bath or single room), meals, and gratuities. It will not provide for golf, telephone, taxi, laundry, conference photograph, or any other personal expenses.

Conferees on total or partial personal expense who are living at the conference location, may request a reduction of $25 (the amount allotted for the special fund) in the fixed fee. Application for this special fee ($75) must be made when the registration card is returned to the director.

Accommodations are available for a limited number of women to attend each conference, and also for wives who wish to accompany their husbands. All such requests should be made at the time the attendance application is submitted, because these accommodations, limited in number, will be assigned in the order that specific requests are received. Children under 12 years of age cannot be accommodated. Dogs or other animals will not be permitted in the dormitories.

Special fund. The special fund is provided for by the board of trustees from the registration fees and is made available to the chairman of each conference for the purpose of assisting scientists from academic and government institutions who could not otherwise attend or participate because of financial limitations. This fund is provided with the object of increasing the participation of research workers from academic and government laboratories; its use is not limited to scientists who have been invited by the chairman to attend a conference in order to present a paper. The money is to be used as an assistance fund only and may be used to contribute toward traveling expenses or subsistence expenses at the conference, or both. Total travel and subsistence expenses will not usually be provided.

Cancellations. The cancellation of an approved application for attendance at a conference will cause forfeiture of the $15 deposit.

Attendance. Requests for attendance at the conferences or for additional information should be addressed to W. George Parks, Director, Department of

Chemistry, University of Rhode Island, Kingston, R.I. From 9 June to 29 August, mail should be addressed to Colby Junior College, New London, N.H.

Colby Junior College

Petroleum

Philip D. Caesar, *chairman*
George H. Denison, *vice chairman*

9–13 June. R. E. Kallio, "Microbial oxidation of hydrocarbons"; W. H. Bauer, "Oxidation of boranes"; P. S. Bailey, "Mechanisms of ozonolysis of hydrocarbons"; H. G. Wolfhard, "The physics and chemistry of combustion"; R. J. Gordon, "Application of a single molecular orbital model to combustion reactions"; E. B. Rifkin, "New advances in the chemistry and physics of antiknock action"; Andrew Fono, "Homolytic reactions induced by metal salts"; Joseph Weiss, "Radiation induced oxidation of hydrocarbons"; Glen A. Russell, "Fundamental processes in autoxidation of hydrocarbons."

Separation and Purification

Lyman C. Craig, *chairman*
Edmond S. Perry, *vice chairman*

16 June. Joel H. Hildebrand, "What solubility theory has to offer"; J. L. Torgesen, "The retention of impurities by growing crystals"; H. L. Meltzer, "Three phase countercurrent distribution."

17 June. W. E. Henderson, "Separations by filtration through membranes"; O. Smithies, "Zone electrophoresis in starch gels"; K. Hickman, "Recovery of water."

18 June. H. A. Sober, "Chromatography with columns of modified cellulose"; M. A. Mitz, "Effect of CO_2 on chromatograms with modified cellulose"; A. T. James, "Vapor-liquid chromatography."

19 June. D. F. Peppard, "Mechanism of extraction of metallic cations by acid esters of orthophosphoric acid"; B. S. Weaver, "Separation of rare earths by liquid-liquid extraction."

20 June. W. Greiner, "A commercial countercurrent solid-liquid extraction process"; M. W. Fogle and C. C. DeWitt, "An engineering approach to the separation of amino acids."

Catalysis

Vladimir Haensel, *chairman*
R. P. Eischens, *vice chairman*

23–27 June. H. L. Pickering and H. C. Eckstrom, "Infrared studies of adsorbed species on evaporated metal films"; J. Halpern, "Homogeneously catalyzed reactions of molecular hydrogen in solution"; D. E. O'Reilly, "Nuclear magnetic resonance studies of catalytic solids"; T. R. Hughes, R. J. Houston, and R. P. Sieg, "Carbon monoxide chemisorption on supported metal catalysts by radiotracer measurements in a flow system"; G. Parravano, "Oxygen affinities of metal catalysts"; G. S. John and R. J. Mikovsky, "Average properties of fluidized catalysts"; F. C. Tompkins, "Chemisorption and catalysis"; Herman Pines, W. O. Haag, and Gaston Benoy, "Alumina—a catalyst and a support"; H. Kloosterziel, "Hydrogen-deuterium exchange and redistribution reactions of hydrocarbons on solid catalysts."

Polymers

T. G. Fox, *chairman*
F. R. Eirich, *vice chairman*

30 June. H. Mark, "Recent advances in polymer chemistry"; C. Sadron, "Recent research in the Centre de Recherches sur les Macromolecules of Strasbourg"; J. C. W. Chien, "Kinetics of ethylene polymerization by soluble organotitanium-aluminum catalysts."

1 July. A. Korotov, "Kinetics and mechanism of polymerization of vinyl monomers by metallo-organic compounds"; J. W. L. Fordham, "Stereoregular polymers from free radical initiators"; J. R. Schaefgen, "Laterally ordered polymers."

2 July. W. Slichter, "NMR studies of some stereospecific polymers"; W. R. Krigbaum, "Thermodynamics of the polystyrene-cyclohexane system near the Flory theta temperature."

3 July. E. L. Wittbecker, "Interfacial polycondensation"; P. W. Morgan, "Fundamentals of interfacial polycondensation"; W. Kern, "The importance of uniformity of structure in macromolecular chemistry."

4 July. R. K. Graham, "The synthesis and characterization of graft copolymers"; Y. Landler, "Physical and mechanical properties of some graft copolymers obtained by preozonization."

Textiles

Emery I. Valko, *chairman*
Leonard Smith, *vice chairman*

7 July. H. Mark, "Deformation mechanism of polymers"; Norman J. Abbott and Freddy Khoury, "Tenison changes in textile structures during wetting and drying."

8 July. W. A. Sisson, "The structure and properties of viscose rayons"; R. E. Seaman and J. C. Shivers, "Elastic textile fibers based on condensation polymers."

9 July. C. M. Conrad, "Relationships between mechanical behavior and chemical modification of cotton"; Helmut Zahn, "Some new results in wool chemistry."

10 July. A. A. Burgeni and E. V. Painter, "Movement of fluids in fibrous beds: capillary sorption, permeation"; F. W. Minor, L. C. Buckles, E. Wulkow, and A. M. Schwartz, "The transport of liquids in textile assemblies."

11 July. C. Schlatter, "Mechanism of fiber and yarn lubrication."

Corrosion

Joseph E. Draley, *chairman*
P. M. Aziz, *vice chairman*

14–18 July. The nature of metal surfaces: H. Juretschke, "The atomic nature of metal surfaces"; C. S. Smith, "Metallography and corrosion." *Adsorption on metals*: J. T. Law, "The adsorption process on semiconductors"; L. S. Bartell, "Optical studies of adsorption from solution"; R. T. Gomer, "Field and ion emission microscopy"; P. W. Selwood, "Magnetization and surface chemistry." *Oxides on metals*: J. V. Cathcart, "The microtopography of oxide films on metals"; Jerome Kruger; "The growth of oxide films on copper in water containing oxygen"; W. D. Feitknecht, "Chemistry of the corrosion products formed on Cu, Cd, Zr, and Fe in aqueous solutions"; E. A. Gulbransen, "Crystal habits in localized corrosion and oxidation processes in relation to metal structure." *Electrode reactions*: J. O'M. Bockris, "The mechanism of anodic dissolution of metals and the inhibition of corrosion." *Passivity*: Review of Darmstadt passivity colloquium and general discussion on passivity mechanisms.

