in the early years of the century fixed the task of chemists for a long time ahead.

9. Berzelius.

To begin with, an enormous amount of work had to be done in determining the actual proportions in which elementary substances combine. A very large share of this work belongs to Berzelius, who by a great number of very accurate determinations confirmed inductively the correctness of Dalton's theory. And even more important than the conformation of the theory was the great harvest of actual knowledge of the things and processes of nature which was collaterally gathered, whilst chemists were trying to prove or to refute existing opinions.

Indeed, whilst the atomic theory of Dalton was the first step towards a systematic and comprehensive study of chemical phenomena—*i.e.*, of the qualitative varieties under which matter presents itself to us on the surface of this globe—the extension which was gained in the domain of actual facts was much greater than the simplification which the theory had attempted to give. The number of elements or simple bodies, which in Lavoisier's time hardly exceeded thirty, increased before the year 1830 to more than double: the number of new compounds, unknown before, has probably never been counted. Compared with this growth of actual knowledge of facts, the development of the theory was slow and uncertain. The view of nature from the atomic point of view marks indeed a great contrast to that from the astronomical point of view.

10. Atomic theory and gravitation compared.

We now live about as long after the reform of chemistry through Lavoisier and Dalton as Laplace lived after the reform of physical astronomy