Berzelius united Dalton's and Davy's researches into a comprehensive system of chemistry. The identity or difference of chemical substances seemed in the early part of the century to be fixed by the constituent elements and their quantitative proportions determined by a qualitative and quantitative analysis. This simple view had to be abandoned when Wöhler in 1823, Liebig in 1824, and Faraday in 1825 found that entirely different qualities, indicating a different constitution, could belong to bodies having the same elements in the same numerical proportions.[1] The composition of a compound had to be distinguished from its constitution, the elementary from the constituent analysis and formula. It took forty years before the great variety of views which were brought forward with the purpose of explaining how composition and constitution of the same aggregate of elements might

[1] This phenomenon is termed "Isomerism," from the Greek word *ἰσομερής*, which signifies "having equal parts." The term was introduced by Berzelius in 1830, after he had satisfied himself that compounds existed, differing widely in their properties, which contain the same constituent elements in the same proportions, and which combine with other bodies in the same proportions to form neutral salts. This he found to be the case with "racemic" and "tartaric" acid. Up to that time he had hesitated in accepting the growing evidence that equal constituents in equal proportions did not constitute identity of compounds. Wöhler in 1823 and Liebig in 1824 had found the same numerical composition for "cyanate" and "fulminate" of silver. In 1825 Faraday found two hydrocarbons which contained the same proportions of carbon and hydrogen, but showed totally different properties, such as unequal density in the gaseous state. Two oxides of tin, having the same composition, were also known, and two modifications of "phosphoric acid." The explanation of these anomalies caused Berzelius much difficulty. He resorts to the notion of a difference of grouping of the constituent atoms. "The isomerism of compounds," he says, "in itself presupposes that the positions of the atoms in them must be different" (see E. von Meyer, 'History of Chemistry,' p. 238). A. Rau in his 'Theorien der modernen Chemie' (3 parts, Braunschweig, 1877-84) gives in the appendix to the third part a detailed history of isomerism. He denies that Berzelius refers to the different position of atoms in order to explain isomerism; he attributes this suggestion to Dumas in 1833.