Vitamins and Metabolism

Lemuel D. Wright, *chairman*
Harry P. Broquist, *vice chairman*

21 July. Klaus Schwarz, "The factor 3 potencies of selenium compounds in dietary liver necrosis and in other deficiencies"; M. L. Scott and M. C. Nesheim, "Selenium as a nutrient for chicks"; E. L. R. Stokstad and R. G. Eggert, "Role of vitamin E and selenium in the nutrition of the pig"; Lester J. Reed, "Nature and reactions of protein-bound lipoic acid"; David E. Metzler, "Catalysis of pyruvate decarboxylation by thiamine and thiamine analogs."

22 July. Victor W. Rodwell, Miyoshi Ikawa, Benjamin E. Volcani, and Esmond E. Snell, "The bacterial oxidation of pyridoxine"; Sidney Weinhouse, "Factors influencing entry and removal of blood glucose"; John Spizizen, "Metabolism of viruses"; Boris Magasanik, "Histidine biosynthesis"; H. Waelsch, A. Neidle, and D. D. Clarke, "Amine metabolism."

23 July. G. Popjak, J. W. Cornforth, R. H. Cornforth, J. Gosselin, R. G. Gould, I. Youhotsky-Gore, and A. de Waard, "Biosynthesis of squalene and sterol from mevalonic acid"; T. T. Tchen, "The earlier stages of steroid biogenesis"; E. Kodicek, "Studies on sterols in microorganisms"; David B. Sprinson, P. R. Srinivasan, and J.

Rothschild, "The metabolic reactions between glucose and aromatic compounds"; D. W. Woolley, "Serotonin"; Byron E. Leach, Robert G. Heath, and Mathew Cohen, "Studies with taraxein."

24 July. June Lascelles, "Factors involved in the synthesis of porphyrins and related pigments by microorganisms"; Peter B. Danneberg, "Chemotherapeutic studies with fluorinated pyrimidines"; Samuel Bieber, "Uracil antagonists and tumor inhibition"; Howard A. Schneiderman, "Chemistry and physiology of insect hormones"; Hugh S. Forrest, "Metabolic reactions of biopterin."

25 July. J. R. Couch, "Mineral metabolism in the avian species"; James S. Dinning, "The role of vitamins C and B_{12} in one-carbon metabolism"; N. W. Flodin, "Amino acid fortification."

Instrumentation

N. B. Nichols, *chairman*
Clifford E. Berry, *vice chairman*

28 July–1 Aug. Invited papers. William A. Baum, "Image tubes and their astronomical applications"; Philip G. Gilman, "Automatic data logging"; John H. Heller, "Challenging problems in medical and biological instrumentation"; P. C. Hoell, "Electron beam dosimetry"; C. Lester Hogan, "Masers"; R. N. Lane, "Solions"; Marcus O'Day, "Worth-while rediscoveries from 100 years ago"; H. I. Schiff, "The use of the mass spectrometer in studying free radicals and other short-lived species."

Contributed papers. R. P. Bigliano, "Analog computers as process control elements"; Erik Blomgren, "Some new principles and devices for the study of electrochemical phenomena"; W. M. Flook, "New instrument developments"; A. S. Iberall, "Some transfer functions of the human in a control situation"; Joseph M. Kime, "An indoor coefficient of restitution tester for golfballs and baseballs"; Sidney Lees, "A physical basis for control system dynamics"; C. G. McIlwraith and J. B. Breazeale, "Instrument applications of low friction magnetic bearings"; Eugene Mittelman, "Heat transfer measurements under dynamic conditions"; C. B. Moore, "A noncontacting static meter for textile yarn"; Henry J. Noebels, "New instrumentation for measuring substances in the ppm region"; Louis Rosenthal, "An automatic heating-cooling curve apparatus"; E. W. Silvertooth, "Tracking instrumentation for balloon-borne telescope"; Lloyd Slater, "The academic stature of instrumentation"; Harry Sohon, "A novel method of measuring electrical phase angles"; Frederick Vanderschmidt and J. C. Simons, Jr., "New instruments using radioisotopes as ionizing sources"; R. R. Webster, R. L. Uphoff, and J. F. Laycak, "An acoustic volume gage."

Elastomers

Edwin B. Newton, *chairman*
Paul G. Carpenter, *vice chairman*

4 Aug. W. Postelnik, "Status of the high temperature polymer program"; W. F. Watson, "Mechanico-chemical reactions of polymers"; G. S. Trick, "Effects of microstructure on crystallization rates of elastomers."

5 Aug. M. Berger, "Kinematics of a rolling tire and its application to tire performance"; D. C. Edwards and E. B. Storey, "The union of butyl rubber with carbon black"; A. M. Gessler, "Subnormal structure channel blacks and their reinforcing effect in rubber."

6 Aug. B. Ellis and G. N. Welding, "Vulcanization characteristics of natural rubber gum stock ACS-1"; C. J. Jankowski, R. F. Neu, and R. L. Zapp, "New vulcanization studies with butyl rubber"; David Craig, D. E. Diller, R. B. Fowler, F. A. Regenass, E. H. Rowe, W. L. Semon, J. J. Shipman, and H. Tucker, "Perdeuterio SN rubber."

7 Aug. Maurice Morton and Alan Rembaum, "Some aspects of homogeneous anionic polymerization"; Paul Fugassi, "The sorption of benzene by natural and synthetic polymeric hydrocarbons"; Melvin Mooney, "The rheology of visco-elastic materials."

8 Aug. Henno Keskkula, J. A. Schmidt, and J. G. Cobler, "Methods of studying rubber-polystyrene compositions."

Food and Nutrition

Robert H. Silber, *chairman*
Lester J. Teply, *vice chairman*

11 Aug. Aline U. Orten, "The intestinal absorption of amino acids"; Alfred E. Harper, "Amino acid balance and imbalance"; James M. Hundley, "Vegetable proteins in human nutrition"; Theodore Van Itallie, "Physiological aspects of hunger and satiety."

12 Aug. Roselyn Alfin-Slater, "Further observations in fatty acid nutrition"; Albert Behnke, "Changes in gross body composition and in adipose tissue as a result of caloric restriction"; F. N. Andrews, "Hormonal relationships to nutrition in domestic animals"; Franklin C. McLean, "Hormonal and nutritional factors in osteoporosis."

13 Aug. R. R. Williams, "Food supplementation in relation to world food shortage"; O. L. Kline, "Food supplementation"; Olaf Mickelson, "Is toxicology enough for a food protection program?"; Josef Warkany, "Nutritional experiments as an instrument of research in congenital malformations"; Josef Brozek, "Recent developments in studies of the relations between nutrition and behavior."

14 Aug. Mark Hegsted, "The establishment of nutritional requirements of man"; Calvin Woodruff, "Infant nutritional requirements—fact, fancy, and calculations"; Arnold Schaefer, "Nutritional surveys in the Near and the Far East"; William J. Darby, "The program of nutrition of the World Health Organization."

15 Aug. S. H. Wittwer, "Effect of gibberellin on plant growth and composition"; Kenneth Beeson, "Effects of fertilizers on the nutritional value of plants."

