

-5 MAY 1961

# THE PENNSYLVANIA STATE UNIVERSITY

UNIVERSITY PARK • PENNSYLVANIA

March 8, 1961

On behalf of The American Carbon Committee and The Pennsylvania State University, you are cordially invited to attend the Fifth Biennial Conference on Carbon to be held at The Pennsylvania State University, June 19-23, 1961.

For your information, there is enclosed a list of tentative papers to be presented and pertinent information relative to the Conference. Abstracts of the Conference will be mailed about May 19th to those who pre-register by mail.

If you should have any questions concerning the Conference, please do not hesitate to write to David S. Coleman, Conference Center, The Pennsylvania State University, University Park, Pennsylvania. We look forward to seeing you in June.

Sincerely,

*Philip L. Walker, Jr.*

Philip L. Walker, Jr.  
Local Chairman  
Carbon Conference

## HOW TO REACH THE UNIVERSITY

The Pennsylvania State University is in the Borough of State College (post office address, University Park, Pennsylvania) in the geographical center of the State. It is on U. S. Highway Routes 45 and 322, and is 275 miles from New York City, 190 miles from Philadelphia, 185 miles from Washington, D. C., and 140 miles from Pittsburgh.

State College is served by Greyhound and Edwards Lakes-to-Sea Bus Lines (take east-west route only). If you wish to travel by airplane, Allegheny Airlines connects with major airline companies and stops at Black Moshannon Airport (for the Philipsburg-Clearfield-State College area). Limousine and taxi service are available to bring you to the University (about 30 minutes ride). By train (Pennsylvania Railroad), passengers should get off at Lewistown where limited bus connections to State College are available (about 50 minutes ride).

## HOUSING ACCOMMODATIONS

### University Residence Hall Accommodations

Persons attending the Conference are invited to reserve room space in the modern University residence hall which can house the entire group. Double rooms with twin beds and a very limited number of single rooms are available. It will usually be necessary to assign two people to each double room. Persons wishing to room together should note this fact on the enclosed reservation form.

There are no private baths, but well-appointed bathrooms are located conveniently near each room. Blankets, bed linens, soap, and towels are furnished, and daily maid service is provided. Accommodations for men, women, and couples are available.

The room rate is \$3.00 per night per person in a double room and \$3.50 in a single room. You may occupy a room as early as Saturday, June 17, and as late as Saturday, June 24, inclusive.

Please indicate your room preference as noted on the reservation form, but pay for rooms only upon arrival.

### Other Room Accommodations

The Nittany Lion Inn on The Pennsylvania State University Campus is an attractive colonial inn, operated in cooperation with the University's Department of Hotel and Institution Administration. Accommodations include double and twin-bedded rooms. There are three air-conditioned dining rooms and a coffee shop. Rates vary from \$6 to \$8 for a single room and from \$10 to \$12 for a twin-bedded room. Write directly to the Nittany Lion Inn for reservations.

Other accommodations may be secured by writing directly to the Autoport Motel, College Court Motel, Colony Motel, Nittany Manor Motel, Penn Hi-Boy Motel, Ranch Court Motel, State College Hotel, Stevens Motel, or Taylor Motel. The address for all is State College, Pennsylvania. Rates vary from \$5 to \$8 for a single room and \$8 to \$12 for a twin-bedded room.

It is suggested that reservations be made early because of the demand for rooms in June. Should you encounter difficulty in securing accommodations, write to: Conference Center, The Pennsylvania State University, University Park, Pennsylvania.

## REGISTRATION

Registration will be conducted from Sunday afternoon, June 18 through Wednesday afternoon, June 21. Exact times and places of registration and meetings will be indicated on the Abstracts.

The presentation of papers will begin on Wednesday morning, June 19, and will end Friday afternoon, June 23.

## MEALS

Those attending the Conference have their choice of meal arrangements. You may choose to eat all of your meals in a University dining hall, in the Hetzel Union Building cafeteria, or in local restaurants. Only the banquet dinner on Tuesday, June 20, is paid for in your registration fee.

If you wish to eat all of your meals in a University dining hall, please indicate this choice on the enclosed form. This meal arrangement will begin with breakfast on Monday, June 19, and will end with dinner on Friday, June 23. The menu for each meal will be pre-determined but will be well-balanced and plentiful. With this plan the total cost for five breakfasts, five lunches, and four dinners (14 meals) will be only \$16.00. Please do not send money in advance for meals. Pay only upon arrival.

