

Meetings

Calorimetry

Annual calorimetry conferences emphasize progress reports rather than reports on final and completed work. This year's conference, the 21st, was held in Boulder, Colorado, 22–24 June 1966; approximately 175 from the United States and abroad attended.

This conference honored Leo Brewer (University of California, Berkeley) who had been chosen to present the Huffman Memorial Lecture. (This is the "key-note" address of the conference, given by a leader in the field of high-temperature chemistry.) Brewer spoke on new relations between spectroscopy and thermodynamics. He touched on a variety of topics that ranged from the excited states of simple molecules to the problem of cohesion in metals and metallic bonding.

The general problem of physics of high-temperature calorimetry was discussed by F. E. Wittig (University of Munich, Germany). He outlined some of the basic considerations that are involved in design and operation of calorimeters at high temperature, such as thermal gradients, breakdown of electrical insulators, temperature control and measurement, and so forth. F. Grønvold (University of Oslo) a specialist in the application of the adiabatic method in measuring heat capacity at high temperatures, discussed the heat capacities of a number of chalcogenides and pnictides with significant magnetic contributions to the heat capacity between 300° and 1000°K.

A. Cesairliyan (National Bureau of Standards, Washington, D.C.) has applied high-speed, pulse methods to the measurement of specific heats of conductors. These dynamic methods are particularly promising in the very high-temperature range where steady-state methods become difficult and inadequate. J. F. Elliott, (Massachusetts Institute of Technology) reported on the use of a calorimeter for solution work

in liquid iron at temperatures up to 1600°C. Other new high-temperature solution and mixing calorimeters were described by groups at the University of Denver, Argonne National Laboratory, and the University of Toronto, Ontario, Canada.

New drop-type, high-temperature calorimeters were reported from Dynatech Corporation and from the Argonne National Laboratory. The latter group also described a calorimetric system, heated by electron beams, for use at temperatures up to 2500°C.

Among foreign countries Holland was particularly well represented. Th. Holleman (Royal Shell Laboratory, Amsterdam) reported on his extensive investigation of the heats of mixing of normal alkanes. He found that his results could be reasonably well described on the basis of a principle of corresponding states, simply related to the chain length of the hydrocarbon molecules. Another Dutch speaker, G. Somsen (Free University, Amsterdam), discussed the enthalpies of solvation in nonaqueous solvents, such as formamide and related compounds. From his data he calculated enthalpies of solvation of individual ions, which in turn are interpreted in terms of interaction with the coordinated solvent molecule, the energy of mutual interaction between solvent molecules in the solvated layer, and the polarization energy of the solvent beyond the first coordination shell.

The magnetic, specific heats of some of the rare earth metals at low temperatures have been measured by O. V. Lounasmaa (Otaniemi, Finland). In terbium and dysprosium there is an exponential dependence of the magnetic specific heat on temperature, while for holmium and thulium a power law seems to apply. The observed magnetic specific heats can be correlated with existing data on magnetization and electrical conductivity.

Throughout its history the calorimetry conference has been very ac-

tive in promoting work on the temperature scale and on standard substances for various types of calorimetric work. Since 1965 the conference has sponsored the adoption of copper as a reference material for low-temperature heat-capacity work. Standard samples of pure copper are available through D. W. Osborne of the Argonne National Laboratory. At Boulder, S. R. Gunn, on behalf of the committee on standard samples, reported that a uniform, purified batch of THAM (Tris-hydroxymethyl-aminomethane), which has been proposed as a standard for aqueous solution calorimetry, will be prepared by the National Bureau of Standards. In due course samples from this batch will be available to competent users.

For 20 years the calorimetry conference has operated on the basis of tradition only, without the aid of written laws. During the Boulder meeting this was rectified through the unanimous adoption of a new constitution and by-laws.

During the business meeting at Boulder, D. L. Hildenbrand was elected chairman-elect and program chairman for the 22nd conference; R. H. Busey (Oak Ridge National Laboratory) was reelected secretary-treasurer. F. Grønvold, G. C. Sinke (Dow Chemical Company) and E. D. West (National Bureau of Standards) were elected to the board of directors.