Medicinal Chemistry

Maynard B. Chenoweth, *chairman*
Alfred Burger, *vice chairman*

18 Aug. Symposium on fundamentals in medicinal chemistry: Bernard Belleau, "Fundamental principles governing adrenergic blocking activity of beta-haloalkylamines"; E. J. Ariens, "Affinity and intrinsic activity in medicinal chemistry"; George B. Brown, "Some biologically active purine derivatives"; B. R. Baker, "Mechanisms of action of certain non-competitive inhibitors."

19 Aug. Symposium on fundamentals in pharmacology: Walter F. Riker, "An analysis of quaternary ammonium action at the neuromuscular synapse"; Edith Bülbring, "The function of 5-hydroxytryptamine in peristalsis"; Desmond R. H. Gourley, "Effects of drugs on active transport"; Aser Rothstein, "The cell surface as the site of action of drugs and metals."

20 Aug. Symposium on central nervous system stimulants: John H. Biel, "Chemistry of some central stimulants"; Leo G. Abood, "The psychotogenic action of piperidyl benzilates and related substances"; Lewis Danziger, "Some servo mechanisms in medicinal chemistry"; Mildred C. Rebstock, "Natural and synthetic antibiotic families."

21 Aug. Symposium on adrenal cortical inhibition and aldosterone: W. L. Bencze and M. J. Allen, "Chemistry of amphenone-analogs"; J. J. Chart and H. Sheppard, "Pharmacology of amphenone-analogs"; K. Heusler, O. Wieland, H. Ueberwasser, and A. Wettstein, "A new total synthesis of aldosterone"; Dickinson W. Richards, "Pharmacology of the lung: present knowledge and future needs."

22 Aug. Symposium on salicylates: Richard V. Heinzelman, "Chemistry of newer salicylates"; William B. Bass, "Pharmacology of newer salicylates"; Raymond W. Houde, "Analgesics related to salicylic acid: clinical studies in patients with pain due to cancer."

Cancer

H. G. Schlumberger, *chairman*
Frederik B. Bang, *vice chairman*

25 Aug. J. J. Biesele, "Early cytological effects of carcinogens"; Stanfield Rogers, "Mechanism of urethane-induced lung carcinoma in mice"; Wilhelm Hueper, "Carcinogenic studies on

water soluble and insoluble macromolecules"; S. C. Sommers, "Pathological evidence of endocrine imbalance in cancer patients"; J. Leighton, "Mechanisms of tumor invasion as seen in tissue culture."

26 Aug. L. Kilham, "Fibroma of squirrels transmitted by a virus immunologically related to the Shope rabbit fibroma virus"; R. C. Mellors, "Fluorescent antibody study of viruses in experimental neoplasms"; J. A. Reyniers, "Germ-free animals and cancer research." Alfred Gellhorn, *chairman*: Abraham Goldin, "Competitive analogue-metabolite relationships in cancer chemotherapy"; Julian J. Jaffé, "The chemotherapy of neoplasms using azaurocil and azauridine"; J. F. Holland, "Tumor suppressive activity in tumor ascites fluid."

27 Aug. E. Zwilling, "Differentiation of early chick embryo tissues following disaggregation and reaggregation"; D. McKay, "Histochemistry of the migrating primordial germ cell"; G. Barry Pierce, "Tissue—and organogenesis in mouse teratomas"; H. S. Fleming, "Organoid growth of transplants in the eye"; W. F. Loomis, "The role of CO_2 tension in cell differentiation (*Hydra*)."

28 Aug. E. C. Hammond, "Epidemiological methods in cancer research"; Lalla Iverson, "Incidence of chorioepithelioma in Southeast Asia"; J. Higginson, "Cancer in the South African Bantu"; E. S. Wynne, "Epidemiology of 'cancer eye' in cattle"; H. Innes, "Divergent susceptibilities of animal species to different types of cancer."

29 Aug. Henry Plaine, *chairman*: A. E. Kehr, "Genetic tumors in plants (*Nicotiana*)"; Madge T. Macklin, "Heredity in human cancer"; F. Friedman and L. Burton, "Etiology of tumors in *Drosophila.*"

New Hampton School

Physical Metallurgy

John Frye, Jr., *chairman*
Walter R. Hibbard, Jr., *vice chairman*

Microstructures: Their Origin and Influence on Properties

9–13 June. Special techniques: H. Wilsdorf, "Electron microscopy"; R. M. Fisher, "Electron probe analyzer"; R. Gomer, "Emission microscopy"; A. V. Baez, "X-ray microscopy." *Dislocations studies*: W. G. Johnston, "Etch pits"; S. A. Kulin, "X-ray techniques"; D. C. Robinson, "Electron microscopy"; A. R. Lang, "Berg-Barrett techniques." *Precipitation and 2nd phases*: J. Cahn, "Quantitative metallographic techniques"; Jack Washburn, "Precipitation on dislocations"; John Hilliard, "Kinetics of precipitate nucleation and growth"; A. J. Kelly, "Deformation of single crystals of age hardened aluminum alloy"; A. J. Cochart, "Role of second phases in creep." *Deformation and fracture*: J. R. Low and R. W. Guard, "Slip in iron alloys"; Morris Cohen, "Brittle behavior in steel"; Peter Gibbs, "Brittle fracture of crystals"; Jack Gilman, "Dislocations and fracture." *Oxidation and corrosion*: W. D. Forgeng and W. W. Webb, "Crystal growth during oxidation"; Ralph Condit, "Sulfurization of iron"; D. Van Rooyen, "Oxidation nucleation"; V. J. Albano, "Metallic films"; D. Vermilyea, "Oxidation kinetics."

Proteins and Nucleic Acids

Paul Zamecnik, *chairman*
Stanford Moore, *vice chairman*

16–20 June. Structural studies on nucleic acids. Unusual constituents of nucleic acids. The mechanism of synthesis of ribonucleic acid and of deoxyribonucleic acid. The relationship of ribonucleic acid to protein synthesis. Intermediate reactions in protein synthesis. The incorporation of analogues into nucleic acids and proteins. Speakers and discussants: G. Cohen, W. E. Cohn, F. Crick, B. Davis, P. Doty, A. Kornberg, C. Levinthal, F. Lipmann, R. Loftfield, M. Meselson, S. Moore, H. Neurath, S. Ochoa, V. Potter, J. Watson, and P. Zamecnik.

Coal

Alfred R. Powell, *chairman*
Henry C. Howard, *vice chairman*

23 June. Coal tar, W. M. Bywater, discussion leader: E. W. Volkmann, "The structure of coal tar"; R. W. Dornte, "Composition of high-temperature coke oven topped tar and creosote"; N. T. Shideler and F. Whittier, "Pitches and their modifications for special uses"; F. E. Cislak, "Pyridine bases—their characterization."

24 June. Martin B. Neuworth, "The composition of the low-temperature tar neutral oil"; H. R. Batchelder, "Battelle studies on lignite tar." *Coal hydrogenation,* E. E. Donath, discussion leader: F. J. Dent, "The hydrogenation of coal for gaseous hydrocarbons"; R. W. Hiteshue, "High-temperature coal hydrogenation."

25 June. H. R. Linden, "Coal pretreatment and hydrogenation to high-BTU gas"; M. D. Schlesinger, "Low-pressure coal hydrogenation." *Coal gasification,* L. L. Newman, discussion leader: Xavier Duval, "The reactions of carbon with water vapor"; C. G. von Fredersdorff, "Kinetics of fixed-bed and suspension systems of coal gasification."

