Meetings and Societies

Electron Microscopy

The first Regional Conference on Electron Microscopy in Asia and Oceania was held in Tokyo, 23–27 Oct., under the auspices of the International Federation of Electron Microscope Societies. The conference was efficiently arranged by the Japanese Society of Electron Microscopy with the support of the Science Council of Japan and the Ministry of Education. The meetings were held in the International Conference Auditorium of the ultramodern Sankeikaikan, which affords excellent facilities for multilingual conferences. English was the official language, but many of the papers were presented in Japanese or German, which were interpreted through earphones with a channel selector provided at each seat. The delegates from the U.S.S.R. brought their own interpreter, who read their papers in English. Both the organization and the physical facilities of the conference were excellent, and the organizing committee deserves highest commendation for its splendid work.

The 200 delegates included two from Germany, six from the U.S.S.R., five from China, two from India, two from Indonesia, two from Cambodia, and four from the United States.

The conference was appropriately opened by a review of the history of the electron microscope by one of its original designers, Ernst Ruska, director in the Fritz-Haber-Institute of the Max-Planck-Society, Berlin, whose advances in the field continue to be reflected in high-quality electron microscopes produced by the Siemens Company. Fourteen of the 54 papers presented dealt with electron optical theory and instrumentation, mostly from Japan and Germany; 18 with industrial products, including investigations of rubbers, metals, fibers, and inorganic crystals; and 22 with biological applications. In both Japan and Germany investigators are concerned with damage to specimens caused by the electron beam and are extensively investigating the relationship of temperature to the amount of damage. Cooling the specimen diminishes the damage.

V. G. Nyrikov, director of the Institute of Electron Optics of the Ministry of Radiotechnical Industry, Moscow, reported on the development of electron microscopes in Russia. At present there are about 400 of four different types in use, one of them employing electrostatic, rather than magnetic, lenses. The best resolution claimed with the large 100-kilovolt instrument was a rather conservative 30 angstroms; however, a new instrument is under construction which is designed to resolve to about 10 angstroms. As is the case in other fields, the principal retardation to progress in the biological field lies not in instrumentation but in the preparation of materials —fixation, imbedding, thin sectioning, and so forth. In Japan and in India there has been extensive development of ultrathin sectioning techniques, and several papers indicated a high level of electron microscopy.

Along with the scientific and industrial recovery of Japan since World War II, there has evolved a keen interest in the design and development of complex scientific instruments. This trend is well exemplified in the development of electron microscopes. There are at present four different companies manufacturing eight different types or models of electron microscopes ranging widely in complexity and versatility and priced from about $3000 to $25,000. Three hundred of these instruments are in use in Japanese laboratories, a number that represents a remarkable percentage of the world's estimated 1800 instruments.

Two of the instruments probably deserve special mention because of their novelty and simplicity. One, manufactured by Akashi, uses as an electron source a pointed platinum (oxidized) filament without a condenser lens and obtains sharp images at a resolution down to about 25 angstroms. The other, produced by Hitachi, utilizes permanent, instead of electro-, magnets for its lenses and varies their strength by movable shunting rings. This obviates the necessity of carefully regulated lens current power supplies. This instrument also provides a resolution of 25 to 30 angstroms and permits a wide and continuous range of magnification. The simplicity, compactness, low cost, low upkeep, and reasonable resolution would seem to recommend these microscopes for many purposes.

The complete proceedings of the conference, a volume of 150 to 200 pages will be available in about 6 to 8 months and can be obtained through the conference secretary, Dr. K. Kanaya, Electrotechnical Laboratory, 2 chome, Nagata-cho, Chiyoda-ku, Tokyo, Japan.

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Aeronautical Sciences

The Institute of the Aeronautical Sciences 25th annual meeting will be held 28–31 Jan. at the Sheraton-Astor Hotel, New York. A record 94 technical papers will be delivered. One technical session for each year the IAS has been in existence has been arranged. Among the 25 will be one each on missiles and earth satellites, three on aerodynamics, and two on materials. Sessions will be held simultaneously.

