

pally, to their facility of combination with oxygen. Thus, the First Section is the Metals of the Earths; the Second, the Metals of the Alkalies; the Third, the Easily Oxidable Metals, as Iron; the Fourth, Metals Less Oxidable, as Copper and Lead; the Fifth Section contains only Mercury and Osmium; and the Sixth, what were at an earlier period termed the *Noble Metals*, Gold, Silver, Platinum, and others.

How such principles are to be applied, so as to produce a definite and consistent arrangement, will be explained in speaking of the philosophy of the Classificatory Sciences; but there are one or two peculiarities in the classes of bodies thus recognized by modern chemistry, which it may be useful to notice.

1. The distinction of Metallic and Non-metallic is still employed, as of fundamental importance. The discovery of new metals is so much connected with the inquiries concerning chemical elements, that we may notice the general progress of such discoveries. *Gold, Silver, Iron, Copper, Quicksilver, Lead, Tin*, were known from the earliest antiquity. In the beginning of the sixteenth century, mine-directors, like George Agricola, had advanced so far in practical metallurgy, that they had discovered the means of extracting three additional metals, *Zinc, Bismuth, Antimony*. After this, there was no new metal discovered for a century, and then such discoveries were made by the theoretical chemists, a race of men who had not existed before Beccher and Stahl. Thus *Arsenic* and *Cobalt* were made known by Brandt, in the middle of the eighteenth century, and we have a long list of similar discoveries belonging to the same period; *Nickel, Manganese, and Tungsten*, which were detected by Cronstedt, Gahn, and Scheele, [and Delhuyart, respectively; metals of a very different kind, *Tellurium* and *Molybdenum*, which were brought to light by Müller, Scheele, Bergman, and Hielm; *Platinum*, which was known as early as 1741, but with the ore of which, in 1802 and 1803, the English chemists, Wollaston and Tennant, found that no less than four other new metals (*Palladium, Rhodium, Iridium* and *Osmium*) were associated. Finally, (omitting some other new metals,) we have another period of discovery, opened in 1807, by Davy's discovery of *Potassium*, and including the resolution of all, or almost all, the alkalies and earths into metallic bases.

[2nd Ed.] [The next few years made some, at least some conjectural, additions to the list of simple substances, detected by a more minute scrutiny of known substances. *Thorium* was discovered by Berzelius in 1828; and *Vanadium* by Professor Sefström in 1830. A