If you desire to eat on your own and pay as you go, reasonably priced meals are served in a very fine cafeteria in the Hetzel Union Building. Or, if you wish, you may eat some of your meals in the cafeteria and some in local restaurants. Because of the number of other groups on campus during this week, meal service, especially in the cafeteria, may be somewhat slower than it will be in the University dining hall. The Planning Committee has made housing and meal arrangements in the residence and dining halls for your convenience, if you elect to use them.

Coffee will be served during the mid-morning and mid-afternoon breaks of each conference day, Monday through Friday, at no extra cost.

## PARKING WHILE ON CAMPUS

Those who wish to drive their cars will be given a parking sticker upon registering for the Conference. This will entitle the owner to park in an assigned area throughout his stay at no extra cost to him.

## ABSTRACTS

It is important to note that a copy of the Abstracts of the Conference will be mailed to those who pre-register by mail. The Abstracts will be mailed about May 19.

## RECREATIONAL FACILITIES

The Pennsylvania State University is located in a beautiful mountainous area of central Pennsylvania. On the University Campus an 18-hole golf course is available to Carbon Conference participants at a nominal fee. Other facilities include tennis courts, bowling alleys, and nearby swimming and fishing facilities.

## GENERAL INFORMATION

Mean Temperatures in June at Penn State:  
Daytime maximum - 79° F. (26° C.)  
Evening minimum - 57° F. (14° C.)  
The month of June - 68° F. (20° C.)  
Relative humidity up to 70%



FIFTH BIENNIAL CONFERENCE ON CARBON  
The Pennsylvania State University  
University Park, Pennsylvania  
June 19-23, 1961

Additions and corrections as of March 13, 1961, to "Preliminary list of authors and papers to be presented at the Conference".

- 57. Withdrawn.
- 62. Withdrawn.
- 65. Change of author to: J. T. Meers.
- 94. Withdrawn.
- 95. Change of affiliation and address to: Australian Atomic Energy Commission Research Establishment,  
Sutherland, New South Wales, Australia.
- 128. Withdrawn.
- 140. Addition: The Catalytic Properties of Amorphous Carbon, D. E. Weiss, Commonwealth Scientific and  
Industrial Research Organization, Melbourne, Australia.

