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## SCIENCE:

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## AUGUST WILHELM VON HOFMANN.

ON May 6, 1892, the New York papers announced the death of this great chemist, in a brief despatch from Berlin; and the comments upon his life and works took an equally brief form. Yet there was probably no German professor whose name was dear to so many American pupils, no foreigner who viewed American science so sympathetically, no contemporary who had left so deep an impress upon one of the cardinal branches of human knowledge and industry. Chemical journals will bring to every laboratory eloquent tributes to the memory of the deceased master; but I am glad that this paper, which appeals to the general scientific public of the United States, opens its columns to a testimonial, however triffing and inadequate, from one of the departed master's pupils.

August Wilhelm Hofmann was born April 8, 1818, in the Hessian town of Giessen, in which his father lived as an Giessen was an obscure town, harboring the architect. equally insignificant University of the Grand Duchy of Hesse-Darmstadt. But six years after the birth of Hofmann an event occurred which was to have a curiously analogous effect upon his own career and that of his native town, the installation of Justus Liebig in the chair of chemistry. From a torpid mediæval village, Giessen became a centre of intellectual activity; its university achieved imperishable renown as the first to establish a laboratory devoted primarily to instruction. Equally beneficent was Liebig's influence upon young Hofmann: after devoting his attention successively to philology and to law, the example of Liebig drew him irresistibly toward chemistry, and he became one of his most enthusiastic and successful pupils. His first connection with Liebig was of a personal nature, since the erection of the University Laboratory, which was entrusted to the elder Hofmann, brought the two families into intimate relations. Later he married a niece of Liebig's wife.

His first apprenticeship as teacher, after the formal comple-

tion of his studies, was likewise passed under Liebig's eye; but in 1845 he established himself as privat docent in Bonn, although he was not destined to remain there long. Late in the same year he accepted an invitation to become the head of the Royal College of Chemistry, then newly established in London by Prince Albert, the Consort of the Queen. This institution was avowedly intended to be a reproduction, on British soil, of the Giessen Laboratory, and the choice of its director could not have been a happier one. The English pupils found in their teacher not the traditional German pedagogue, narrow, pedantic and awkward, visionary and incapable of adapting himself to his surroundings; but a brilliant lecturer, an energetic executive officer, a polite gentleman, a kind and encouraging teacher, and a sympathetic friend. During the seventeen years of his life in London he seemed to have completely assimilated himself to his surroundings, and the English world of science, ordinarily so nativistic, seems to have admitted him unreservedly within its fold. In fact, there was nothing upon which his energy and sagacity might be brought to bear, with which he was not entrusted. If there was a question to be solved in the manufactures, if the Treasury wanted advice in excise matters, if a competent judge were needed in international exhibitions of science and arts, if learned societies were in search of a representative head, recourse was always had to Hofmann. In fact, he received what was for many years the highest scientific reward in the bestowal of the Crown, the Mastership of the Mint. In England his greatest and most lasting work was doubtless accomplished. It was there that he and his pupils first investigated the organic compounds of phosphorus, the complicated ammonia bases, the cyanides, the isonitrils, and the mustard oils. In his laboratory the aniline dyes and the azo-dyes were discovered by himself and his pupils Perkin and Peter Griess. From all parts of the world pupils came to work under him, and I have heard him relate with pardonable pride how he was always sure in his extensive travels to find old pupils, be it in the extreme west and south of the United States or on the outskirts of European civilization in Egypt and Asia Minor. The Royal College of Chemistry became a place of pilgrimage for the young chemist, similar to Liebig's laboratory in Giessen, or to Berzelius's house in Stockholm, or Gay-Lussac's in Paris, in earlier times.

Nevertheless, he accepted a call in 1862 to found a University Laboratory at Bonn, and actually planned and superintended the erection of the building. Before he could enter upon his duties as director, however, he received an invitation to a still larger field. He was to become the successor in Berlin of two recently deceased chemists of great renown, Mitscherlich and Heinrich Rose. A new University Laboratory was to be built in what was rapidly becoming the metropolis of Germany; the Royal Academy was anxious to provide additional facilities for private research. So it happened that Hofman really went straight from London to Berlin, in 1865; Kekulé filled the vacancy in Bonn, while Williamson assumed charge of the Royal College of Chemistry.

Until his death, Hofmann remained at the head of chemical affairs in Berlin. The laboratory was built in 1867, and at once was completely filled with students; in a short while it became rather uncomfortably crowded, and has remained so until now. It has always harbored numerous foreigners, especially Americans. As member of the Prussian Academy, he was entitled to a research laboratory and a dwelling, which were so connected with the Students' Laboratory that no time