

Obituary Notices

Prof. H. M. Dawson, F.R.S.

HARRY MEDFORTH DAWSON, professor of physical chemistry in the University of Leeds since 1920, died on March 9 at the age of sixty-three years, after an illness which had disabled him during the whole of the current University session.

All his life, apart from three years' Continental training, was spent in Leeds, first at the Leeds Modern School and then in turn as student, demonstrator, lecturer and professor at the University of his home city. In the last year of his studentship at Leeds he was engaged on research work with Prof. A. Smithells, and received the highest award then open to a student of science in his election to the 1851 Exhibition. There followed three years at Berlin, Leipzig and Giessen, which were all-important in bringing home to him the conviction that no work could henceforth make the first claim on his time and thought but that of research.

This inspiration came at a time when the atmosphere of the German universities was permeated by the research spirit to an extent then almost unknown in Great Britain, when brilliant young men were forming the research habit, and when new vistas were being opened out by theories and experimental investigations of the first importance. In the years just preceding, van't Hoff's original paper on "Osmotic Pressure and the Thermodynamic Deductions for Dilute Solutions," Arrhenius's "Theory of Isohydric Solutions" and Nernst's "Electromotive Activity of the Ions" had been published and Ostwald's text-books were presenting physical chemistry in a new light. Dawson and fellow-students from Great Britain (including Donnan), were brought under vivifying influences of personal contact and example and of the written word. On returning from Germany with a Ph.D. from the University of Giessen, he was appointed to a demonstratorship in physical chemistry in the department at Leeds from which he had gone as a student. From then onwards came a steady stream of papers on the mechanics of chemical change in solutions, embodying the results of experimental work carried out by himself and many senior students who received in succession the benefit of his training in research methods. A vast amount of matter was thus accumulated, and it was his reward that after many years a more generalized treatment of the results became possible. He was elected to the fellowship of the Royal Society in 1933, to the great gratification of his friends, who had come to fear that his devotion to work in the laboratory at Leeds rather than its effective exposition elsewhere might tell against that form of recognition. He had received the D.Sc. degree of Leeds many years before, in 1907.

Meanwhile, as primarily responsible for the lecturing and laboratory teaching in physical chemistry in the University, Dawson had developed the subject

not only for the students of pure chemistry but also for those of the various departments of applied chemistry and medicine, and in 1920 a professorship in physical chemistry was instituted, to which he was appointed. Throughout this time he had been an indefatigable worker, whose laboratory light was shining on most evenings and who seemed to regard the University vacation as a provision for minimizing interruption to research work. It was only during the last few years that warning of overstrain necessitated some diminution of effort.

Dawson's literary output was almost entirely that of his papers in the *Journal of the Chemical Society*, but he also contributed the section on general and physical chemistry to several numbers of the annual report of the Society and was one of the authors drawn upon by Abegg for his (German) treatise on chemistry.

Dawson's departmental preoccupations left him little time for the more general administrative work of the University, nor was it with him a primary interest, but he concerned himself with the award of scholarships, was for a considerable period a representative of Leeds on the Joint Matriculation Board of the Northern Universities, and at different times was dean of the Faculty of Science and the representative of Convocation on the Council. He will also be remembered as for many years the secretary of the Priestley Club, with a membership drawn from inside and outside the University, and notable for its friendly informality and the wide range of its scientific interests.

Prof. Dawson was fortunate in his family life. He married Miss Phillis Mary Barr, and she, with three sons and two daughters, survives him.

JOHN W. COBB.

Dawson's researches on solutions form a contribution to chemical science of great significance and importance. His earlier work was connected in the main with various aspects of chemical equilibria and more particularly with the formation of complex ions. Thus he was able, by means of distribution experiments, to establish the existence of the complex ion $(\text{Cu}_4\text{NH}_3)^{++}$ in ammoniacal copper sulphate solutions. The other group of compounds in which he was interested was the polyiodides. Here, having confirmed Jakowkin's conclusion of the existence of the tri-iodide in aqueous solutions, he extended the observation to organic solvents such as nitrobenzene, in which he showed that, under appropriate conditions, the higher polyiodides KI_3 , KI_7 , KI_5 exist in significant proportions.

Although this work was of considerable importance, Dawson's name will be particularly associated with the kinetic measurements which were so largely instrumental in the successful development of the modern theory of acids and bases. A commencement