The proceedings of the conferences are not published; abstracts are distributed at the meeting. Most of the individual papers are later published in the standard journals.

The 22nd Calorimetry Conference will be held at the North American Aviation Science Center, Thousand Oaks, California, 20–22 June 1967. For information about program and attendance, contact D. L. Hildenbrand, Douglas Advanced Research Laboratory, Huntington Beach, California.

O. J. KLEPPA
University of Chicago, Chicago, Illinois

Forthcoming Events

November

1–3. **Chemistry**, mtg., European Federation of Chemical Engineering and Central Chemical Assoc. of Finland, Helsinki, Finland. (E. Lehtinen, Kemian Keskusliitto, Bulevardi 2, Helsinki)

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1-4. **Human Factors Soc.**, natl. conv., Anaheim, Calif. (K. S. Teel, Autonetics, P.O. Box 4173, Anaheim 92803)

1-5. **American Soc. of Parasitologists**, 41st annual mtg., and **American Soc. of Tropical Medicine and Hygiene**, mtg., San Juan, Puerto Rico. (Secretary-Treasurer, P.O. Box 295, Kensington, Md. 20795)

1-5. **International Bureau of Rock Mechanics**, 8th intern. conf., Leipzig, Germany. (Internationales Büro für Gebirgsmechanik, Inselstr. 12, Berlin C2, Germany)

2. **American Inst. of the City of New York**, New York. (Mrs. G. E. Peterson, American Inst. of the City of New York, 2 E. 63 St., New York 10021)

2-3. **Acoustical Soc. of America**, fall mtg., Los Angeles, Calif. (The Society, 335 E. 45 St., New York 10017)

2-3. **Gastric Cancer**, intern. conf., Nagoya, Japan. (R. Kinoshita, City of Hope Medical Center, Duarte, Calif. 91010)

2-4. **Automation in Analytical Chemistry**, 1st European Technicon symp., Paris, France. (Compagnie Technicon, Route Nationale no. 1, Domont, Seine-et-Oise, France)

2-4. **Electronics Research and Engineering**, northeastern mtg. (NEREM), Boston, Mass. (T. A. Longo, 31 Channing St., Newton, Mass. 02158)

2-4. **Parenteral Drug Assoc.**, annual conv., New York, N.Y. (The Association, Western Saving Fund Bldg., Broad and Chestnut St., Philadelphia, Pa. 19107)

3-4. **Entomological Soc. of America**, eastern branch, 38th annual mtg., New York, N.Y. (G. K. Schumaker, Connecticut Agricultural Experiment Center, Box 1106, New Haven 06504)

3-5. **Leukocyte Chemistry and Morphology Correlated with Chromosome Anomalies**, conf., New York, N.Y. (New York Acad. of Sciences, 2 E. 63 St., New York 10021)

3-5. **Gerontological Soc.**, 19th annual scientific mtg., New York, N.Y. (The Society, 660 S. Euclid St., St. Louis, Mo. 63110)

3-5. **Machine Methods in Libraries**, 4th symp., Washington Univ., St. Louis, Mo. (E. Brodman, Library, Washington Univ. School of Medicine, 4580 Scott Ave., St. Louis 63110)

4-5. **Tumor Chemotherapy**, intern. conf., Osaka, Japan. (R. Kinoshita, City of Hope Medical Center, Duarte, Calif. 91010)

6-10. **Society of Exploration Geophysicists**, 26th annual intern. mtg., Houston, Tex. (R. B. Baum, Seismograph Service Corp., 1229 Capital Natl. Bank Bldg., Houston 77002)

