

minute globules, which are generally nearly spherical, but sometimes elongated, and which are thickly disseminated through the mass. The colour of these globules is considerably lighter than that of the glass; they are commonly greyish brown, sometimes inclining to chocolate-brown; and when they have been formed near the interior surface of the cavities in the glass, they project, and resemble a cluster of small seeds. Their diameter rarely exceeds a line, and seldom attains that size, as in general they are so near to one another that their surfaces touch before they can acquire considerable magnitude. In the process of cooling, they adapt their form to their confined situation, fill up every interstice, and finally present a homogeneous body wholly unlike glass, and equally unlike the parent basalt. When the union of the little globules has been imperfectly effected, the fracture of the mass indicates its structure by numerous minute conchoidal surfaces, which display the form of each globule.

But, if the arrangement has extended a little farther, all these subdivisions are entirely lost; the mass becomes perfectly compact; has an even or a flat conchoidal fracture; is nearly of the same hardness as the glass; is commonly of a chocolate colour, graduating into a brownish black; and the intensity of the colour increases in proportion to the degree to which the arrangement has extended. Its aspect is rather greasy; and it much resembles some varieties of jasper in the compactness of its texture, and in its opacity. Its magnetic action is extremely *feeble*. Sp. gr. 2.938.

3. If the mass were now rapidly cooled, it is obvious that the result would be the substance just described; but if the temperature adapted to the further arrangement of its particles be continued, another change is immediately commenced, by the progress of which it acquires a more stony texture, and much greater tenacity, and its colour deepens as these changes advance, till it becomes absolutely black. Sometimes this alteration is effected by a gradual transition, the limits of