FIFTH BIENNIAL CONFERENCE ON CARBON

The Pennsylvania State University

University Park, Pennsylvania

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-5 MAY 1961

Preliminary list of authors and their papers to be presented at the Conference

1. CHEMICAL CHARACTERISTICS OF CARBON BRUSH WEAR DUST, R. J. Bobka, National Carbon Company, Research Laboratories, Parma, Ohio
2. THE CATALYTIC EFFECT OF IRON ON THE CARBON-CARBON DIOXIDE REACTION, J. F. Rakszawski, F. Rusinko, Jr., and P. L. Walker, Jr.; The Pennsylvania State University, University Park, Pennsylvania
3. SURFACE COMPLEXES IN THE CARBON-OXYGEN REACTION, F. J. Vastola, P. L. Walker, Jr., and N. R. Laine; The Pennsylvania State University, University Park, Pennsylvania
4. THE KINETICS OF THE DIAMOND OXYGEN REACTION, T. Evans and C. Phaal; J. J. Thomson Physical Laboratory, University of Reading, Whiteknights Park, Reading, England
5. THE DEGASSING BEHAVIOR OF COMMERCIAL GRAPHITES, L. G. Overholser and J. P. Blakely; Oak Ridge National Laboratory, Oak Ridge, Tennessee
6. STUDIES OF SURFACE SORPTION IN GAS-GRAPHITE SYSTEMS, T. J. Clark and R. C. Giberson; General Electric Company, Hanford Atomic Products Operation, Richland, Washington
7. SURFACE OXIDES FORMED ON CARBONS IN CARBON DIOXIDE, H. W. Davidson, and J. W. Brightwell; Research Laboratories, General Electric Company Limited, Wembley, Middlesex, England
8. A FAIRLY GENERAL PAPER ON THE GRAPHITE/CO<sub>2</sub> WORK, J. M. Hutcheon, United Kingdom Atomic Energy Authority, Warrington, Lancs, England
9. (Title of paper to be announced), W. J. Thomas, University College of Swansea, Singleton Park, Swansea, England
10. RELATION BETWEEN STRUCTURE OF GRAPHITE AND ITS OXIDATION RATE, F. M. Lang, Commissariat A L'Energie Atomique, Paris, France
11. THE FORMATION OF METHANE FROM HYDROGEN AND CARBON AT HIGH TEMPERATURES AND PRESSURES, K. Hedden, Institut fur Physikalische Chemie, der Universitat Munster, Munster, Germany
12. ADSORPTION AND DESORPTION OF WATER FILMS ON GRAPHITE SURFACES, G. L. Montet, Solid State Science Division, Argonne National Laboratory, Argonne, Illinois
13. KINETICS OF GRAPHITE OXIDATION AT TEMPERATURES UP TO 2000° C, R. F. Strickland-Constable and J. Nagle, Imperial College, London, England
14. SURFACE OXIDES AND CATALYSTS ON GRAPHITE SINGLE CRYSTALS, Gerhart R. Hennig, Argonne National Laboratory, Argonne, Illinois
15. THE EFFECT OF GASIFICATION BY CARBON DIOXIDE ON THE PORE STRUCTURE OF GRAPHITE, J. Butcher and D. M. Grove; Queen Mary College, University of London, London, England
16. REACTION OF OXYGEN AND HYDROGEN WITH CARBON OF A CARBON SUPPORTED PLATINUM CATALYST, J. G. Aston, H. Chon, R. A. Fisher, and E. S. J. Tomezsko; The Pennsylvania State University, University Park, Pennsylvania
17. THE FORMATION AND OXIDATION OF HIGH-AREA CARBON FILMS, V. R. Deitz and E. F. McFarlane; U. S. Department of Commerce, National Bureau of Standards, Washington, D. C.
18. OXIDATION AND HEAT TRANSFER STUDIES IN GRAPHITE CHANNELS, D. G. Schweitzer, Brookhaven National Laboratory, Upton, Long Island, New York

19. CREEP AND RECOVERY IN GRAPHITE AT HIGH TEMPERATURES, E. J. Seldin, National Carbon Company, Research Laboratories, Parma, Ohio
20. EFFECT OF HEAT-TREATMENT ON THE HIGH-TEMPERATURE THERMAL PROPERTIES OF BAKED CARBONS AND IRRADIATED GRAPHITES, J. F. Doar and J. N. Pike; National Carbon Company, Research Laboratories, Parma, Ohio
21. EXTENDED DISLOCATIONS IN GRAPHITE IN THE ANISOTROPIC ELASTIC CONTINUUM APPROXIMATION, G. B. Spence, National Carbon Company, Research Laboratories, Parma, Ohio
22. DIRECT OBSERVATION OF IMPERFECTIONS IN GRAPHITE SINGLE CRYSTALS, R. Bacon and R. Sprague; National Carbon Company, Research Laboratories, Parma, Ohio
23. THE SPECTRAL EMISSIVITY AND TOTAL NORMAL EMISSIVITY OF COMMERCIAL GRAPHITES AT ELEVATED TEMPERATURES, A. F. Grenis and A. P. Levitt; Watertown Arsenal, Watertown, Massachusetts
24. THE HIGH TEMPERATURE TENSILE PROPERTIES OF SPECIAL PITCH-COKE GRAPHITES, H. E. Martens and W. V. Kotlensky; Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California
25. EFFECTS OF STRAIN ANNEALING ON STRUCTURE AND MECHANICAL PROPERTIES OF PYROLYTIC GRAPHITE, E. R. Stover, General Electric Research Laboratory, Schenectady, New York
26. ANELASTICITY OF CARBON AND GRAPHITE, T. Tsuzuku, Nihon University, Tokyo, Japan
27. PRELIMINARY STUDIES OF YOUNG'S MODULUS OF CARBONS AT ELEVATED TEMPERATURES, J. Andrew and D. Wobschall; Carbon Research Laboratory, Buffalo, New York
28. FURTHER STUDIES OF YOUNG'S MODULUS OF CARBONS AT ROOM TEMPERATURE, J. Andrew and J. Distant; Carbon Research Laboratory, Buffalo, New York
29. THERMAL CONDUCTIVITY OF CARBONS AT HIGH TEMPERATURE, H. E. Strauss, Carbon Research Laboratory, Buffalo, New York
30. THE THERMAL DIFFUSIVITY OF GRAPHITES AT HIGH TEMPERATURE, N. Juul, Carbon Research Laboratory, Buffalo, New York
31. SURFACE PROPERTIES OF EXTREMELY THIN GRAPHITE LAMELLAE, H. P. Boehm, Anorganisch-Chemisches Institut Der Universitat, Heidelberg, Germany
32. OPTICAL OBSERVATION OF THE FRACTURE OF GRAPHITE UNDER UNIFORM STRAIN, J. M. Hutcheon, United Kingdom Atomic Energy Authority, Warrington, Lancs, England
33. DESTRUCTIVE AND NONDESTRUCTIVE MECHANICAL PROPERTIES OF GRAPHITE, H. W. Davidson, J. S. Orchard and H. H. W. Losty; G.E.C. Record Laboratories, Middlesex, England
34. (Title of paper to be announced), G. K. Williamson, Central Electricity Generating Board, Berkeley Nuclear Laboratories, Berkeley, Glos, England
35. SOME STRENGTH MEASUREMENTS ON GRAPHITE, I. B. Mason, AERE, Harwell, Didcot, Berks., England
36. ELECTRON SPIN RESONANCE IN HIGH TEMPERATURE CARBONS AND GRAPHITES, L. S. Singer and G. Wagoner; National Carbon Company, Research Laboratories, Parma, Ohio
37. A REVIEW OF ELECTRON SPIN RESONANCE IN CARBONACEOUS MATERIALS, L. S. Singer, National Carbon Company, Research Laboratories, Parma, Ohio
38. EFFECT OF BORON ON SOME ELECTRONIC PROPERTIES OF GRAPHITE, D. E. Soule, National Carbon Company, Research Laboratories, Parma, Ohio
39. ELECTRONIC PROPERTIES OF MESOMORPHOUS CARBONS, H. E. Blayden, The British Coke Research Association, Chesterfield, Derbyshire, England

