JOURNAL OF THE
AMERICAN CHEMICAL SOCIETY

VOLUME 80 DECEMBER 2, 1958 NUMBER 22

HARRY NICHOLLS HOLMES

1879-1958

Harry Nicholls Holmes, former president of the American Chemical Society (1942), died on July 1, 1958.

Professor Holmes was born July 10, 1879, in the village of Fayetteville, Pennsylvania, and was brought up on a farm nearby. He walked six miles a day to attend Westminster College where he acquired an interest in chemistry and top honors in his graduating class. After five years of teaching in preparatory schools he saved enough money to enter Johns Hopkins University. While at Johns Hopkins University he became imbued with the research spirit fostered by Ira Remsen, then president of that university, and completed his doctoral thesis with J. C. W. Frazer on electro-osmosis.

In 1907, with a brand-new Ph.D. and no money, he moved to Earlham College, Richmond, Indiana, as head of the Chemistry Department. At Earlham he was the entire department—janitor as well as professor—but still found time to coach the basketball team (good enough to beat Purdue), carry on a successful research program, and to win wife Mary Shiveley, proud daughter of a leading Indiana attorney.

In 1914, Dr. Holmes moved to Oberlin College as head of the Chemistry Department. There he pursued a vigorous program of teaching, research and administrative work, with time for golf, gardening, church work, faculty politics, dramatics, and the rearing of two sons.

An insatiable appetite for chemical information, coupled with an unselfish and expansive human nature, made Professor Holmes an ideal teacher. He was a veritable "Mr. Chips," beloved by his students and respected by his colleagues. As director of the Chemistry Department of Oberlin College he succeeded in arousing the interest of hundreds of college students and causing them to pursue advanced studies. In this "sputnik" age, where there is so much discussion as to methods of training of scientists, a few more personalities of the caliber of Professor Holmes would go a long way toward a solution of this problem.

He had been active in the affairs of the American Chemical Society since the time of his joining in 1908; in the National Research Council; in the American Association for the Advancement of Science; in the American Institute of Chemists; and in Alpha Chi Sigma, Sigma Xi, Phi Lambda Upsilon, and Gamma Alpha.

His researches have led to the publication of over seventy technical papers in colloid chemistry, biochemistry, and other fields. In 1936 he isolated crystalline Vitamin A alcohol (as a solvate containing one molecule of methanol). Later work on vitamins showed that large doses of B_1 could help prevent sea-sickness and travel-sickness in general. He published a number of papers on Vitamin C and its value in treating allergies of many kinds, including allergies to sulfa drugs. During World War II, with the coöperation of physicians and dentists he showed that large doses of Vitamin C greatly lessened the shock caused by wounds, surgery and accidents in general.

He has personally trained over 6,000 students in graduate and undergraduate chemistry courses, and indirectly reached hundreds of thousands more through his *General Chemistry* (five editions); *Introductory College Chemistry* (five editions); *Colloid Chemistry; Laboratory Manual of Colloid Chemistry* (three editions); *Laboratory Manual of General Chemistry* (four editions); *Qualitative Analysis;* and other books of a popular nature such as *Out of the Test Tube, Strategic Materials and Na-*

tional Strength, and *Have You Had Your Vitamins?*

He was a pioneer in this country in teaching colloid chemistry, for as early as 1913 he gave laboratory instruction in this subject at Earlham College. After moving to Oberlin College in 1914 he promptly began research in the colloid field and and soon offered a formal laboratory course for masters' degree candidates and some gifted seniors.

In 1919 the National Research Council appointed Professor Holmes chairman of a "Committee on Colloids," a position he held for six years. The members of the 1919 committee were Wilder D. Bancroft, W. A. Patrick, J. A. Wilson, Jerome Alexander, and G. W. A. Clowes.

In 1923 J. H. Mathews and Professor Holmes planned the first Colloid Symposium, held at the University of Wisconsin under the auspices of the Committee on Colloid Chemistry of the National Research Council. The Symposium idea was so successful that it was soon adopted by chemists in other fields. Each year a monograph was published. Professor Holmes edited the second and third of these monographs.

In 1922 John Wiley and Sons brought out the first of three editions of Professor Holmes' *Laboratory Manual of Colloid Chemistry*. At that time Ostwald's and Hatschek's very brief manuals were in existence but practically ignored in this country. The "Laboratory Manual" was followed in 1934 by *Introduction to Colloid Chemistry*.

The Committee on Colloids of the National Research Council, recognizing the importance of increased interest in Colloid Chemistry selected Professor Holmes in 1922 to give the first of a series of transcontinental lecture tours on Colloid Chemistry. The tour lasted five weeks and ranged from the University of Wisconsin to Stanford University and the University of California.

In 1926 Professor Holmes lectured on his own colloid research at the University of Berlin, the College de France, the four Holland universities, the Royal Polytechnic Institute of Turin, and the University of Rome.

His numerous semi-popular lectures over a period of about thirty-one years such as the "Christmas Week Lectures for Young People" authorized by the Franklin Institute, Philadelphia, did much to arouse interest in colloid chemistry.

Professor Holmes was the first to devote an entire chapter to colloid chemistry in a freshman text, his *General Chemistry*, in 1922. The idea was soon adopted by other authors.

His research papers—more than seventy in number—dealt with such topics as silica gels, catalysts, adsorption, and, as a tool in isolation of Vitamin A, with chromatography. Here again he was a pioneer in introducing (from Europe) and developing in this country the use of chromatographic adsorption.

In addition to the research papers and books mentioned above, Professor Holmes wrote chapters on colloid chemistry for: Colliers Encyclopedia; Medical Physics Year Book; Bogues "Colloid Behavior"; and Alexanders "Colloid Chemistry."

The many editions of his widely used freshman texts, *General Chemistry* and *Introductory College Chemistry*, carried chapters on Colloid Chemistry which helped spread the colloid gospel.

Professor Holmes was elected president of the American Chemical Society in 1942, received the Gold Medal of the American Institute of Chemists in 1951, and was honored by his own college with the Oberlin Alumni Medal for Distinguished Service. His old alma mater, Westminster College, conferred the honorary Doctor of Laws degree in 1941. He was an honorary member of Phi Lambda Upsilon and Alpha Chi Sigma, and a Fellow of the Metallurgical, Chemical, and Mining Society of South Africa (1942).

There are not many chemists who have designed and built a golf course, won prizes for excellence in a national art show, coached a basketball team that beat Purdue, lectured (successfully) in broken French to the Collège de France, authored over seventy technical papers, written books whose total sales amount to some 700,000 copies, served as president of the American Chemical Society, furnished over one per cent of all the students awarded the Ph.D. in Chemistry over a ten year period (1935–1945), isolated a crystalline vitamin for the first time, and helped bring a new field of chemistry —colloid chemistry—of age.

As an indication of his ability to lead a full and interesting life, he turned to painting upon retirement; and after listening to his descriptions of his excursions in the beaux arts, one realized that here was a man who would never grow old.

(This notice has been prepared largely from material furnished by Dr. Richard R. Holmes, Research Associate at the University of Minnesota, and by Professor W. A. Patrick of Johns Hopkins University.)