

CHEMISTRY

Nobel Chemistry Award For Discovery of Deuterium

Young Physical Chemist, Working With Two Youthful Colleagues, Brings to America Second Science Honor

See Front Cover

THE 1934 Nobel Prize in chemistry was awarded to Prof. Harold C. Urey of Columbia University in recognition of his part in the discovery of heavy hydrogen (deuterium). Since the 1934 physics prize and the 1933 chemistry prize unawarded last year are not to be given this year, all of this year's science Nobel awards are to be conferred on Americans. The prize in medicine went to the Americans who developed liver therapy for pernicious anemia, Drs. G. H. Whipple, George R. Minot and William P. Murphy.

Prof. Urey is only 41 years of age and he is professor of physical chemistry at Columbia. He discovered heavy hydrogen in 1931, in collaboration with Dr. F. G. Brickwedde of the National Bureau of Standards and Dr. G. M. Murphy of Columbia University.

Research on the heavy isotope of hydrogen and its compound with oxygen, heavy water, has filled the journals of chemistry and physics. So much research has been under way, and so fast have new discoveries been made, that the National Research Council recently formed a committee to serve as a clearing house for research information in this field. Prof. Urey is chairman of this committee.

Early this year Prof. Urey was awarded the Willard Gibbs medal, another high scientific honor.

Science News Letter, November 24, 1934

CHEMISTRY

Heavy Hydrogen's Great Use Is Tracing Atoms

By **DR. HAROLD C. UREY**, Nobelist in Chemistry, 1934

THE importance of heavy hydrogen, or deuterium, to chemistry lies in the fact that it enables scientists to trace the course of chemical reactions, and also enables them to check theoretical calculations on chemical reactions, par-

ticularly as they deal with the effects of the mass of atoms.

To physics, deuterium is important because it provides physicists with a new atomic nucleus for use in experiments on the bombardment of the atom, in which some of the secrets of atom nuclei can be learned.

Since living things live essentially in a water solution, and all—man, animal and plant—are composed so largely of hydrogen compounds, deuterium is, of course, very important to the biologists.

Science News Letter, November 24, 1934

GENERAL SCIENCE

We Nominate— For Future Halls of Fame

THIS being the time of year when Nobel prizes are being awarded, the temptation to list notable science achievements of the past few years is too great to resist.

We nominate for future halls of fame:

The discovery of heavy hydrogen or deuterium, by Dr. Harold C. Urey of Columbia University, Dr. F. G. Brickwedde of the National Bureau of Standards, and Dr. G. M. Murphy of Columbia University now honored by the Nobel prize in chemistry for 1934.

The discovery of artificial radioactivity by Prof. F. Joliot and Irene Curie-Joliot, Parisian husband and wife research team.

The discovery of the positron or positive electron by Dr. Carl D. Anderson of California Institute of Technology.

The discovery of the neutron by Dr. J. Chadwick of Cambridge.

The development by Dr. William P. Murphy of Boston and Dr. Guy W. Clark of Lederle Laboratories of a potent liver extract, one injection of which monthly will control pernicious anemia.

The award of the 1934 Nobel prize in medicine for liver therapy for this disease to Dr. George H. Whipple of Rochester, N. Y., Drs. George R. Minot and William P. Murphy of Boston.

The successful transplantation of parathyroid and thyroid gland tissue by Drs. Harvey B. Stone, J. C. Owings and George O. Gey of Johns Hopkins.

The exploration of those bearers of heredity, the genes, within the chromosomes, an epic of biological research in which a half-dozen scientists in America and abroad have participated.

The demonstration by Dr. Leonard



DR. F. G. BRICKWEDDE



DR. G. M. MURPHY