40. SOME REACTIONS OF AROMATIC SYSTEMS IN CHARs, J. D. Brooks and T. McL. Spotswood; Commonwealth Scientific and Industrial Research Organization, Australia
41. FORMATION OF SPIN CENTERS IN CARBONS BY OXIDATION, K. Antonowicz, Carbon Research Laboratory, Buffalo, New York
42. FORMATION OF FREE SPINS IN CARBONS BY CHEMICAL ATTACK, K. Antonowicz, Carbon Research Laboratories, Buffalo, New York
43. TRAPPED RADICALS IN ORGANIC DEPOSITS, R. Mangiaracina, Carbon Research Laboratories, Buffalo, New York
44. (Title of paper to be announced), A. Pacault, Universite de Bordeaux, Laboratoire de Chimie Physique, Bordeaux, France
45. FURTHER CONSIDERATIONS OF THE ELECTRON PROPERTIES OF GRAPHITE, T. E. Peacock, University College, London, England
46. ELECTRONIC PROPERTIES OF GRAPHITE AND ITS CRYSTAL COMPOUNDS IN THE DIRECTION OF THE c-AXIS, A. R. Ubbelohde, Imperial College of Science and Technology, London, England
47. (Title of paper to be announced), J. Uebersfeld, Universite de Besancon, Faculte des Sciences, Besancon, France
48. THEORY OF ELECTRON TRANSPORT PROPERTIES OF GRAPHITE SINGLE CRYSTALS, J. McClure, National Carbon Company, Research Laboratories, Parma, Ohio
49. THEORY OF CONDUCTION ELECTRON SPIN RESONANCE, J. McClure, National Carbon Company, Research Laboratories, Parma, Ohio
50. ELECTRONIC PROPERTIES OF SOME POLYRADICAL HYDROCARBON POLYMERS, H. A. Pohl and E. H. Englehard, Princeton University, Princeton, New Jersey
51. SEMI-CONDUCTION IN PYRO POLYMERS DOPED WITH Na, Ca, and Th, H. A. Pohl and S. L. Rosen; Princeton University, Princeton, New Jersey
52. ELECTRON MICROSCOPE STUDY OF RADIATION DAMAGE IN GRAPHITE, W. Bollman, Battelle Memorial, Geneva, Switzerland
53. EFFECT OF TEMPERATURE ON RADIATION-INDUCED CONTRACTION OF REACTOR GRAPHITE, J. M. Davidson and J. W. Helm; General Electric Company, Hanford Atomic Products Operation, Richland, Washington
54. MECHANISM OF RADIATION DAMAGE TO GRAPHITE AT HIGH TEMPERATURES, D. R. de Halas and H. H. Yoshikawa; General Electric Company, Hanford Atomic Products Operation, Richland, Washington
55. NEUTRON IRRADIATION EFFECTS ON RESISTIVITY OF PYROLYTIC GRAPHITE, C. Klabunde, Oak Ridge National Laboratory, Oak Ridge, Tennessee
56. POST IRRADIATION MEASUREMENTS OF THERMAL CONDUCTIVITY BETWEEN 200 and 600° C FOR LOW PERMEABILITY GRAPHITES;  
R. A. Meyer and D. G. Schweitzer  
General Atomic Brookhaven National Laboratory  
San Diego, California Upton, Long Island, New York
57. MECHANISMS OF DIMENSIONAL CHANGE IN GRAPHITE, E. R. Stover, General Electric Research Laboratories, Schenectady, New York
58. RESISTIVITY CHANGES IN ELECTRON IRRADIATED REACTOR GRAPHITE, I. T. Myers and H. V. Larson; General Electric, Hanford Laboratories Operation, Richland, Washington

