

circumstances which have given to the resulting rocks a very peculiar character. There is one striking deduction which M. Fournet has drawn from the mineralogical character of these rocks, namely, that those masses which, according to our chemical knowledge, would require the most intense and long continued incandescence for their formation, namely, those in which quartz largely predominates, are precisely those which from their geological position must have been longest exposed to such an agency—hence, in granite, the foundation rock, quartz, which is the most infusible and refractory material, largely prevails. The possibility of an earth being converted by intense heat into the hardest and purest crystal, was shown in the formation of fictitious rubies (page 764). To the granite succeed rocks in the exact order of their containing less quartz, and being therefore more easily fusible—as granite with a large proportion of felspar, porphyry, serpentine, mica schist, and clay slate.\* If we take these phenomena into consideration, together with the facts previously stated, of the transmutation of one substance into another by heat, it appears to me, that in the present state of our knowledge, we are warranted in concluding that granite and its associated rocks, are nothing more than sedimentary deposits altered by igneous agency. But from what source were the most ancient granite rocks derived—whence originated

\* Jameson's Edinburgh Journal, No. 47.