the characters of devitrified glasses. It consists in the appearance of minute crystallites, and other imperfect or rudimentary crystalline forms, accompanied with an increase of density and diminution of volume. It must be regarded as an intermediate stage between the perfectly glassy and the crystalline conditions. Rocks exposed to temperatures as high as their melting-points fuse into glass which, in the great majority of cases, is of a bottle-green or black color, the depth of the tint depending mainly on the proportion of iron. In this respect they resemble the natural glasses—pitchstones and obsidians. Microscopic investigation of such artificially-fused rocks shows that, even in what seems to be a tolerably homogeneous glass, there are abundant minute hair-like, feathered, needle-shaped, or irregularly-aggregated bodies diffused through the glassy paste. These crystallites, in some cases colorless, in others opaque, metallic oxides, particularly oxides of iron, resemble the crystallites observed in many volcanic rocks (p. 205). They may be obtained even from the fusion of a granitic or granitoid rock, as in the well-known case of the Mount Sorrel syenite near Leicester, which, being fused and slowly cooled, yielded to Mr. Sorby abundant crystallites, including exquisitely-grouped octahedra of magnetite.[14]

According to the observations of Delesse, volcanic rocks, when reduced to a molten condition, attack briskly the sides of the Hessian crucibles in which they are contained, and even eat them through. This is an interesting fact, for it helps to explain how some intrusive igneous rocks have come to occupy positions previously filled by sedimentary strata, and why, under such circumstances, the composition

[14] Zirkel, Mik. Besch. p. 92; Sorby, Address Geol. Sect. Brit. Assoc. 1880. On the microscopic structure of slags, etc., see Vogelsang's "Krystalliten."