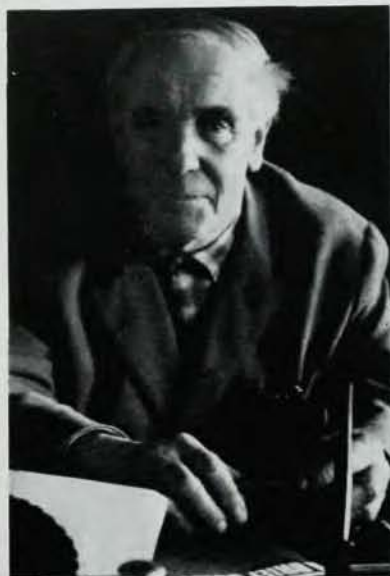


SOCIETY ACTIVITIES AND AWARDS



P. L. Kapitza

Photo by Dan Cooper

Danish Bohr Medal

For work in the development of high magnetic fields, Piotr Leonidovich Kapitza has received the Niels Bohr Gold Medal of the Danish Engineers Association. Established in 1955, the award is given every three years for achievement in the peaceful uses of nuclear physics, and has been awarded to Niels Bohr, Sir John Cockcroft, and George de Hevesy. Dr. Kapitza received the Medal on May 25 in a private audience with the King of Denmark, while on a tour of Danish atomic-energy installations and educational institutions.

Born in Kronstadt, near St. Petersburg, in 1894, Dr. Kapitza was educated at the Petrograd Polytechnical Institute, where he became a lecturer in 1919. Two years later, he went to the Cavendish Laboratory to work with Rutherford and remained in Britain for the next thirteen years. Dr. Kapitza subsequently became a PhD and fellow of Trinity College, Cambridge, assistant director of magnetic research, Messel research professor of the Royal Society, and director of the Society's Mond Laboratory. His early work at Cambridge was in nuclear physics, but he later branched out to methods for obtaining high magnetic

fields and to low-temperature research. In 1934, he returned to Russia, where he continued his work on magnetism and low-temperature physics. In Moscow, he was appointed and still remains director of the Institute of Physical Problems of the USSR Academy of Sciences and has investigated the properties of liquid helium, liquefaction problems, and high-power electronics.

It was the study of α -particle tracks at Cambridge which first turned Dr. Kapitza's attention to the production of strong magnetic fields. Overcoming the heating difficulty attendant on the production of high magnetic fields with his suggestion of short pulses, he was able to create fields of about 500 kilogauss for 0.003 sec. A special laboratory was erected at Cambridge where he produced fields up to 320 kilogauss in a volume of 2 cm³. Experiments that he carried out included measurements of magnetoresistance of bismuth and other elements in fields up to 300 kilogauss. It was found by Dr. Kapitza that the resistance changed according to a square law in weak fields, but linearly in stronger fields. He suggested that the ideal resistance follows a linear law and that additional resistance masks the ideal resistance at weak fields and produces the quadratic field dependence. He also proposed that superconductivity is related to the disappearance of the residual resistance for some metals. He later studied magnetostriction in ferromagnetics and in diamagnetic and paramagnetic substances, and upon his return to the USSR, he and his co-workers measured again the Zeeman and Paschen-Back effect, with magnetic fields of up to 320 kilogauss.

British Acoustical Society

Final negotiations are now going on to consolidate the two professional groups devoted to acoustics in Great Britain into a new British Acoustical Society. For many years, the only formal organization of acousticians in Great Britain was the Acoustics

Group of The Institute of Physics and The Physical Society. However, this group required its members to be physicists and was thus dominated by physical acousticians. A few years ago, the Society of Acoustic Technology was formed, composed of nonphysicists active in acoustics and interested in areas such as architectural and psychological acoustics and noise control. But it soon became apparent that Britain could not support two acoustical societies, especially since neither had an official publication of its own. The decision to merge was made about two years ago, and the new society has since received official approval of the Royal Society. Discussions about an official journal, membership fees, and grades are still continuing, and the organization is not expected to begin functioning until some time in 1966.

Officers

During 1965, the American Crystallographic Association is under the presidency of Henri A. Levy of the Oak Ridge National Laboratory. Dr. Levy earned a doctorate in chemistry from the California Institute of Technology and was subsequently a research fellow at Caltech for several years. He later served as a group leader at the Clinton Laboratories, and since 1952 has held the post of chief research scientist at the Oak Ridge National Laboratory. His main work has been in electron, x-ray, and neutron diffraction, crystal and molecular structure, and radiochemistry.

Benjamin Post of the Polytechnic Institute of Brooklyn has been named vice president of the Crystallographic Association and is slated to become the Association's president in 1966. Awarded his PhD from Polytech in 1946, he later taught in the Physics Department at PIB and since 1960 has held the rank of professor of physics. He has worked principally in the areas of chemical crystallography, low-temperature x-ray diffraction, lattice vibrations, and interstitial compounds.