26 June. W. H. Oppelt, "Considerations in the design of a liquid slag removal system for a pressurized fixed-bed generator"; F. J. Dent, "Experiments on the gasification of coal in fixed-bed pressure gasifiers"; Sabri Ergun, "Tracer techniques in the investigation of the nature of reaction sites"; C. D. Pears, "Process variables and parameters in the underground gasification of coal". *Paths in coal research,* Henry C. Howard, discussion leader.

27 June. H. H. Lowry, Martin B. Neuworth, Irving Wender.

Magnetic Resonance

H. S. Gutowsky, *chairman*
Clyde A. Hutchison, Jr., *vice chairman*

30 June. High resolution nuclear magnetic resonance, Harden M. McConnell, *chairman*: James N. Shoolery, "Interpretation of high resolution NMR spectra and current chemical applications"; H. J. Bernstein, "Methods of high resolution spectral analysis." H. S. Gutowsky, *chairman*: John R. Zimmerman, "Influence of intermolecular interactions on chemical shifts"; J. A. Pople, "The interpretation of proton chemical shifts"; S. Meiboom, "The study of chemical exchange kinetics by NMR."

1 July. Nuclear magnetic relaxation, N. Bloembergen, *chairman*: L. O. Morgan, "Proton spin relaxation by paramagnetic species"; C. A. Reilly, "Proton magnetic relaxation in some aromatic molecules"; D. W. McCall, "Diffusion and relaxation in simple liquids." *Paramagnetic resonance of free radicals,* Clyde A. Hutchison, Jr., *chairman*: George Fraenkel, "Topics in paramagnetic resonance of free radicals"; S. I. Weissman, "Electron exchange effects in electron spin resonance."

2 July. Irradiation-produced free radicals, H. S. Jarrett, *chairman*: Walter Gordy, to be announced; R. K. Waring, to be announced. *Theoretical aspects of magnetic resonance in molecular species,* B. P. Dailey, *chairman*: Martin Karplus, "Theoretical interpretation of electron coupled spin-spin interactions"; Harden M. McConnell, "Relation between magnetic resonance spectra and molecular electronic structure."

3 July. Magnetic resonance in solids, G. E. Pake, *chairman*: John Waugh, "Structure and ionic motions in complex salts"; R. G. Shulman, "NMR in magnetic solids." S. I. Weissman, *chairman*: H. S. Jarrett, "Ferrimagnetic resonance in $NiMnO_3$"; Clyde A. Hutchison, Jr., "Paramagnetic resonance of lanthanides and actinides."

4 July. Recent developments in high-resolution nuclear magnetic resonance instrumentation, E. G. Baker, *chairman*: W. A. Anderson and G. A. Williams, to be announced.

Organic Coatings

E. R. Mueller, *chairman*
D. F. Koenecke, *co-chairman*

7 July. Frederick R. Eirich, "Graft and block polymers"; John C. Cowan, "Vinyl ethers of unsaturated fatty alcohols: promising new protective coating vehicles."

8 July. Ray L. Heinrich and David A.

Berry, "Monocarboxylic aromatic acids in alkyd coatings"; J. K. Craver, "New epoxy resins in surface coatings"; D. W. Caird, "Solution and film forming properties of lexan polycarbonates."

9 July. Raymond R. Myers, "The rheology of film application by rollers"; James H. Taylor, "Application of hydrodynamic theory to the roll mill NIP."

10 July. Samuel Gusman, "A study of factors affecting the adhesion to metal of certain vinyl poylmers"; Elaine Shafrin, "Factors affecting wettability of organic surfaces."

11 July. H. Lacks, "Icephobic coatings."

Organic Reactions and Processes

Charles K. Bradsher, *chairman*
Robert I. Stirton, *vice chairman*

14 July. C. K. Bradsher, introductory remarks; C. D. Marshall, C. W. Smith, B. P. Geyer, G. W. Hearne, S. A. Ballard, H. DeV. Finch, and R. R. Whetstone, "Aerolein chemistry and derivatives"; B. C. McKusick, "Synthesis and chemistry of tetracyanoethylene."

15 July. Discussion on free radicals, Cheves Walling, discussion leader: Cheves Walling, introductory remarks; Frank R. Mayo, "Autoxidation of unsaturated compounds"; Bernhard Raecke, "The rearrangement of salts of aromatic and heterocyclic acids."

16 July. William D. Emmons, "The preparation, reactions, and synthetic applications of oxaziranes"; Nelson J. Leonard, "Amine oxidation"; H. C. Longuet-Higgins, "The molecular orbital theory of conjugated systems."

17 July. J. F. Bunnett, "Nucleophilic aromatic substitution"; P. O. Tawney, A. R. Williams, and R. H. Snyder, "The chemistry of maleimide, N-carbamylmaleimide and derived structures"; Benjamin Phillips, "The synthesis and reactions of aliphatic peracids."

18 July. N. B. Lorette, "The preparation and reactions of simple ketone acetals."

Statistics in Chemistry and Chemical Engineering

Frank Wilcoxon, *chairman*
Richard DeGray, *vice chairman*

21 July. R. Bradley, *chairman*: L. Moses, "Recent developments in ranking methods." M. Terry, *chairman*: W. Kruskal, "Population characteristics related to ranking methods."

22 July. O. L. Davies, *chairman*: D. Frazier, "The analysis of an inter-laboratory study"; J. Mandel, "Intra- and inter-laboratory testing—a general approach." G. E. Box, *chairman*: W. H. Glancy, "Experiences in the comparison of inter-laboratory data."

23 July. R. DeGray, *chairman*: C. M. Mottley, "The application of statistics in scientific investigation." E. Bianco, *chairman*: G. E. Ferris, "Subjective testing in industrial research."

24 July. B. Carpenter, *chairman*: A. Stein, "Uses and misuses of sampling inspection plans." S. M. Free, *chairman*: Harry Smith, Jr., "The simultaneous analyses of multiresponse designs."

25 July. Gertrude Cox, *chairman*: H. O. Hartley, "Application of balanced experimental designs in industry."

Steroids and Related Natural Products

Gilbert Stork, *chairman*
Elias J. Corey, *vice chairman*

28 July–1 Aug. D. H. R. Barton, "Some photochemical transformations in natural products chemistry"; C. Djerassi, to be announced; A. Bowers, to be announced; B. C. L. Weedon, "Some studies on natural polyenes"; A. Eschenmoser, to be announced; K. Wiesuer, "Recent progress in the chemistry of alkaloids"; E. P. Olivetto, "New chemistry of 11-oxygenated steroids"; L. H. Sarett, to be announced; R. B. Woodward, to be announced; W. S. Johnson, "Recent progress in the synthesis of steroids"; Oskar Jeger, to be announced; Josef Fried, to be announced.

Radiation Chemistry

William H. Hamill, *chairman*
Warren M. Garrison, *vice chairman*

4 Aug. H. C. Longuet-Higgins, "Structure and stability of ions"; J. L. Magee, "Charge transfer in gases."

5 Aug. H. M. Rosenstock, "Statistical theory of mass spectra"; Max Wolfsberg, "Theoretical study of mass spectra of alcohols"; D. P. Stevenson, "Survey of bimolecular processes in the mass spectrometer"; J. L. Franklin, "Ion-molecule reactions in the mass spectrometer."

