

temperature) is sprayed onto a flat specimen surface cooled by liquid air from the rear. The randomly oriented crystallites deposited in this way gave excellent powder diffraction patterns. Several years ago, Kathleen Lonsdale of England suggested that, since little information could be obtained from liquid x-ray scattering patterns that would be useful for identification work, it might be helpful to take x-ray photographs of the frozen liquids.

James W. Edwards, Rudolph Speiser, and Herrick L. Johnston of Ohio State University's Cryogenic Laboratory, described a very high temperature x-ray camera capable of heating a specimen from room temperature to 2,500 degrees absolute. This may prove to be an important instrument, since no x-ray work has been done at these high temperatures.

The application of x-ray diffraction analysis to the detailed and exact study of alloy equilibrium diagrams and other metallurgical problems such as determination of slip plane and slip direction, stacking faults, and stress analysis was the subject of several papers. Others dealt with the problems of interpreting small angle scattering and with the properties of evaporated thin alkali halide films, and there were several papers on crystal structure analysis.

R. A. Van Nordstrand of Sinclair Refining Company has worked out the complicated phase transitions in several straight chain hydrocarbons by heating the specimens on a Geiger counter x-ray spectrometer. He is extending the study to phases developed from various solvents.

Studies of elastically bent quartz plates by B. E. Warren and J. E. White of Massachusetts Institute of Technology showed that the integrated reflection intensity was increased by a factor of two and a half for x-rays of wavelength 1.5 Angstrom and by a factor of twelve for x-rays of wavelength seven-tenths Angstrom, by bending the plates. Since the increase was the same for convex and concave bending, geometrical focusing was not an important factor.

Caroline H. MacGillavry of the University of Amsterdam, the Netherlands, spoke on the polymorphism and crystal chemistry of phosphorous pentoxide.

—William Parrish

### Meetings to Be

"Acoustics and Man" is the theme of the twentieth anniversary meeting of the Acoustical Society of America which will be held May 5-7, 1949, and centered on New York City at the Hotel Statler (formerly the Pennsylvania). In an unusual move, papers are being grouped according to function rather than phenomena. The sessions are as follows: Acoustics as related to communications, acoustics as a tool in physics, acoustics in comfort and safety, and acoustics and the arts. Further information may be had from Harold Burris-Meyers, Stevens Institute of Technology, Hoboken, New Jersey.

A symposium on molecular structure and spectroscopy will be held at the Mendenhall Laboratory of Physics at the Ohio State University from June 13 through June 17,

1949. For further information, or for a copy of the program when it becomes available, write to Harald H. Nielsen, Mendenhall Laboratory of Physics, the Ohio State University, Columbus 10, Ohio.

### Honors, Awards, Fellowships

George R. Harrison, dean of the School of Science of the Massachusetts Institute of Technology, was awarded the Medal for Merit in recognition of his outstanding services during the war as chief of the division of optics and chief of the division of physics of the National Defense Research Committee, and as assistant chief of field service of the Office of Scientific Research and Development.

John Stack, research scientist of the National Advisory Committee for Aeronautics, Lawrence D. Bell, president of the Bell Aircraft Corporation, and Captain Charles E. Yeager of the U. S. Air Force, as the three men most responsible for the attainment of supersonic flight, were awarded the Collier Trophy.

The Du Pont Company is awarding four postgraduate fellowships in physics for 1949-50: to California Institute of Technology, Carnegie Institute of Technology, Ohio State University, and Yale University. Each fellowship provides \$1,200 for a single person or \$1,800 for a married person, together with an award of \$1,000 to the university. Choice of candidates and the problems on which they are to work is left to the universities. Besides the physics fellowships, Du Pont is awarding fifty-one fellowships in chemistry, fifteen in chemical engineering, five in mechanical engineering, and two in metallurgy.

Illinois Institute of Technology has announced that applications for fellowships, scholarships, and assistantships for graduate study, research, and teaching will be accepted until March 15, 1949 and should be sent to the Examiner of Credentials, Graduate School, Illinois Institute of Technology, Technology Center, Chicago 16.

### James Hollie Cross

James Hollie Cross, assistant professor of physics at Texas Technological College, died on December 8, 1948.

### A. Herman Pfund

A. Herman Pfund, professor emeritus of physics at Johns Hopkins University and a pioneer in the science of optics, died January 4, at the age of 69. Among his many contributions was the development of an extremely sensitive vacuum thermopile for measuring infrared rays. He won several high awards, including the Ives Medal of the Optical Society of America, which devoted its entire October 1948 Journal issue to the work of his students and colleagues, to honor his retirement. Professor Pfund was a member of the governing board of the American Institute of Physics.