

cal research, and serves as a connecting link between so many distant points of philosophical speculation, as this. To the geologist, the chemist, the optician, the crystallographer, the physician, it offers especially the very elements of their knowledge, and a field for many of their most curious and important inquiries. Nor, with the exception of chemistry, is there any which has undergone more revolutions, or been exhibited in a greater variety of forms. To the ancients it could scarcely be said to be at all known, and up to a comparatively recent period, nothing could be more imperfect than its descriptions, or more inartificial and unnatural than its classification. The more important minerals in the arts, indeed, those used for economical purposes, and those from which metals were extracted, had a certain degree of attention paid to them, for the sake of their utility and commercial value, and the precious stones for that of ornament. But until their crystalline forms were attentively observed and shown to be determinate characters on which dependence could be placed, no mineralogist could give any correct account of the real distinction between one mineral and another.

(327.) It was only, however, when chemical analysis had acquired a certain degree of precision and universal applicability, that the importance of mineralogy as a science began to be recognised, and the connection between the external characters of a stone and its ingredient constituents brought into distinct notice. Among these characters, however, none were found to possess that eminent distinctness which the crystalline form offers; a character in the highest degree geometrical, and affording, as might be naturally supposed, the strongest evidence of its necessary connection with the intimate constitution of the substance. The full importance of this character was, however, not felt until its connection with the texture or cleavage of a mineral was pointed out, and even then it required numerous and striking instances of the critical discernment of Haüy and other eminent mineralogists in predicting from the measurements of the angles of crystals which had been confounded to-