6 Aug. T. H. Anderson, "Effects of irradiation of organic substances at 77°K"; W. Kanzig, "Structure of electron deficient color centers"; P. H. Yuster, "Effects of x-ray irradiation on alkali halide crystals containing impurity ions"; E. H. Taylor, "Effect of radiation on catalytic properties of solids."

7 Aug. M. Magat, "Effects of solutes in organic systems"; R. H. Schuler, "Radiation chemistry of organic systems"; C. D. Wagner, "Some aspects of radiolysis of *n*-paraffins"; R. Bell, "Common features of photo- and radiation-induced addition of chlorine to aromatics."

8 Aug. A. O. Allen, "Kinetics of water radiolysis under heavy particle irradiations"; (speaker to be announced), "Irradiation of aqueous systems."

Analytical Chemistry

Louis Gordon, *chairman*
John Mitchell, Jr., *vice chairman*

11 Aug. Charles N. Reilley, "Chelometric analysis"; Edward J. Griffith, "Thermogravimetry."

12 Aug. H. W. Kirby, "Progress report on radio chemistry in inorganic analysis"; G. Duyckaerts, "Infrared analysis of solids."

13 Aug. Harlan Foster, "Nuclear magnetic resonance"; open discussion.

14 Aug. W. Klyne, "Optical rotatory dispersion"; E. W. Abrahamson, "Analysis of reaction intermediates."

15 Aug. J. B. Neilands, "Enzymatic reactions."

Inorganic Chemistry

H. B. Jonassen, *chairman*
R. W. Mason, *vice chairman*

18–19 Aug. Organometallic complexes of the transition metals, Heinz Sternberg, *chairman*: J. Chatt, "Metal olefin complexes"; G. Ecke, "Recent developments in organomanganese chemistry"; R. P. Eischens, "Infrared spectra of chemisorbed species containing metal-carbon bonds"; H. H. Jaffe, "Nature of the metal-carbon bond"; R. S. Nyholm, "Substituted metal carbonyls"; P. L. Pauson, "Organometallic complexes of the transition metals"; R. E. Rundle, "Structure of organometallic complexes"; M. C. Whiting, "Structure and catalytic properties of some metal carbonyl complexes."

20 Aug. Nonaqueous solvents, Leonard Katzin, *chairman*: Dieter M. Gruen, "Molten salt solutions"; George Watson, "Molten fluorides as high-temperature solvents"; Max T. Rogers, "Interhalogen systems"; Alan F. Clifford, "HF solutions"; C. C. Addison, "Nitrogen oxide systems"; S. Bruckenstein, "Acetic acid systems."

21–22 Aug. Inorganic polymers, Charles Haber, *chairman*: L. F. Audrieth, "Inorganic polymerization reactions"; W. Conard Fernelius, "Semi-inorganic coordination polymers"; (speaker to be announced), "Theoretical consideration in search for inorganic polymer systems."

Chemistry of Adhesion

G. W. Koehn, *chairman*
Alan A. Marra, *vice chairman*

25–29 Aug. H. P. Brown and J. F. Anderson, "Adhesive properties of carboxylic rubbers"; K. R. Williams and H. T. Patterson, "Adhesion of fibers to elastomers"; J. S. Long, "Hydrophyl balance measurements"; B. W. King, "Adhesion of porcelain enamels to metal." *High temperature adhesives*: D. G. Bennett, "Ceramic adhesives"; H. H. Levine, "Triazine compounds"; F. H. Bair, "Other high performance adhesives"; C. A. Dahlquist, "Tack"; Turner Alfrey, "Role of cohesive failure in adhesive bonds"; C. E. Schildknecht, "Advances in graft polymerization"; D. S. Ballantine and D. J. Metz, "Graft polymerization by irradiation"; H. A. Smith, "Preparation and properties of monolayers on active metal surfaces."

Kimball Union Academy

Lipide Metabolism

Warren M. Sperry, *chairman*
Donald B. Zilversmit, *vice chairman*

9 June. Analytical methods, Donald B. Zilversmit, *chairman*: Hermann Schlenk, "Paper chromatography of lipides"; S. R. Lipsky, "The application of gas liquid chromatographic techniques to the analysis of lipide mixtures." *Analytical methods and complex lipides,* William Insull, *chairman*: Norman K. Freeman, "Infrared spectroscopy in lipide analysis"; Herbert Meltzer, "Separation of complex lipides by three phase countercurrent fractionation."

10 June. Analytical methods and sphingolipides, Martin Marcus, *chairman*: Norman Radin, "Sphingolipide metabolism and chromatography"; Maurice M. Rapport, "A serological expedition to the field of sphingolipides"; Samuel Bogoch, "Neuraminic acid in brain ganglioside and in cerebrospinal fluid." *Sphingolipides,* David M. Tennent, *chairman*: J. Folch-Pi, "Study of the brain ganglioside-strandin"; E. Klenk, "Mucoproteins and mucolipides of erythrocytes."

11 June. Sphingolipides, Michael C. Schutz, *chairman*: Eli Robins, "Biochemical changes in developing white matter"; Benjamin Weiss, "Synthesis of sphingosine derivatives"; Roy Gigg and Herbert E. Carter, "The chemistry of sphingolipides." *Biosynthesis of sphingolipides,* Leon Swell, *chairman*: Jonathan B. Wittenberg, "Sphingosine biogenesis"; Roscoe O. Brady, "The enzymatic synthesis of glycosphingolipides."

12 June. Biosynthesis of sphingolipides, sterols, and fatty acids, H. C. Meng, *chairman*: Irving Zabin, "Biosynthesis of sphingolipides"; George Alexander and Erwin Schwenk, "New experiments on the biosynthesis of sterols"; Marvin D. Siperstein, "The nature of the lipogenic defect in diabetes." *Biosynthesis of fatty acids,* Clyde T. Caldwell, *chairman*: D. E. Green, D. M. Gibson, S. J. Wakil, and E. Titchener, "The reconstruction of the fatty acid synthesis system of pigeon liver"; F. Lynen, "Biosynthesis of fatty acids by purified enzymes."

13 June. Biosynthesis of phosphatides and triglycerides, Alex Lesuk, *chairman*: K. P. Strickland and R. J. Rossiter, "Biogenesis of phosphatides and triglycerides"; E. P. Kennedy, "The enzymatic synthesis of complex lipides."

Cell Structure and Metabolism

Montrose J. Moses, *chairman*

The Muscle Cell

16 June. Definitive aspects: H. Ruska and C. A. Edwards, "Comparative structure and organization of the muscle cell"; S. V. Perry, "Chemical organization of muscle cells"; D. Wilkie, "Physiological parameters of muscle cell function"; A. Sandow, discussion leader.

17 June. Membrane limited structures of the muscle cell: G. Palade, "Fine structure of the sarcosomes"; E. G. Slater, "Biochemistry of the sarcosomes"; K. R. Porter, "The sarcoplasmic reticulum."

18 June. Contraction: A. Huxley, "Light microscopic observations on contracting muscle"; S. Inoué, "Polarized light studies of muscle contraction"; A. J. Hodge, "Changes in fine structure associated with contraction. A review of recent concepts"; A. G. Szent-Gyorgyi, discussion leader. J. Gergely, "Myosin and actomyosin: reality or artifact?"; H. Holtzer and J. Marshall, "Localization of muscle proteins."

