

owe their peculiar character, essentially to carbon; and their endless varieties, to differences in its quantity; or to the modifying influence of the hydrogen and oxygen, with which it is associated. In animal substances, carbon exerts a similar influence; but its effects are materially modified by the presence of another staminal principle, to be presently considered. Carbon, in some state or other, exists in considerable quantities upon the surface of our globe; but apparently by no means in so large a proportion, as oxygen and hydrogen. Exclusively of that actually involved in the composition of organized beings, carbon is met with nearly pure in large quantities, in particular districts, in the well-known form of *fossil coals*; but it occurs in far greater proportion in combination with oxygen, in the form of *carbonic acid*; which carbonic acid in union with lime, constitutes common *chalk* and *lime stone*; two of the most abundant minerals in nature.\* Carbon in its elementary state, is a very inert substance; and is scarcely liable to be affected by, or to affect organized beings; but with hydrogen and oxygen, it forms

\* In order to give some idea of the proportion in which carbon exists in different common substances, it may be observed, that a pound of charcoal is equal to, and is contained in rather more than, two pounds of sugar or flour, and eight of potatoes or limestone; so that a mountain of limestone, contains the essential element, of at least, an equal bulk of potatoes; and of a forest, that would amply cover many such mountains.