Obituary

Francis William Bergstrom

1897-1946

Francis William Bergstrom, professor of chemistry, died, following a brief illness, in the Stanford University Hospital on 29 March 1946.

Born in Bloomington, Indiana, on 10 January 1897, he went to Stanford with his parents in 1908, when his father was appointed professor of educational psychology at the University. He attended the Palo Alto schools and entered Stanford University as a student in 1914, specializing in chemistry and allied engineering subjects. Receiving the A.B. degree in 1918, he continued with graduate studies under the inspiration and guidance of the late Prof. E. C. Franklin. As a result of this work he was awarded the Ch.E. degree in 1919 and the Ph.D. in 1922. Then followed three years of postdoctorate studies with the aid of a National Research Council Fellowship in chemistry. This period was spent mainly at Clark and Brown Universities, where the young Dr. Bergstrom collaborated with Prof. Charles A. Kraus, who in turn had been one of Prof. Franklin's first students at the University of Kansas.

In 1925 Dr. Bergstrom was appointed instructor in the Chemistry Department of Stanford University. In due course of time he passed through the ranks of assistant and associate professor and in 1942 became a full professor. He was thus directly connected with the Stanford Chemistry Department as a student or faculty member for a total of 29 years. During 1934 he was honored by a Guggenheim Fellowship award for study in Europe, and on this basis he spent about eight months abroad, mainly at Oxford and Heidelberg.

Throughout his career Dr. Bergstrom was a most enthusiastic and industrious scientific investigator. He worked especially with nitrogen compounds, both of the inorganic and organic types. His numerous researches were characterized by great experimental skill and by clear and logical thinking. Approximately 70 scientific papers, published in the most important chemical journals, attest to his outstanding research abilities. Largely as a result of these accomplishments he was appointed as an associate editor of the *Journal of Organic Chemistry* when this publication was started in 1936 and continued in this capacity until his death. During the period 1 July 1943–1 January 1946 he also served as the responsible investigator and supervisor of an important project on antimalarial compounds, sponsored by the Committee on Medical Research, OSRD.

Outstanding as his achievements as a scientist were, it is as a pre-eminent teacher that Prof. Bergstrom will be especially remembered by his colleagues, by the hundreds of undergraduates that passed through his introductory courses in organic chemistry during more than two decades, and by the scores of graduate students who gained knowledge and inspiration for chemical research under his guidance.

GEORGE S. PARKS
Stanford University, California

William Crowell Bray

1879-1946

William Crowell Bray, professor of chemistry at the University of California, died on 24 February 1946.

A native of Wingham, Ontario, Canada, he was a graduate of the University of Toronto and in 1905 took his doctorate at the University of Leipzig, Germany. After five years on the faculty of Massachusetts Institute of Technology, he became assistant professor of chemistry at the University of California in 1912, attaining the professorship in 1918.

During World War I he directed research at the Experimental Station, American University, Washington, D. C., and in 1919 was associate director of the Fixed Nitrogen Research Laboratory. The following year he returned to the University of California.

Prof. Bray was a member of the National Academy of Sciences, the American Chemical Society, the American Association for the Advancement of Science, the American Academy of Arts and Sciences, and the Electrochemical Society. Among his many outstanding scientific contributions the following are particularly noteworthy: "The general relation between concentration and the conductance of ionized solutions," with C. A. Kraus; "Manganese dioxide as a catalyst for the oxidation of carbon monoxide"; "A system of qualitative analysis for the common elements," with A. A. Noyes; and a series of papers dealing with the mechanism of oxidation-reduction reactions involving hydrogen peroxide, iodine, bromine, and hydrazine. He was the author of *Qualitative analysis for the rare elements,* with A. A. Noyes, and *A course in general chemistry,* with W. M. Latimer.

An able scientist and an inspiring teacher, Prof. Bray has exerted a profound influence on research and teaching in the field of inorganic chemistry.

WENDELL M. LATIMER
University of California, Berkeley