59. STORED ENERGY, J. M. Hutcheon, Culcheth Laboratories, United Kingdom Atomic Energy Authority, England
60. IRRADIATION CREEP, J. M. Hutcheon, Culcheth Laboratories, United Kingdom Atomic Energy Authority, England
61. OXYGEN GRAPHITE SYSTEM DESCRIBING THE WINDSCALE WORK ON THE EFFECTS OF IRRADIATION DAMAGE AND CONTAMINATION ON REACTIVITY, J. M. Hutcheon, Culcheth Laboratories, United Kingdom Atomic Energy Authority, England
62. ELECTRON SPIN RESONANCE IN NEUTRON DAMAGED GRAPHITE, G. Wagoner, Research Laboratory, National Carbon Company, Parma, Ohio
63. OBSERVATION OF LATTICE DEFECTS IN FISSION-IRRADIATED GRAPHITE, F. E. Fujita and K. Izui; Japan Atomic Energy, Tokae-mura, Ibaragi, Japan
64. THE MIGRATION OF FISSION PRODUCTS IN ARTIFICIAL GRAPHITE WITH PARTICULAR REFERENCE TO CAESIUM, STRONTIUM, AND BARIUM, J. Bromley, AERE, Harwell, Didcot, Berks., England
65. RELATIONSHIPS BETWEEN PHYSICAL PROPERTIES AND STRUCTURE IN PYROLYTIC GRAPHITE, W. W. Lozier, National Carbon Company, Research Laboratories, Parma, Ohio
66. X-RAY STUDY OF THE EFFECTS OF HEAT-TREATMENT ON PYROLYTIC GRAPHITES, O. J. Guentert and S. Cvikevich; Raytheon, Research Division, Waltham, Massachusetts
67. OXIDATION KINETICS OF PYROLYTIC GRAPHITE, W. S. Horton, General Electric, General Engineering Laboratory, Schenectady, New York
68. ELECTRONIC PROCESSES IN PYROLYTIC GRAPHITES, C. A. Klein, Raytheon, Waltham, Massachusetts
69. THE STRUCTURAL AND MECHANICAL PROPERTIES OF PYROLYTIC GRAPHITE TO 5000° F, W. V. Kotlensky and H. E. Martens; Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California
70. THE MAGNETIC SUSCEPTIBILITY OF PYROLYTIC GRAPHITE, D. B. Fischbach, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California
71. SOME EFFECTS OF MICROSTRUCTURE ON PROPERTIES OF PYROLYTIC GRAPHITE, E. R. Stover, General Electric Research Laboratory, Schenectady, New York
72. DIFFUSION OF NOBLE GASES THROUGH GRAPHITES AND PYROLYTIC CARBON, Lloyd R. Zumwalt, A. B. Riedinger and E. E. Anderson; General Atomic, San Diego, California
73. THE THERMAL CONDUCTIVITY OF PYROLYTIC GRAPHITE, J. Pappis and L. Hagen; Raytheon, Waltham, Massachusetts
74. THE MECHANICAL BEHAVIOR OF PYROLYTIC GRAPHITE IN TENSION BENDING AND COMPRESSION AS A FUNCTION OF TEMPERATURE, J. Pappis, S. Cvikevich, and R. Donadio; Raytheon, Waltham, Massachusetts
75. DEPOSITION OF PYROLYTIC GRAPHITE, R. J. Diefendorf, General Electric Research Laboratory, Schenectady, New York
76. EVAPORATION OF PYROLYTIC GRAPHITE, R. C. Folweiler and R. J. Diefendorf; General Electric Research Laboratory, Schenectady, New York
77. MICROSTRUCTURE OF PYROLYTIC GRAPHITE, G. Susich and L. M. Dogliotti; Quartermaster Research and Development Command, Natick, Massachusetts
78. STUDIES IN THE DEPOSITION OF CARBON FROM GASEOUS HYDROCARBONS, K. Carley-Macaulay and M. MacKenzie; AERE, Harwell, Didcot, Berks., England
79. THE DEPOSITION OF PYROLYTIC CARBON IN THE PORES OF BONDED AND UNBONDED CARBON POWDERS, R. L. Bickerdike, A.R.G. Brown, G. Hughes, and H. Manson; Metallurgy and Physics Department, Royal Aircraft Establishment, Farnborough, Hampshire, England