19 June. Contraction: T. Hayashi, "Model contraction systems"; W. F. H. M. Mommaerts, "Energy supplying systems and contraction"; A. Csapo, "Possible link between intact muscle and models"; discussion; L. Lorand, "Relaxing factors."

20 June. Neuromuscular relationships: R. Couteaux, "Cytochemistry and morphology of the subneuronal apparatus"; J. del Castillo, "Physiological function of the motor end plates"; R. J. Barrnett, discussion.

Nuclear Chemistry

John R. Huizenga, *chairman*
Morris L. Perlman, *vice chairman*

23–27 June. Nuclear spectroscopy, application of the shell and unified nuclear models in the interpretation of experimental results. Coulomb excitation. Photonuclear reactions, dependence of the cross section for formation of an excited nucleus by gamma-ray absorption on nuclear deformation. Heavy ion reactions. Discussion of Γ_n *and* Γ_f *as function of energy, atomic weight, and number. Hot atom chemistry. Chemical techniques. Geochemistry including cosmic abundances and synthesis of the elements.* Speakers and detailed program to be announced.

Solid State Studies in Ceramics

M. L. Kronberg, *chairman*
William D. Kingery, *vice chairman*

High Temperature and High Pressure Phenomena

30 June–4 July. P. W. Gilles, "Vapor species above solids—particularly oxides"; A. J. Thorn, discussion. R. E. Carter, "Determination of dissociation pressures of oxides by use of galvanic cells"; S. L. Blum, discussion. A. Muan, "Equilibria among gas, liquid and crystalline phases in oxide systems involving changes in oxidation states"; T. B. King, "Water solubility and oxygen diffusion in molten silicates." C. E. Birchenall, J. E. Burke and G. C. Kuczynski, in a comprehensive discussion of "The current status and trends in the fields of diffusion and sintering." R. Roy, "Crystal chemical observations on high pressure phase relationships"; G. C. Kennedy, discussion. H. T. Hall, "Some recent developments in high pressure chemistry"; S. Zerfoss, discussion. R. Chang, "Creep of ceramic oxides at high temperatures and low stresses"; J. A. Pask, discussion. D. T. Griggs, "Some mechanical properties of minerals at high temperatures and high stresses"; M. L. Kronberg, discussion. S. P. Mitoff, "Electrical conductivity of single crystals of magnesium oxide at elevated temperatures." W. B. Crandall, "Unsteady-state heat transfer at elevated temperatures"; W. D. Kingery, discussion. R. B. Sosman, guest lecture, "A scientific-technologic survey of eating places." A number of scientists from abroad will attend and will report on current research in their respective institutions. They are: H. J. Oel, J. White, E. W. Gorter, A. L. Roberts, K. Hauffe, P. Murray or D. Livey, R. Lindner, and K. Torkar.

Chemistry and Physics of Isotopes

Russell Baldock, *chairman*
Ralph Weston, *vice chairman*

7–11 July. Natural abundance of isotopes (geological and biological significance). Theoretical aspects of kinetic isotope effects. Applications of kinetic isotope effects to reaction mechanisms. Solvent properties of heavy water. Isotope separation (emphasis on chemical exchange). Isotopes in geology. Some new applications in mass spectrometry. Brief progress reports on current research activities.

Chemistry, Physiology and Structure of Bones and Teeth

D. Dziewiatkowski, *chairman*
Wallace D. Armstrong, *vice chairman*

14 July. Elaboration of the inorganic structures in bones and teeth, Reidar F. Sognnaes, *chairman*: J. T. Albright and R. F. Sognnaes, "Fine structure of the inorganic elements in adult bones and teeth"; S. F. Jackson, "Structural relationship between inorganic and organic elements in embryonic bone." Baird Hastings, *chairman*: Honor B. Fell, "The study of skeletal physiology by the organ culture method."

15 July. Physics of the solid state, John H. Marshall, *chairman*: N. H. Nachtrieb, "Dynamics of the solid state"; W. F. Neuman, "The bone crystal"; A. S. Posner, discussion. Karl Meyer, *chairman*: Harry Bostrom, "Aspects of the metabolism of mucopolysaccharides."

16 July. Enzymes of bone, Alexander B. Gutman, *chairman*: P. Robbins and F. D'Abramo, "Active sulfate and the

synthesis of chondroitin sulfate"; H. F. DeLuca, "Vitamin D and citrate metabolism." Franklin C. McLean, *chairman*: Nicolay Eeg-Larsen, "Glycolysis in epiphyseal cartilage."

17 July. Chemistry and physiology of the parathyroid hormone, John E. Howard, *chairman*: H. Rasmussen, "Studies on the isolation of the parathyroid hormone"; C. Rich, M. Horwith, D. Thompson, and H. Rasmussen, "Physiological effects of purified parathyroid hormone in humans." E. C. Reifenstein, Jr., *chairman*: E. Kodicek, "Metabolism of vitamin D."

18 July. Current research trends, Wallace D. Armstrong, *chairman*: contributed short papers, to be selected.

Chemistry at Interfaces

Stephen Brunauer, *chairman*
Norman Hackerman, *vice chairman*

21 July. Chemical reactions at interfaces, Herman E. Ries, Jr., *chairman*: E. A. Gulbransen, "Structural aspects of reactions at solid-gas interfaces"; Alexandre Rothen, "Studies of enzymatic reactions at a solid-liquid interface"; J. H. Schulman, "Selective interaction of sodium and potassium ions with surface active agents at solid-liquid and liquid-liquid interfaces."

22 July. Electrical phenomena at interfaces, H. van Olphen, *chairman*: Pasupati Mukerjee, "Some interactions of amphipathic ions in aqueous solutions"; D. T. Rogers, "Tribo-electric properties of distillate fuels"; David C. Grahame, "Factors affecting the adsorption of ions at interfaces."

23 July. Adsorption, L. E. Copeland, *chairman*: A. C. Zettlemoyer, "Chemisorption on metals"; Fred Karush, "Adsorption of small molecules by proteins"; G. M. Schwab, "Chemisorption and catalysis."

24 July. Interfaces in dispersed systems, A. J. G. Allan, *chairman*: R. K. Iler, "Recent developments in the surface chemistry of silica and silicates"; C. R. Singleterry, "Detergents in organic media"; R. D. Vold, "Packing and ionization of layers of sodium dodecyl sulphate adsorbed on carbon particles"; A. M. Gaudin, "Induced hydrophobicity in minerals."

25 July. General discussion.

High-Pressure Research

J. M. Lupton, *chairman*

28 July. High-pressure synthesis, C. M. Sliepcevich, *chairman*: H. Tracy Hall, "High-pressure, high-temperature developments"; C. Walling, "Organic reactions at high pressures." *Transport properties,* A. Michels, *chairman*: John Ross, "Transport processes in dense gases"; R. B. Dow, "Rheological properties at high pressures."

29 July. Measurement, correlation, and utilization of pressure, volume, and temperature data, W. C. Edmister, *chairman*: V. J. Berry, "Effects of pressure, temperature, and composition on the behavior of a gas condensate system"; A. Bondi, "A corresponding-states correlation without critical constants—application to the PVT properties of higher molecular weight hydrocarbons"; L. N. Canjar, "Treatment and correlation of light hydrocarbon PVT data"; J. B. Opfell, "Some limitations on applications of equations of states."