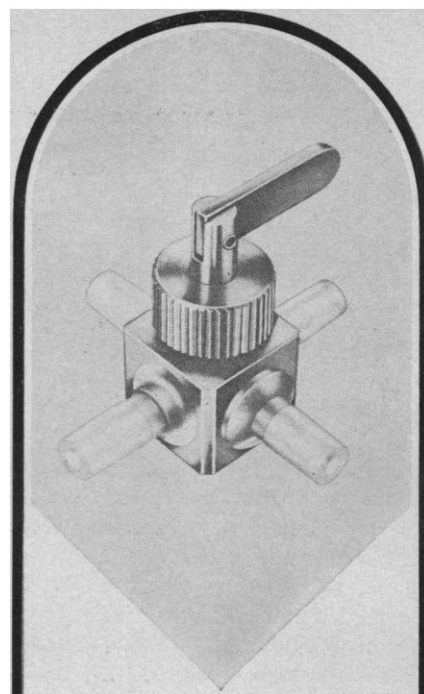
6-12. **Medical Journalists**, world mtg., Manila, Philippines. (S. S. B. Gilder, 1850 Taft Ave., Manila)

6-14. **World Medical Assoc.**, 20th general assembly, Manila, Philippines. (A. Z. Romualdez, 10 Columbus Circle, New York 10019)

7-8. **Modern Trends in Cardiac Management**, scientific session conf., Bombay, India. (I. J. Pinto, Esperance, Colaba Causeway, Bombay 1)

7-9. **Society for Experimental Stress Analysis**, fall mtg., Pittsburgh, Pa. (Executive Secretary, 21 Bridge Square, Westport, Conn. 06882)

7-10. **Displays for Command and Control Centers**, symp., Munich, Germany.



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8-10. **Computers**, fall joint conf., American Federation of Information Processing Socs., San Francisco, Calif. (W. H. Davidow, P.O. Box 2208, Menlo Park, Calif. 94025)

9-11. **Society of Aerospace Material and Process Engineers**, 10th natl. symp., "Advanced Fibrous Reinforced Composites," San Diego, Calif. (The Society, P.O. Box 613, Azusa, Calif.)

9-11. **Pittsburgh Diffraction conf.**, Pittsburgh, Pa. (P. R. Swann, U.S. Steel Corp., Fundamental Research Lab., Monroeville, Pa. 15146)

10-11. **Mind as a Tissue**, 5th Lankenau intern. research conf., Lankenau Hospital, Philadelphia, Pa. (Div. of Research, Lankenau Hospital, Lancaster and City Line Ave., Philadelphia 19151)

10-11. **Thiamine**, mtg., Ciba Foundation study group, London, England. (Ciba, 41 Portland Pl., London, W.1)

10-12. **American Soc. of Cytology**, 14th annual scientific mtg., Milwaukee, Wis. (W. R. Lang, 1025 Walnut St., Philadelphia, Pa. 19107)

10-12. **Newtonian Studies**, intern. conf., Univ. of Texas, Austin. (R. Palter, Philosophy Dept., Univ. of Texas, Austin)

11. **Joint Commission on Applied Radioactivity**, annual mtg., Budapest, Hungary. (C. Fisher, Commissariat à l'Energie Atomique, Centre d'Etudes de Saclay, Boite Postale 2, Gif-sur-Yvette, France)

11-12. **New England Psychological Assoc.**, annual mtg., Boston, Mass. (M. M. Riggs, New Hampshire Child Guidance Clinics, 121 S. Fruit St., Concord, N.H.)

11-12. **Psychosomatic Disorders**, 10th annual conf., London, England. (A. H. Crisp, Academic Psychiatric Unit, Middlesex Hospital, London, W.1)

11-13. **Association of Clinical Scientists**, annual mtg., Washington, D.C. (The Association, 300 N. State Street, No. 5322, Chicago, Ill. 60610)

12. **Petroleum**, 6th Arab congr., Baghdad. (League of Arab States, Midan Al Tahrir, Cairo, UAR)

13-16. **Education in the Neurological Sciences**, conf., White Sulphur Springs, W.Va. (J. L. O'Leary, Dept. of Neurology, Washington Univ. School of Medicine, St. Louis, Mo. 63110)

13-16. **Otorhinolaryngology**, 6th Latin American congr., Mexico, D.F. (F. Hernandez Orozco, Amsterdam 295, Mexico, D.F., Mexico)

