

*Sect. 2.—Reception and Confirmation of the Atomic Theory.*

IN order to give a sketch of the progress of the Atomic Theory into general reception, we cannot do better than borrow our information mainly from Dr. Thomson, who was one of the earliest converts and most effective promulgators of the doctrine. Mr. Dalton, at the time when he conceived his theory, was a teacher of mathematics at Manchester, in circumstances which might have been considered narrow, if he himself had been less simple in his manner of life, and less moderate in his worldly views. His experiments were generally made with apparatus of which the simplicity and cheapness corresponded to the rest of his habits. In 1804, he was already in possession of his atomic theory, and explained it to Dr. Thomson, who visited him at that time. It was made known to the chemical world in Dr. Thomson's *Chemistry*, in 1807; and in Dalton's own *System of Chemistry* (1808) the leading ideas of it were very briefly stated. Dr. Wollaston's memoir, "on superacid and subacid salts," which appeared in the *Philosophical Transactions* for 1808, did much to secure this theory a place in the estimation of chemists. Here the author states, that he had observed, in various salts, the quantities of acid combined with the base in the neutral and in the superacid salts to be as one to two: and he says that, thinking it likely this law might obtain generally in such compounds, it was his design to have pursued this subject, with the hope of discovering the cause to which so regular a relation may be ascribed. But he adds, that this appears to be superfluous after the publication of Dalton's theory by Dr. Thomson, since all such facts are but special cases of the general law. We cannot but remark here, that the scrupulous timidity of Wollaston was probably the only impediment to his anticipating Dalton in the publication of the rule of multiple proportions; and the forwardness to generalize, which belongs to the character of the latter, justly secured him, in this instance, the name of the discoverer of this law. The rest of the English chemists soon followed Wollaston and Thomson, though Davy for some time resisted. They objected, indeed, to Dalton's assumption of atoms, and, to avoid this hypothetical step, Wollaston used the phrase *chemical equivalents*, and Davy the word *proportions*, for the numbers which expressed Dalton's atomic weights. We may, however, venture to say that the term "atom" is the most convenient, and it need not be understood as claiming our assent to the hypothesis of indivisible molecules.