30 July. Solid state, H. G. Drickamer, *chairman*: H. Brooks, "Review of recent work on the effects of pressure on semiconductors"; W. B. Daniels and Charles S. Smith, "Single-crystal elastic constants to 10,000 atmospheres." *Optical properties,* A. W. Lawson, *chairman*: H. G. Drickamer, "Optical studies on the structure of solids"; B. Vodar, "Recent results on atomic and molecular spectra of compressed gases."

31 July. Geophysics, G. A. MacDonald, *chairman*: A. F. Birch, "Application of high-pressure research to problems in geophysics." *Molecular physics,* J. M. Lupton, *chairman*: A. Michels, "Some conclusions on interactions from recent high-pressure experiments."

1 Aug. Geochemistry, J. R. Gold-

smith, *chairman*: G. C. Kennedy, Rustum Roy, "Application of high-pressure research to problems in geochemistry."

Toxicology and Safety Evaluations

John A. Zapp, Jr., *chairman*
Don D. Irish, *vice chairman*

4 Aug. The laboratory animal in toxicity studies, Margaret Ives, *chairman*: L. Royal Christensen, "The endemic disease pattern in experimental animals"; C. N. Wentworth Cumming, "The care and nurture of laboratory animals." *The laboratory animal in toxicity studies,* O. G. Fitzhugh, *chairman*: Lloyd W. Hazleton and Bernard L. Oser, "The choice of animals as related to the interpretation of toxicity studies."

5 Aug. Statistical methods in toxicology, Carrol S. Weil, *chairman*: Jerome Cornfield, "Biometric approach to the planning and analysis of toxicity studies." *Estimation of hazards for man,* David W. Fassett, *chairman*: Hardin B. Jones, "Extension of laboratory and other data to populations."

6 Aug. Health hazards of nuclear reactors, Norton Nelson, *chairman*: Charles R. Williams, "The public heath aspect of nuclear reactors." *Metabolic and biochemical investigations in toxicity evaluations,* Arnold J. Lehman, *chairman*: F. A. Denz, to be announced.

7 Aug. Air pollution toxicology, Eugene R. Krackow, *chairman*: Herbert E. Stokinger, "Experimental evaluation of the toxicity of air pollutants"; Geoffrey Carey, "Clinical approach to the toxicity of air pollutants." *The role of judgment in toxicological research,* Don D. Irish, *chairman*: Maurice H. Seevers, "Horse sense in collecting and interpreting toxicological data."

8 Aug. Training of toxicologists, a panel discussion; Henry F. Smyth, Jr.; *chairman*: Henry F. Smyth, Jr., "The work and responsibilities of a toxicologist"; Elliott A. Maynard, "Past and current training of toxicologists"; E. M. K. Geiling, "Appropriate future training of toxicologists."

Chemistry and Physics of Metals

J. A. Krumhansl, *chairman*
E. I. Salkovitz and J. W. McClure, *vice chairmen*

11 Aug. Electronic structure—general: J. C. Slater, "Electron energy bands in metals"; A. F. Kip, "Cyclotron resonance"; D. H. Tomboulian, "Soft x-ray valence band emission studies."

12 Aug. Specific band determinations: G. Lehman, "Band structure of uranium and thorium"; J. R. Reitz, "Band structure of selenium and tellurium"; J. W. McClure, "Band structure of graphite." *Liquid metals*: S. Strauss, "Size effects in liquid alloys."

13 Aug. Transport properties: E. I. Salkovitz, "Transport properties in dilute alloys"; T. G. Berlincourt, "Hall

effect in metals and alloys"; A. I. Schindler, "Band dependent properties in transition metal alloys." *Elastic properties of metals and alloys*: J. R. Reitz, "Elastic constants of metals and alloys and electronic structure."

14 Aug. Point defects and electronic properties: T. J. Rowland, "Nuclear magnetic resonance in copper and silver alloys"; W. Harrison, "Influence of lattice disturbances on point defect scattering"; L. Roth, "Scattering of Bloch waves"; F. J. Blatt, "Thermoelectric power of noble metal alloys."

15 Aug. Special topics: L. Apker, "Recent progress in photoelectric emission"; H. Brooks, recapitulation.

Infrared Spectroscopy

F. A. Miller, *chairman*
V. Z. Williams, *vice chairman*

18 Aug. Spectra of trapped species, B. Crawford, Jr., *chairman*: J. A. A. Ketelaar, "Infrared spectra of crystalline solid solutions"; G. C. Pimentel, "Matrix methods." *Infrared spectra of adsorbed molecules*: A. Terenin, "Infrared spectra of molecules adsorbed on solid surfaces"; William A. Pliskin and R. P. Eischens, "The infrared spectra of carboxylic acids chemisorbed on metals and metal oxides."

19 Aug. Measurement of vibrational relaxation times, G. C. Pimentel, *chairman*: K. E. Shuler, "Theoretical aspects"; S. H. Bauer, "Experimental aspects." *Detectors for the infrared region*: E. F. Daly, "Infrared detectors."

20 Aug. Infrared intensities, D. A. Ramsay, *chairman*: D. F. Eggers, Jr., "Infrared intensities from band area measurements"; J. H. Jaffe, "Infrared intensities from dispersion measurements." *Raman intensities*: M. V. Volkenstein, "Theoretical aspects"; L. A. Woodward, "Experimental aspects."

21 Aug. The origin of group frequency shifts, V. Z. Williams, *chairman*: D. H. Whiffen, "Physical effects"; L. J. Bellamy, "Chemical effects." *Group intensities*: R. N. Jones, "Infrared intensities in liquid and solution phases."

22 Aug. F. A. Miller, *chairman*: L. J. Bellamy, B. Crawford, Jr., J. A. A. Ketelaar, R. C. Lord, H. W. Thompson, and N. Wright, "Infrared: its present needs and future directions," panel discussion.

Glass

James E. Archer, *chairman*
R. J. Charles, *vice chairman*

Physicochemical Aspects of Glass

25 Aug. General introduction: R. W. Douglas, "Transport phenomena in glasses"; (speaker to be announced), "Thermodynamic considerations of glasses and slags."

26 Aug. J. Uys, "Water in silicate melts"; panel presentation, "Room temperature reactivity of glasses."

27 Aug. J. Gibbs, "Nature of the glass transition in linear polymers"; W. Hillig, "Kinetic stability of the glassy state."

28 Aug. S. W. Barber, "Dispersion of acoustic waves at low temperature in binary alkali silica glass and its relation to other mechanical properties"; R. J. Charles, "Effect of temperature and atmosphere on the corrosion fatigue of lime glass."

29 Aug. Summary discussion; overflow papers; business meeting.

W. GEORGE PARKS
Department of Chemistry, University of Rhode Island, Kingston

Society Elections

■ The Radiological Society: pres. and AAAS Council representative, Leo G. Rigler, Cedars of Lebanon Hospital, Los Angeles, Calif.; pres.-elect, Laurence L. Robbins, Massachusetts General Hospital, Boston; historian, Howard P. Doub, Henry Ford Hospital, Detroit, Mich.; sec.-treas., Donald S. Childs, 713 E. Genesee Street, Syracuse, N.Y. The vice-presidents are Robert D. Moreton, Fort Worth, Tex., James W. J. Carpenter, Chicago, Ill., and Everett L. Pirkey, Louisville, Ky.