14. **Organic Solid State**, 4th annual symp., Franklin Inst. Research Laboratories, Philadelphia, Pa. 19103)

14-15. **Association for the Study of Nerve Adjustments**, annual conf., East Berlin. (K. Hecht, Wiltbergstr. 50, 1115 Berlin-Buch, East Germany)

14-16. **Geological Soc. of America**, 79th conv., San Francisco, Calif. (Executive Secretary, 231 E. 46 St., New York, N.Y. 10017)

14-16. **American Petroleum Inst.**, 46th annual mtg., New York, N.Y. (The Institute, 1271 Sixth Ave., New York 10020)

14-16. **Belfer Graduate School of Science**, Yeshiva Univ., 5th annual science conf., Physics, Chemistry, and Mathematics, New York, N.Y. (A. Gelbart, Belfer

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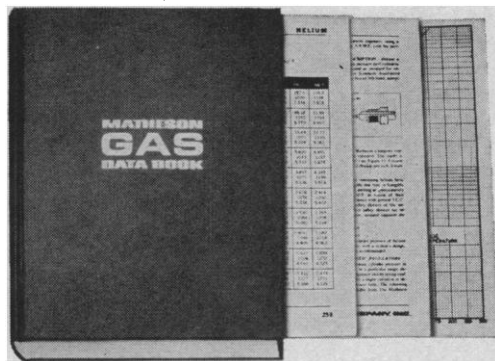
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14-17. **Engineering in Medicine and Biology**, conf., San Francisco. (D. Le Croisette, Jet Propulsion Laboratory, California Inst. of Technology, Pasadena)

14-17. **Gulf and Caribbean Fisheries Inst.**, 19th annual mtg., New Orleans, La. (The Institute, 1 Rickenbacker Causeway, Miami, Fla. 33149)

14-18. **Use of Isotopes in Hydrology**, symp., Vienna, Austria. (J. H. Kane, Conferences Branch, Div. of Technical Information, U.S. Atomic Energy Commission, Washington, D.C. 20545)

15-17. **Technical and Electronic Ceramic Manufacturers** exhibit and seminar, New York, N.Y. (Exhibition Management, Inc., 37 W. 39 St., New York 10018)

15-17. **Physics of Failure in Electronics**, 5th annual symp., Columbus, Ohio. (T. S. Shilliday, Battelle Memorial Inst., Columbus Laboratories, 505 King Ave., Columbus, Ohio 43201)

15-17. **American Soc. of Tool and Manufacturing Engineers**, Mid-Atlantic Engineering conf. and tool exposition, Baltimore, Md. (Director of Engineering Conferences, ASTME, 20501 Ford Rd., Dearborn, Mich. 48128)

15-18. **Magnetism and Magnetic Materials**, conf., Washington, D.C. (V. J. Folen, Code 6452, U.S. Naval Research Laboratory, Washington 20390)

16. **Physics of Newer Forms of Carbon**, mtg., Inst. of Physics and the Physical Soc., carbon and graphite group, London, England. (Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London S.W.1)

16-17. **Medical Library Assoc.**, New England Regional mtg., Dartmouth College, Hanover, N.H. (MLA, 919 N. Michigan Ave., Chicago, Ill.)

16-18. **Management of Aerospace Programs**, natl. conf., Univ. of Missouri, Columbia. (W. J. Haas, Space Sciences Research Center, Univ. of Missouri, Columbia)

16-18. **Eastern Analytical symp.**, New York, N.Y. (I. L. Simmons, M&T Chemicals, Inc., P.O. Box 471, Rahway, N.J.)

