through Newton. But who could compare the state of chemistry at the present day with that of astronomy in the age of Laplace? There, every step had tended to show that the one Newtonian formula sufficed to comprehend all cosmic phenomena; here, the simplification introduced by Dalton has had to give way to a series of modifications which have rendered the atomic theory one of the most complicated machineries ever introduced into science. Let us review in brief the fate of Dalton's hypothesis during the century which followed. Quite in the early years of the atomic theory, Wollaston prophetically foretold that if once an accurate knowledge were gained of the relative weights of elementary atoms, philosophers would not rest satisfied with the determination of mere numbers, but would have to gain a geometrical conception of how the elementary particles were placed in space. Van't Hoff's 'La Chimie dans l'Espace'—published at Rotterdam in 1875—was the first practical realisation of this prophecy. Many stages had to be gone through before this latest phase of the atomic view was attained. Had it been the case that every elementary substance combines with any other substance only in one fixed numerical proportion, no necessity would have existed to look upon the atomic numbers as anything else than equivalents. But it was found that though the combining numbers were fixed they were not always the same; it was found that if a substance combined in two or more proportions with any other, the larger proportions were always exact multiples of the smallest proportion. And this—the rule or law of *multiple proportions*—was

11. Wollaston's prophecy.