

by our hypothesis. The argument is very simple and obvious: Two molecules of the *same* matter have a tendency to cohere and to form a solid, when the chemical polarities of these molecules are similarly arranged, and do not extend beyond the semi-diameters of the molecules; but two molecules of *different* matter, under circumstances precisely alike, remain passive, and have no tendency to cohere. Hence, while two molecules of the same matter, having the intensity of their polarities much increased, and their chemical poles, consequently, reversed, repel each other, or become *self*-repulsive; two molecules of different matter, still retaining their mutual passiveness, do *not* repel each other.

There is reason to believe, that the phenomena of diffusion are not confined to bodies perfectly gaseous: but exist also in the imperfectly gaseous state of bodies, termed *vapour*; of which the vapour of water may be considered as the most familiar example. Phenomena very similar to, if not identical with, the above, also exist in liquids, and perhaps in solids. Thus the molecules of certain matters diffused through a liquid, as through water, may, in some cases, be supposed to exert a self-repulsive influence on each other; by which supposition only, does their equal diffusion through a large mass of liquid seem explicable. Even in the solid state, as above observed, some-