Edward P. Curtis, special assistant to President Eisenhower for aviation facilities planning, will be guest of honor and principal speaker at the Honors Night Dinner on 28 Jan. Toastmaster Edward R. Sharp, retiring IAS president, will present the John Jeffries, Robert M. Losey, Sylvanus Albert Reed, and Lawrence Sperry awards. Registration at the 1956 annual meeting was 2179.

Society for Social Responsibility

The Society for Social Responsibility in Science will meet on 1 Feb. from 4:30 to 6:30 P.M. at the Hotel New Yorker in New York. A series of papers on the role of the scientist in society will be presented. Interested scientists are invited to attend. A dinner at a nearby restaurant will follow the meeting. For further information, communicate with Reino Hakala, Department of Chemistry, Fairfield University, Fairfield, Conn.

Radiation Hazards

A Symposium on Radiation Hazards to Mankind, sponsored jointly by Hunter College and the Sloan-Kettering Institute for Cancer Research, will be held at Hunter College on 20 Feb. from 3:45 to 10 P.M. Warren Weaver of the Rockefeller Foundation will open the sessions, and the rest of the afternoon will be devoted to two panels that will consider "Implications for graduate study and for the training of college faculties" and "Implications for the secondary-school curriculum and for the training of secondary-school teachers."

A large general session in the evening will be concerned with "Biological effects of atomic radiation." Participants include among others: James F. Crow of

the University of Wisconsin, George Gamow of the University of Colorado, Russell Morgan of Johns Hopkins Hospital, and Lauristan Taylor of the National Bureau of Standards. Lyman Bryson will act as moderator. Morris Meister, principal of the Bronx High School of Science; I. E. Wallen, assistant director of the AAAS Science Teaching Improvement Program; and Abraham Raskin, coordinator of the sciences for the Teacher Education Program, Hunter College, will participate in the afternoon session.

To receive invitations to any of these meetings, write to Prof. Ruth G. Weintraub, Director of Graduate Study in Arts and Sciences, Hunter College, 695 Park Ave., New York 21, N.Y.

Society Elections

■ Indiana Academy of Science: pres., Willis H. Johnson, Wabash College, Crawfordsville; v. pres., W. A. Daily, Eli Lilly and Company; sec., Harry E. Crull, Butler University, Indianapolis; treas., Frank J. Welcher, Indiana University.

■ Sigma Delta Epsilon: pres., Irene C. Diller, Institute for Cancer Research; 1st v. pres., Mary L. Robbins, George Washington University; 2nd v. pres., Esther S. Anderson, University of Nebraska; sec., Helen B. Parker, 7 Lloyd Road, Malvern, Pa.; treas., Teresa Cohen, Pennsylvania State University. Representatives to the AAAS Council are Irene C. Diller and Mary Gojdics.

■ American Fern Society, Inc.: pres., Ira L. Wiggins, Stanford University; v. pres., Harold G. Rugg, Dartmouth College; sec., Mildred E. Faust, Syracuse University; treas., Ronald L. McGregor, University of Kansas.

■ American Astronautical Society, Inc.: pres., Ross Fleisig, Sperry Gyroscope Company; treas., William C. Thacher, Nassau-Bahamas Development Board; rec.-sec., Joseph M. Golden, RCA Communications, Inc.; cor.-sec., A. P. Mayernik. The vice presidents are George R. Arthur, James E. Michaels, and James H. Rosenquist.

Forthcoming Events

February

21–23. National Soc. of College Teachers of Education, annual, Chicago, Ill. (C. A. Eggertsen, School of Education, Univ. of Michigan, Ann Arbor.)

23. American Mathematical Soc., New Haven, Conn. (J. H. Curtiss, AMS, 190 Hope St., Providence 6, R.I.)

23. Oregon Acad. of Science, annual, Monmouth. (F. A. Gilfillan, Oregon State College, Corvallis.)

24–28. American Inst. of Mining, Metallurgical and Petroleum Engineers, annual, New Orleans, La. (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18.)

24–28. International College of Surgeons, 10th biennial cong., Mexico, D.F., Mexico. (M. Thorek, ICS, 850 W. Irving Park Rd., Chicago 13, Ill.)

25–28. American Soc. of Heating and Air-Conditioning Engineers, Chicago, Ill. (A. V. Hutchinson, ASHAE, 62 Worth St., New York 13.)