■ Institute of Mathematical Statistics: pres., L. J. Savage, Eckhart Hall, University of Chicago; pres.-elect., Jacob Wolfowitz, Department of Mathematics, Cornell University (after late May 1958); sec., George E. Nicholson, Jr., Department of Statistics, University of North Carolina, Chapel Hill, N.C.; treas., A. H. Bowker, Department of Statistics, Sequoia Hall, Stanford, Calif. The representative to the AAAS is Harold Hotelling, Institute of Statistics, University of North Carolina.

■ American Academy for Cerebral Palsy: pres., William T. Green; pres.-elect, Robert A. Knight; treas., Samuel B. Thompson; sec., Raymond R. Rembolt, University Hospital, Iowa City, Iowa.

■ Optical Society of America: pres., Irvine C. Gardner; pres.-elect, John Strong; junior past pres., Ralph A. Sawyer; v. pres. for meetings, Stanley S. Ballard; sec., Kasson S. Gibson, National Bureau of Standards, Washington 25, D.C.; treas., E. D. McAlister; sec. for local sections, W. Lewis Hyde. The representative to the AAAS Council is C. C. Kiess, National Bureau of Standards, Washington, D.C.

■ American Mathematical Society: pres., Richard Brauer, Department of Mathematics, Harvard University; pres.-elect, E. J. McShane, University of Virginia; sec., John W. Green, Department of Mathematics, University of California, Los Angeles 24, Calif.; treas., Albert L. Meder, Jr., New York, N.Y. The vice presidents are Garrett Birkhoff, Harvard University, and Salomon Bochner and N. E. Steenrod, Princeton University. The representative to the AAAS Council is W. L. Duren, University of Virginia.

Forthcoming Events

March

31–2. Utilization of Atomic Energy, College Station, Tex. (R. E. Wainerdi, A.&M. College of Texas, College Station, Tex.)

April

1. Microcirculatory Conf., 5th, Buffalo, N.Y. (S. R. M. Reynolds, Dept. of Anatomy, Univ. of Illinois College of Medicine, 1853 W. Polk St., Chicago 12.)

1–2. Alabama Acad. of Science, annual, Birmingham. (H. M. Kaylor, Dept. of Physics, Birmingham-Southern College, Birmingham.)

1–2. Freezing and Drying Symp., 2nd Internatl., London, England. (L. G. Beckett, Institute of Biology, 41 Queen's Gate, London, S.W.7.)

1–3. Corrosion Control, 5th annual conf., Norman, Okla. (M. L. Powers, Extension Div., Univ. of Oklahoma, Norman.)

2–4. American Assoc. of Anatomists, annual, Buffalo, N.Y. (L. B. Flexner, Dept. of Anatomy, School of Medicine, Univ. of Pennsylvania, Philadelphia 4.)

2–4. Instruments and Regulators Conf., Newark, Del. (W. E. Vannah, Control Engineering, 330 W. 42 St., New York 36.)

3–5. Pennsylvania Acad. of Science, annual, Easton, Pa. (G. R. Stevens, Dept. of Geology and Geography, Lafayette College, Easton.)

4–5. Southern Soc. for Philosophy and Psychology, annual, Nashville, Tenn. (W. B. Webb, U.S. Naval School of Aviation Medicine, Pensacola, Fla.)

7–11. American Assoc. of Cereal Chemists, annual, Cincinnati, Ohio. (J. W. Pence, Western Utilization Research Laboratories, Albany, Calif.)

8–10. Electronic Waveguides Symp., New York. (J. Fox, Microwave Research Inst., Polytechnic Inst. of Brooklyn, 55 Johnson St., Brooklyn 1, N.Y.)

9–12. National Council of Teachers of Mathematics, Cleveland, Ohio. (M. H. Ahrendt, NCTM, 1201 16 St., NW, Washington 6.)

9–14. Applied Psychology, 13th internatl. cong., Rome, Italy. (L. Meschieri, National Inst. of Psychology, Rome.)

10–11. American Inst. of Chemists, annual, Los Angeles, Calif. (L. Van Doren, AIC, 60 E. 42 St., New York 17.)

10–12. Biometric Soc., ENAR, Gatlinburg, Tenn. (T. W. Horner, General Mills, Inc., 400 Second Ave. South, Minneapolis 1, Minn.)

10–12. National Speleological Soc., annual, Gatlinburg, Tenn. (G. W. Moore, Geology Dept., Yale Univ., New Haven, Conn.)

10–12. Ohio Acad. of Science, annual, Akron, Ohio. (G. W. Burns, Dept. of Botany, Ohio Wesleyan Univ., Delaware.)

11. Vitamin B-12 Symp., New York, N.Y. (Miss J. Watson, 451 Clarkson Ave., Brooklyn 3, N.Y.)

11–12. Eastern Psychological Assoc., annual, Philadelphia, Pa. (G. Lane, Dept. of Psychology, University of Delaware, Newark.)

11–12. Montana Acad. of Sciences, annual, Missoula. (L. H. Harvey, Montana State Univ., Missoula.)

11–18. Horticultural Conf., 15th internatl., Nice, France. (Secretariat General, 84, rue de Grenelle, Paris 7e, France.)

12. Society for the Scientific Study of Religion, New York. (L. Whitman, 297 Fourth Ave., New York, N.Y.)

13–14. American Soc. for Artificial Internal Organs, Philadelphia, Pa. (G. Schreiner, Georgetown Univ. Hospital, Washington 7.)

13–18. American Chemical Soc., 133rd, San Francisco, Calif. (R. M. Warren, ACS, 1155 16 St., NW, Washington 6.)

13–19. Federation of American Societies for Experimental Biology, annual, Philadelphia, Pa. (M. O. Lee, FASEB, 9650 Wisconsin Ave., Bethesda 14, Md.)

14–16. Automatic Techniques Conf. Detroit, Mich. (J. E. Eiselein, RCA, Bldg. 10–7, Camden 2, N.J.)

14–18. American Assoc. of Immunologists, annual, Philadelphia, Pa. (F. S. Cheever, Graduate School of Public Health, Univ. of Pittsburgh, Pittsburgh 13, Pa.)

14–18. American Soc. for Experimental Biology, annual, Philadelphia, Pa. (J. F. A. McManus, Univ. of Alabama Medical Center, Birmingham.)

14–18. American Soc. of Biological Chemists, annual, Philadelphia, Pa. (P. Handler, Dept. of Biochemistry, Duke University School of Medicine, Durham, N.C.)

15–17. Gas Measurement, 34th annual conf., Norman, Okla. (M. L. Powers, Extension Div., Univ. of Oklahoma, Norman.)

16–25. Instruments, Electronics and Automation Conf., London, England. (Industrial Exhibitions Ltd., 9 Argyll St., London, W.1.)

17–18. Environmental Engineers, 2nd annual institute, New York. (Institute of Environmental Engineers, 9 Spring St., Princeton, N.J.)

17–18. Midwest Benthological Soc., annual, Madison, Wis. (K. M. Mackenthun, 453 State Office Bldg., Madison 2.)

17–19. Association of Southeastern Biologists, annual, Tallahassee, Fla. (J. C. Dickinson, Jr., Dept. of Biology, Univ. of Florida, Gainesville.)

17–19. Eastern Colleges Science Conf., 12th annual, Wilkes-Barre, Pa. (Mrs. E. Stevens, Wilkes College, Wilkes-Barre.)

(*See issue of 21 February for comprehensive list*)