all the modifications appear referable to the degree of incandescence of the materials, the circumstances under which they were ejected, and their slow or rapid refrigeration. An instructive example of the passage of granite into basalt, described by Dr. Hibbert, will illustrate these remarks. In one of the Shetland Isles, a bed of basalt, extending for many miles, is seen in contact with granite. At a little distance from the junction of the rocks, the basalt contains minute particles of quartz, and these become larger and more distinct as they approach the granite; hornblende, felspar, and greenstone (the latter is a homogeneous admixture of hornblende and felspar) next appear; still nearer, the rock consists of felspar, quartz, and hornblende: and at the line of junction, felspar and quartz form a mass, which requires but the presence of mica to be identical with the granite in which it is insensibly lost.*

Limestone in contact with schist frequently assumes a crystalline structure, as if the same agency which had converted the clay into schist, had extended its influence to the overlying calcareous beds. In the Isle of Man interesting examples of this transmutation occur. In some instances the beds in contact with the fundamental rock of schist, are irregular and perfectly crystalline, but change to a stratified disposition, and earthy texture, in proportion as they are further removed from the

* Edinburgh Journal of Science.