80. ALLOYS OF RAYTHEON PYROLYTIC GRAPHITE, B. Bovanic, Raytheon, Waltham, Massachusetts
81. EFFECT OF RESIDENCE TIME ON GRAPHITIZATION AT SEVERAL TEMPERATURES, F. V. Fair and F. M. Collins; Speer Carbon Company, Niagara Falls, New York
82. PROPERTIES OF HIGH DENSITY, RECRYSTALLIZED GRAPHITE, R. M. Bushong, National Carbon Company, Advanced Material Laboratories, Lawrenceburg, Tennessee
83. MANUFACTURE OF FUELED GRAPHITE, D. D. Johnson, National Carbon Company, Fostoria Development Laboratory, Fostoria, Ohio
84. STUDIES OF THE THERMAL BEHAVIOR OF SOME POLYNUCLEAR AROMATICS, I. C. Lewis and T. Edstrom; National Carbon Research Laboratory, Parma, Ohio
85. INFRARED ABSORPTION AT TWO MICRONS AND COAL TAR PITCH PROPERTIES, P. L. Walker, Jr., and D. O. Baumbach; The Pennsylvania State University, University Park, Pennsylvania
86. PROPERTIES OF CARBON AND GRAPHITE BODIES PRODUCED FROM ANTHRACITE, I. Geller and P. L. Walker, Jr.; The Pennsylvania State University, University Park, Pennsylvania
87. CRYSTALLITE ORIENTATION AND PARTICLE SHAPE FACTORS IN RAW AND HEAT TREATED PETROLEUM COKES, P. L. Walker, Jr., R. P. Gardner, M. A. Short, and L. G. Austin; The Pennsylvania State University, University Park, Pennsylvania
88. MODE OF POROSITY DEVELOPMENT IN ACTIVATED ANTHRACITES, M. Kawahata and P. L. Walker, Jr.; The Pennsylvania State University, University Park, Pennsylvania
89. EFFECT OF RAPID HEAT TREATMENT ON THE PROPERTIES OF CARBON, J. Okada, Tokai Electrode Manufacturing Company, Nagoya, Japan
90. INFLUENCE OF AROMATIC NITRO-COMPOUNDS ON THE CONDENSATION OF COAL TAR PITCH, S. Yamada, Tokai Electrode Manufacturing Company, Chigasaki, Kamagawa Pref., Japan
91. THE RATE OF GRAPHITIZATION OF CARBON, S. Mizushima, Keio University, Tokyo, Japan
92. THE ELECTRICAL RESISTANCE OF COKE AS A PARAMETER OF COAL CARBONIZATION, P. L. Waters and P. R. Goard; Commonwealth Scientific and Industrial Research Organization, Division of Coal Research, Australia
93. THE RELATION BETWEEN CONDITIONS OF CARBONIZATION AND THE GRAPHITIZABILITY, J. Parisot, Societe Le Carbone-Lorraine, Paris, France
94. (Title of paper to be announced), T. Noda, Nagoya University, Nagoya, Japan
95. COMPACTION OF ARTIFICIAL GRAPHITE, J. R. May, Commonwealth Scientific and Industrial Research Organization, Division of Coal Research, Australia
96. AN ELECTRON MICROSCOPE STUDY OF CARBON FORMATION IN PYROLYSIS OF HYDROCARBONS,  
Grover L. Johnson           and           Robbin C. Anderson  
Field Research Laboratory       Department of Chemistry  
Socony-Mobil Oil Company       University of Texas  
Dallas, Texas                       Austin, Texas
97. CARBON FILMS FROM CARBON SUBOXIDE DECOMPOSITION I. FORMATION KINETICS, T. J. Hirt and H. B. Palmer; The Pennsylvania State University, University Park, Pennsylvania
98. NEUTRON DIFFRACTION STUDIES OF THE STRUCTURE OF CARBON BLACKS, A. E. Austin and E. Adelson; Batelle Memorial Institute, Columbus, Ohio
99. X-RAY DIFFRACTION PATTERNS AND FUNCTIONAL GROUPS OF CHEMICALLY MODIFIED BROWN COAL CHARs, J. D. Brooks, J. F. Stephens, and H. Silberman; Commonwealth Scientific and Industrial Research Organization, Australia
100. SPECTROMETRIC INVESTIGATIONS OF COAL, R. A. Friedel, U. S. Department of Interior, Bureau of Mines, Pittsburgh, Pennsylvania