16-18. **Characterization of Materials**, conf., Pennsylvania State Univ., University Park. (R. Roy, Materials Research Laboratory, Pennsylvania State Univ., University Park 16802)

16-19. **Physiology of Reproduction**, intern. colloquium, Paris, France. (National Center for Scientific Research, 15, quai Anatole France, Paris 7)

17. **Salmonella** in Food Supplies, mtg., Geneva, N.Y. (F. E. Weber, R. T. French Co., 1 Mustard St., Rochester, N.Y. 14609)

17-18. **Small-Angle Scattering of Electrons and X-Rays**, conf., London, England. (Meetings Officer, Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London S.W.1)

17-19. **American Soc for Cell Biology**, 6th annual mtg., Houston, Tex. (M. J. Moses, Box 2982 Duke Univ. Medical Center, Durham, N.C. 27706)

17-19. **American College of Physicians**, 6th annual Far East session, Tokyo, Japan. (J. L. Pitcher, 106th General Hospital, APO San Francisco, Calif. 96503)

17-19. **Work Evaluation Units**, 3rd natl. conf., Washington, D.C. (J. E. Acker, Jr., Cardiac Work Evaluation Clinic, Knoxville, Tenn.)

17-20. **American Anthropological Assoc.**, 65th annual mtg., Pittsburgh, Pa. (A. Spoehr, Dept. of Anthropology, Univ. of Pittsburgh, Pittsburgh 15213)

17-20. **Audiology**, 8th intern. congr., Mexico, D.F. (P. Berruecos Tellez, Av. Progreso 141 A, Mexico 18, D.F.)

18. **Properties of Anodized Metals and Semiconductors**, symp., Northern Electric Laboratories, Ottawa, Ont., Canada. (J. A. McDonald, Solid State Development, Northern Electric Co., R&D Labs., Box 3511, Station C, Ottawa)

18-19. **Dyslexia**, natl. conf., Philadelphia, Pa., (V. T. Keeney, 1601 Spring Garden St., Philadelphia 19130)

19. **Stabilization of Engineering and Scientific Employment in Industry**, natl. symp., San Jose State College, San Jose, Calif. (Manpower Research Group, Center for Interdisciplinary Studies, San Jose State College, San Jose, Calif.)

20-22. **Water Resources**, 2nd annual conf., Univ. of Chicago, Chicago, Ill. (American Water Resources Assoc., P.O. Box 434, Urbana, Ill. 61801)

21-23. **American Physical Soc., Div. of Fluid Dynamics**, mtg., Stanford Univ., Palo Alto, Calif. (R. J. Emrich, Dept. of Physics, Lehigh Univ., Bethlehem, Pa.)

21-24. **Communications in Science: Documentation and Automation**, Ciba Foundation symp., London, England. (Ciba, 41 Portland Pl., London, W.1)

21-24. **Central American Geologists**, 2nd conf., Guatemala City, Guatemala. (G. Dengo, Central American Inst. of Research and Industrial Technology, Apt. Postal 1552, Guatemala City)

21-25. **Radioisotope Tracers in Industry and Geophysics**, symp., Prague, Czechoslovakia. (J. H. Kane, Conferences Branch, Div. of Technical Information, U.S. Atomic Energy Commission, Washington, D.C. 20545)

22. **Manufacturing Chemists Assoc.**, 16th semiannual mtg. and midyear conf., New York, N.Y. (The Association, 1825 Connecticut Ave., NW, Washington, D.C.)

23. **Chemical Economics Div., Chemical Inst. of Canada**, mtg. on **Internationalization of the Chemistry Industry and Its Effect on Canada**, Montreal, Quebec. (H. A. Bowler, Central Development Dept., Dotmar, 1155 Dorchester Blvd. W., Montreal 2)

26-4. **Pharmacy and Biochemistry**, 7th Pan American congr., Buenos Aires, Argentina. (Z. M. Lugones, Univ. of Buenos Aires, Calle Viamonte 444, Buenos Aires)

28-29. **Parkinson's Disease** Information and Research Center, 3rd research conf., College of Physicians and Surgeons, New York, N.Y. (M. D. Yahr, New York Neurological Inst., 710 W. 168 St., New York 10032)

28-30. **American Soc. of Hospital Pharmacists**, 1st annual midyear mtg., Washington, D.C. (J. A. Oddis, The Society, 4630 Montgomery Ave., NW, Washington, 20014)

28-1. **Aerospace Medicine**, intern. mtg., Sydney, Australia. (Secretariat, Aviation Medical Soc. of Australia, G.P.O. Box 1207, Sydney)

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