

training-school for the greater part of the eminent chemists outside of Paris, and the model for similar establishments, and extended its influence over the world—into England, Scotland, and America. It also did more than any other institution of that kind for the development of ready and accurate methods of analysis, such as are now used in the remotest regions. But it was significant for German chemistry, and for the cosmopolitan character of German science generally, that this brilliant development of experimental research was stimulated from two independent centres; that German chemists as little as German mathematicians attached themselves in a one-sided manner to the Paris school.

19.
Cosmopolitan character of German science.

In mathematical science the classical style of Gauss, transmitted from the ancients through Newton, combined with the analytical or modern French style of Jacobi and Dirichlet to give to German research its character of universality. In a similar manner, when chemistry again found a domicile in Germany and became an integral portion of the university programme, it had been trained in two different schools. For there lived at that time in Sweden the eminent authority Berzelius,¹ who divides with Gay-Lussac the glory of being

¹ J. Jacob Berzelius (a Swede, 1779-1848), one of the most eminent and industrious of chemists, had a great influence on the development of modern chemistry by the number as well as by the accuracy of his experimental determinations, by his invention of methods and apparatus for analysis, and by his extensive proofs of several of the most important theories. The latter directed the labours and governed the opinions of many—especially Ger-

man—investigators. It was through him mainly that Richter's chemical equivalents and Dalton's atomic theory were extensively verified and applied to all parts of the science, to organic and mineralogical chemistry. He also elaborated, in close connection with Davy's electrical discoveries, his celebrated electrochemical theory, which up to the year 1840 was very generally accepted by chemists; and he assisted through his repeated expositions