

But although atmospheric air has been thus originally constituted upon chemical principles, and probably owes its stability, in no small degree, to this circumstance; yet the mode in which its constituent elements are associated, is very different from that, in which the elements of compounds in general, are associated. Indeed the constituent elements of atmospheric air, do not appear to be combined at all; but to be only mixed, or simply diffused through each other, in the same manner, as the minute portions of carbonic acid gas, and of vapour, are known to be diffused through the whole atmosphere; that is to say, according to the laws of the general diffusion of gaseous bodies, which we endeavoured to explain in a former chapter. To this explanation we must refer the reader for details. We shall merely observe here, that the fundamental principle of this explanation consists in the assumption, that the molecules of all bodies in the gaseous state, are self-repulsive, (or repulsive of one another, in preference to others), for the same reason, that in the solid state, they are self-attractive, (or attract one another, in preference to others). When different gaseous bodies therefore, are mixed together, they will not assume a position according to their specific gravities, as they might otherwise be expected to do; but the molecules of each gas, will be equally diffused throughout the whole space