

24.  
Neglect of  
the study  
of affinity.

not appear that philosophers considered the existence and usefulness of chemical formulæ as a proof of the physical existence of atoms, or of smallest indivisible particles of matter, in the older sense of the theory. Hand in hand with this purely formal and experimental treatment of chemical phenomena went the almost absolute neglect with which questions referring to chemical affinity were treated. The word was little more than a name for an unknown something.

How it came to pass that substances had more or less affinity for each other, what was meant by a chemical compound, symbolically expressed by writing two or more letters, near or above each other, in a square or in a circle, united by parentheses or brackets, did not seem to trouble chemical philosophers at all. To compare the problem of chemistry with that of astronomy, the former for a great part of our century resembled that phase of astronomical knowledge in which stellar maps and catalogues, plans of orbits and orreries, were considered sufficient, giving a picture of a certain constellation of the heavenly bodies, but no idea of how these configurations were maintained and altered. In fact, chemistry was for a long time a science purely of numbers, to which was attached a natural history of the substances to which these numbers belonged. The geometrical arrangement of the formulæ was usually looked upon as only symbolical: of the dynamical changes which take place in time, and imply the knowledge of

considered to be represented by more than one number in instances where the same metal had several basic or acid oxides, as in the case of nitrogen and phosphorus (*ibid.*, p. 805). Laurent in 'Comptes

Rendus,'1844, vol. xix. p. 1099, says: "Le même corps simple se présente tantôt avec certaines propriétés, tantôt avec d'autres, il entre dans les corps composés, tantôt avec un certain poids, tantôt avec un autre."