Nier, Alfred Otto Carl, Minnesota '36, "Systematic Study of the Isotopic Constitution of the Elements."

Wooldridge, Dean Everett, California Institute of Technology '36, "An Investigation of the Nuclear Properties of Some of the Rare Gaseous Isotopes."

Yearian, Hubert Jose, Purdue '34, "Intensity Measurements in Electron Diffraction."

In Chemistry:

Adelson, David E., Florida '35, "Polycyclic Hydrocarbons Derived from Retene."

Beach, John Y., California Institute of Technology '36, "The Investigation of Molecular Structure by the Electron Diffraction Method."

Lord, Richard Collins, Jr., Johns Hopkins '36, "The Raman Spectra of Compounds of Deuterium."

In Mathematics:

Dribin, Daniel Maccabaeus, Chicago '36, "Arithmetic of Quadratic Forms."

Fialkow, Aaron, Columbia '36, "Geometric Characterization and Classification of Single-Parameter Families of Plane Curves."

Jacobson, Nathan, Princeton '34, "Pseudo-linear Transformations. Abstract Derivatives and Lie Algebras. Hypercomplex Numbers."

Tompkins, Charles Brown, II, Michigan '36, "Phases of Differential Geometry."

F. K. RICHTMYER,
Secretary

AWARD OF THE CHANDLER MEDAL TO PROFESSOR GIAUQUE

THE Charles Frederick Chandler Medal of Columbia University was presented on May 28 to Professor William Francis Giauque, of the University of California, discoverer of a method of magnetic cooling by which temperatures approaching absolute zero can be obtained.

Dr. George B. Pegram, acting dean of the graduate faculties of the university, presented the medal to Professor Giauque at a gathering of scientific men in Havemeyer Hall. Professor Giauque, who has made a systematic study of very low temperatures and entropy measurements, delivered the medal address on "The Production and Use of Temperatures Below One Degree Absolute."

In his address Dr. Pegram said that Professor Giauque's work "beautifully illustrates the power of experimental skill and ingenuity when directed by keenest appreciation of the guidance afforded by theory. A leader among those chemists who have with great effect been applying modern quantum theory to thermodynamic investigation, he has contributed to the more unified view of nature that chemistry and physics are achieving."

Professor Giauque's most extensive investigations have consisted in the extremely accurate determination, from 0.24 degree above absolute zero to room temperature, of the specific heats and heats of transition of hydrogen chloride, hydrogen bromide, hydrogen iodide, oxygen, nitric oxide and hydrogen. From these he has calculated the entropy of each of these gases. He has also been the first to calculate, from spectroscopic data for the same gases, entropy values which are more accurate than those based on the measurements of specific heats.

Professor Giauque stated in his address that "the results of these investigations have given strong support to the validity of both the third law of thermodynamics and quantum statistics. This type of work is largely responsible for the present confidence in the reliability of the many free energies of gases which have been very accurately determined by the application of quantum statistical methods to detailed spectroscopic observations."

The Chandler Medal, awarded annually by the trustees of Columbia University for conspicuous work in the field of chemistry, was established in 1910 in honor of the late Dr. Charles Frederick Chandler, a founder and president of the American Chemical Society, pioneer in industrial chemistry and professor at Columbia from 1864 to 1925.

Professor Giauque was born in Niagara Falls, Ontario, on May 12, 1895. He was graduated from the University of California in 1920, and held a fellowship there during the next two years, taking the doctor's degree in 1922. After five years as instructor, he was named assistant professor at California in 1927, associate professor in 1930 and full professor in 1934.

In 1929, following the announcement by Professor Giauque and Dr. Johnston of two new isotopes of oxygen, Professor Giauque shared the Pacific Division prize of the American Association for the Advancement of Science for the most important scientific contribution reported by a resident of the Pacific Division at its June meeting. He is a member of the American Chemical Society and a fellow of the American Physical Society. He has been vice-president of Commission XI of the Institut International du Froid since 1928.

The committee of award was composed of Professor A. W. Thomas, chairman; Dr. Leo H. Baekeland and Professor Arthur W. Hixson.

Former medalists include: L. H. Baekeland, W. F. Hillebrand, W. R. Whitney, F. G. Hopkins, E. F. Smith, R. E. Swain, E. C. Kendall, S. W. Parr, Moses Gomberg, J. A. Wilson, Irving Langmuir, J. B. Conant, G. O. Curme, Jr., J. G. Lipman.

IN HONOR OF PROFESSOR HERBERT OSBORN

AT the commencement exercises of the Ohio State University the doctorate of laws will be conferred on