ion bombardment at low temperatures in the electron microscope itself and the structural changes in NaCl wafers held at low temperatures during observation with an electron microscope. Other applications of electron microscopy have been in the fields of analysis, lubrication, structure of glass, and polymer research.

Rapid advances in the electron microscopy of biological specimens in the last few years has been closely related to developments in embedding techniques; the current status was reviewed in a symposium on embedding of cells and tissues with J. Luft as chairman. The requirements and properties of embedding materials for electron microscopy were discussed and evaluated in terms of the most commonly used materials, that is, methacryates, vestopal, and the epoxy resins. The use of water-soluble embedding media for cytochemical localization was also covered. While the epoxy resins are now probably the most widely used, it was concluded that no one material can render consistently good general embedding. It was suggested that a major factor may be the lack of standardization of the various production lots of the component materials. The biologist must continually adapt the embedding procedures and materials to obtain optimum results.

A very wide variety of biological subjects covered general animal and plant cell morphology, viruses, neoplasms, and protein fibers. Reports covered the structure of viruses and the changes they bring about in various cell types. The methods of negative staining and enzyme digestion were widely employed in elucidating viral structure. Various aspects of normal morphology, experimental pathology, and human biopsy were covered during several talks on electron microscopy of liver.

The wide variety of topics presented in the biological sessions gave the participants a good spectrum of the progress of electron microscopy outside their own specialty.

Abstracts of the papers have been published in the August 1963 issue of the *Journal of Applied Physics.*

F. W. C. BOSWELL
Department of Physics, University of Waterloo, Waterloo, Ontario, Canada
G. D. PAPPAS
Department of Anatomy, College of Physicians and Surgeons, of Columbia University, New York 32

British Association for the Advancement of Science

The 125th annual meeting of the British Association for the Advancement of Science was held in Aberdeen, England, 28 August–4 September 1963. As usual, the sessions were directed chiefly to the informed public, and consisted primarily of a series of reports by outstanding British scientists on current developments in scientific affairs which might have popular interest. In the traditional manner there were many splendid receptions by the University, with conferring of honorary degrees, and with special dinners, lunches and receptions by civic groups.

At the opening session, Sir Eric Ashby delivered the presidential address; his subject was "Investment in man." Honorary degrees were conferred upon Sir George Allen, secretary of the British Association; Sir Charles Morris, vice-chancellor of the University of Leeds; and J. M. Robertson, Gardiner professor of chemistry at the University of Glasgow.

Featured were the presidential addresses in the various sections. For the section on physics and mathematics, J. S. Forrest considered the problems of "High voltage insulation." J. M. Robertson discussed "A physical approach to chemical structure" for the section on chemistry. F. F. Darling, for the section on zoology, outlined "The unity of ecology," and for the section on medicine, J. McMichael reported on "The contribution of clinical medicine to physiology." For the section on geography, H. C. Darby discussed British National Parks, and for the section on agriculture, Martin Jones analyzed food supplies for man and beast. The section on psychology heard a discussion from O. L. Zangwill on "Cerebral localization of psychological function."

A significant part of the Aberdeen meeting, which extended through 4 half-day sessions and was appealing both to the public and to specialists, was a symposium on land use in the Scottish uplands. In these sessions, the British Association emphasized two of its important functions: (i) it allowed for public presentation of contributions of scientists to the solution of an urgent practical problem in the management of natural resources; and (ii) it demonstrated the value of a broadly based scientific approach to a major topical question by bringing together geographers, botanists, zoologists, agriculturists, economists, and other repre-

sentatives of various scientific disciplines. Another interesting topical symposium dealt with the effects of radiation on humans and animals.

The Lister lecture was delivered by T. P. Morris on "Science and morals in the treatment of deviant behaviour." J. N. Murrell gave the Kelvin lecture on color and chemical constitution, while the Darwin lecture was presented by L. Wolpert on "Growing in a definite shape."

A special program was arranged for young people. This included the York lecture by Sir Raymond Priestly on "Antarctic exploration yesterday and today," public forums, and a science fair. A feature of the meeting was a series of special scientific films and various visual presentations of scientific developments.

Representatives from the American Association for the Advancement of Science, who extended greetings to the British Association on its 125th birthday, were President and Mrs. Alan T. Waterman, Mr. and Mrs. Edward E. Sherburne, Jr., and the undersigned. Sherburne is AAAS Director of Studies on the Public Understanding of Science. I extended belated thanks to the British Association for having given the first grant-in-aid, of which I can find record, in 1840 to James Blake (1851–93) who later became California's first great scientist. The grant, amounting to about $300 a year for 5 years, was offered to help Blake in his studies on biological action of inorganic compounds. From his research he was able to induce what we call the Periodic Table.

CHAUNCEY D. LEAKE
University of California Medical Center, San Francisco

Forthcoming Events

November

18–20. **Engineering in Medicine and Biology**, 16th annual conf. and exhibit, Baltimore, Md. (H. Gilmer, 933 Ridge Ave., Pittsburgh 12, Pa.)

18–21. **Atomic Industrial Forum** and American Nuclear Soc., winter meeting, New York, N.Y. (O. J. Du Temple, ANS, 86 E. Randolph St., Chicago 1, Ill.)

18. **Industrial Pharmacy** Section, American Pharmaceutical Assoc., 3rd annual eastern regional meeting, New York, N.Y. (H. Lieberman, Warner-Lambert Pharmaceutical Co., 170 Tabor Rd., Morris Plains, N.J.)

18–22. **Plastics**, 10th natl. exposition, Chicago, Ill. (J. Paluszek, G. M. Basford Co., 60 E. 42 St., New York 17)

19–21 American **Physical** Soc., Norman Okla. (K. K. Darrow, 538 W. 120th St., New York 27)