26–28. Western Joint Computer Conf., Los Angeles, Calif. (M. J. Mendelson, Norden-Ketay Corp., 13210 Crenshaw Blvd., Gardena, Calif.)

March

1–2. American Physical Soc., Norman, Okla. (K. K. Darrow, Columbia Univ., New York 27.)

1–3. National Wildlife Federation, annual, Washington, D.C. (C. H. Callison, 232 Carroll St., NW, Washington 12.)

3–6. American Inst. of Chemical Engineers, White Sulphur Springs, W.Va. (F. J. Van Antwerpen, AIChE, 25 W. 45 St., New York 36.)

3–9. American Soc. of Photogrammetry, 23rd annual, joint with American Cong. on Surveying and Mapping, 17th annual, Washington, D.C. (C. E. Palmer, ASP, 1515 Massachusetts Ave., NW, Washington 5.)

4. Wildlife Soc., annual, Washington, D.C. (D. L. Leedy, Fish and Wildlife Service, Dept. of the Interior, Washington 25.)

4–6. National Biophysics Conf., Columbus, Ohio. (H. P. Schwan, School of Medicine, Univ. of Pennsylvania, Philadelphia 4.)

4–8. Analytical Chemistry and Applied Spectroscopy, Pittsburgh, Pa. (L. M. Melnick, U.S. Steel Corp., Applied Research Lab., Monroeville, Pa.)

7–9. American Orthopsychiatric Assoc., 34th annual, Chicago, Ill. (M. F. Langer, AOA, 1790 Broadway, New York 19.)

7–9. Biometric Soc., Eastern North American Region, Washington, D.C. (A. M. Dutton, Box 287, Sta. 3, Rochester, N.Y.)

7–9. Fundamental Cancer Research, 11th annual symp., Houston, Tex. (L. Dmochowski, M. D. Anderson Hospital, Texas Medical Center, Houston 25.)

7–9. Optical Soc. of America, semiannual, New York, N.Y. (S. S. Ballard, Scripps Inst. of Oceanography, San Diego 52, Calif.)

10–16. Nuclear Engineering and Science Cong., 2nd, Philadelphia, Pa. (Engineers Joint Council, 29 W. 39 St., New York 18.)

11–15. National Assoc. of Corrosion Engineers, 13th annual, St. Louis, Mo. (R. T. Effinger, Shell Oil Co., Deer Park Refinery, Houston, Tex.)

11–18. Pakistan Assoc. for the Advancement of Science, 9th annual conf., Peshawar, West Pakistan. (B. Ahmad, PAAS, University Institute of Chemistry, The Mall, Lahore, Pakistan.)

12–13. Cellular and Humoral Aspects of the Hypersensitive States, symp., New York, N.Y. (A. M. Pappenheimer, Jr., Dept. of Microbiology, New York Univ., College of Medicine, 550 First Ave., New York 16.)

13–15. Society of Exploration Geophysicists, 10th annual midwestern, Fort Worth, Tex. (G. A. Grimm, Tide Water Associated Oil Co., Box 2131, Midland, Tex.)

14. Effect of Radiation on Foods, Assoc. of Vitamin Chemists, Chicago, Ill. (M. Freed, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32.)

15. Fats in Human Nutrition, AMA symp., New Orleans, La. (Council on Foods and Nutrition, American Medical Assoc., 535 N. Dearborn, Chicago 10, Ill.)

18–21. Institute of Radio Engineers, natl. convention, New York, N.Y. (B. Warriner, IRE, 1 E. 79 St., New York 21.)

19–21. American Meteorological Soc., 151st national, Chicago, Ill. (K. C. Spengler, AMS, 3 Joy St., Boston 8, Mass.)

20–22. National Health Forum, Cincinnati, Ohio. (National Health Council, 1790 Broadway, New York 19.)

20–23. National Science Teachers Assoc., annual, Cleveland, Ohio. (R. H. Carleton, NSTA, 1201 16 St., NW, Washington 6.)

21–23. American Physical Soc., Philadelphia, Pa. (K. K. Darrow, APS, Columbia Univ., New York 27, N.Y.)

(See issue of 18 January for comprehensive list)