101. THE EXISTENCE OF THE TETRAHEDRAL STRUCTURE IN EVAPORATED CARBON FILM REVEALED BY ELECTRON DIFFRACTION AND ITS CHANGES WITH THERMAL TREATMENTS, J. Kakinoki, Osaka City University, Osaka, Japan
102. INTERCALATION OF COBALT (II) CHLORIDE IN GRAPHITE, L. L. Lyon and J. J. Pitts; University of Wichita, Wichita, Kansas (Los Alamos Scientific Laboratory, Los Alamos, New Mexico)
103. DIFFICULTIES ENCOUNTERED IN THE APPLICATION OF X-RAY DIFFRACTOMETER MEASUREMENTS TO THE MATRIX METHOD OF R. DIAMOND FOR THE DETERMINATION OF CRYSTALLITE SIZE DISTRIBUTIONS IN TURBOSTRATIC MATERIALS, H. A. McKinstry and M. A. Short; The Pennsylvania State University, University Park, Pennsylvania
104. ANALYTICAL DETERMINATION OF CARBON VARIETIES IN ELECTROGRAPHITIZED CARBON PRODUCTS BY X-RAY DIFFRACTION METHOD, T. Noda and M. Inagaki; Nagoya University, Nagoya, Japan
105. X-RAY STUDIES ON THE COAL MACERAL VITRINITE AND ITS EXTRACTION PRODUCTS, W. Ruland, European Research Associates, Brussels, Belgium
106. ABSORPTION OF GRAPHITE IN THE ULTRAVIOLET AND VISIBLE SPECTRUM AND ITS REFRACTIVE INDEX AT 5460A, S. Ergun, U. S. Department of the Interior, Bureau of Mines, Pittsburgh, Pennsylvania
107. DEVELOPMENT OF THREE-DIMENSIONAL CRYSTALLINITY IN NATURAL GRAPHITE MATERIALS, S. Ergun, U. S. Department of the Interior, Bureau of Mines, Pittsburgh, Pennsylvania
108. THE BREIT-DIRAC CORRECTION TO COMPTON SCATTERING OF CARBON, S. Ergun, U. S. Department of the Interior, Bureau of Mines, Pittsburgh, Pennsylvania
109. TECHNIQUE FOR MICROSCOPIC STUDIES OF GRAPHITE, E. M. Woodruff and R. L. Hales; General Electric Company, Hanford Atomic Products Operation, Richland, Washington
110. CATALYZED LAMELLAR REACTIONS OF GRAPHITE, M. L. Dzurus and G. R. Hennig; Argonne National Laboratory, Solid State Science Division, Argonne, Illinois
111. SURFACE CHEMISTRY AND CATALYTIC PROPERTIES OF CHARCOAL, B. R. Puri, Punjab University, Chandigarh, India
112. DIRECT TITRATION OF THE ACIDITY OF CARBON BLACKS, M. Stuebaker, Phillips Chemical Company, Akron, Ohio
113. COMPRESSIBILITY OF CARBON BLACK, A. I. Medalia, Cabot Corporation, Fundamental Research Section, Cambridge, Massachusetts
114. THERMAL TREATMENT AND MICROPOROUS STRUCTURE OF CARBONACEOUS ADSORBENTS, M. M. Dubinin, Institute of Physical Chemistry, Moscow, U. S. S. R.
115. INTERPRETATION OF NITROGEN ADSORPTION ISOTHERMS OF OXIDIZED CARBON BLACKS, L. L. Lyon, G. R. Crocker, and R. O. Lussow; University of Wichita, Wichita, Kansas (Los Alamos Scientific Laboratory, Los Alamos, New Mexico)
116. ADSORPTION OF SURFACE ACTIVE AGENTS FROM NON-AQUEOUS SOLUTIONS OF CARBON BLACKS, J. A. Abram and G. D. Parfitt; University of Nottingham, Nottingham, England
117. HYDRIDE-ION TRANSFER REACTIONS OF CARBON BLACK, D. Rivin, Cabot Corporation Research Laboratories, Cambridge, Massachusetts
118. ADSORPTION OF VAPORS ON HIGH ENERGY SITES OF CARBON BLACKS, A. Voet, W. N. Whitten, Jr. and F. Boyd; J. M. Huber Corporation, Research Department, Borger, Texas
119. ELECTROCHEMISTRY OF FINALLY DIVIDED CARBON AND CHEMICALLY-MODIFIED CARBON SURFACES, G. W. Murphy, The University of Oklahoma, Norman, Oklahoma
120. ON THE SIZE DISTRIBUTION OF PORES IN CARBON AND IN OTHER POROUS SUBSTANCES, G. Biorci and D. Pescetti; Instituto Elettrotecnico Nazionale, Torino, Italy

