

knowledge of the composition and properties of chemical substances for the sake of arriving at the truth irrespective of the practical results. The history of chemistry as a science is regarded by many as beginning with Boyle. No one before his time grasped the main problem of chemistry so clearly as he. After the death of Boyle the phenomena of combustion became the *burning* question of the day, and engaged the attention of the most eminent scientists of the 18th century, prominent among these were Becher and Stahl, who revived the old Greek idea of a fire-material and explained combustion as a decomposition; to be capable of burning the substance must contain fire-material, which Becher called Terra Pinguis and Stahl, Phlogiston, as the substance burns the fire-material escapes. For more than one hundred years this theory of combustion, false and untenable as it now seems, was almost universally accepted as a workable basis for experiments and for chemical research. It was during the so-called Phlogiston era that Black, Cavendish, Priestley, Scheele and others contributed such a wealth of observations, experiments and new materials that Lavoisier was able during the closing years of the century to found a new era, the so-called modern period of chemistry which has continued down to the present time. Priestley, Scheele, Cavendish, Bergman and others were successful experimenters and discovered many important facts but they could not grasp the significance of their work or estimate its value. It was left to Lavoisier to interpret the meaning of their experiments, correlate the results and enunciate the great principles involved. By a judicious use of the facts and principles thus handed down to him Lavoisier succeeded in exposing the fallacy of the Phlogiston theory and finally replaced it by his own theory of oxidation, in which he explained clearly the part played by oxygen in the phenomena of combustion, calcination and respiration. He demonstrated the laws of combination, in constant proportion and the great principle of the indestructibility of matter.

The impetus given to scientific study by Lavoisier led on to the development of the "Atomic Theory," a principle so broad in its conception that it includes all previous and subsequent theories. It confirmed and generalized "Dalton's Law of Multiple Proportions." It rendered intelligible the profound