121. STEAM ACTIVATION OF CHARCOAL: A SYSTEMATIC STUDY OF WEIGHT AND VOLUME LOSSES, D. G. Edwards, R. York, J. Tracht, P. E. Loveday, and F. P. Williams; Carnegie Institute of Technology, Pittsburgh, Pennsylvania
122. THORIUM OXIDE INFILTRATION OF GRAPHITE SPHERES, Frank Rusinko, Jr., and W. E. Parker; Speer Carbon Company, Niagara Falls, New York
123. PREPARATION OF SPECIAL GRAPHITE GRADES FOR JET PROPULSION LABORATORY HIGH TEMPERATURE STUDY, F. M. Collins, R. Kronenwetter, and L. Simbeck; Speer Carbon Company, Research and Development Laboratories, Niagara Falls, New York
124. APPLICATION OF GRAPHITE TO HIGH TEMPERATURE NUCLEAR FUEL ELEMENTS, W. V. Goeddel, G. R. Tully, Jr., and R. A. Meyer; General Atomic, San Diego, California
125. UNIQUE PROPERTIES OF FLEXIBLE CARBON FIBERS, G. E. Cranch, Fostoria Development Laboratory, National Carbon Company, Fostoria, Ohio
126. THE EFFECT OF CARBON STRUCTURES ON COPPER OXIDATION AT A SLIDING ELECTRICAL CONTACT, P. M. Scherer and W. J. Spry; National Carbon Company, Parma, Ohio
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134. GRAPHITE FOR THE DRAGON REACTOR PROJECT, R. A. U. Huddle, Dragon Project, Dorchester, Dorset, England
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137. (Title of paper to be announced), C. H. V. Sawyer, Powell Duffryn Carbon Products Ltd., Hayes, Middlesex, England
138. (Title of paper to be announced), R. N. Beech, Powell Duffryn Carbon Products Limited, Hayes, Middlesex, England
139. GAS PERMEABILITY STUDIES ON ARTIFICIAL GRAPHITES, T. R. Jenkins and F. Roberts; AERE, Harwell, Didcot, Berks., England