

sons. They seemed to afford a practical means of recognising and obtaining in the laboratory substances in their qualitative or chemical purity, if they were elements, or in identical chemical combinations, if they were compounds. And secondly, these regular, recurring forms, which, in many cases, exhibited characteristic and geometrically fixed arrangements of plane surfaces, appeared the only means by which we could gain an insight into the grouping and the shape of the ultimate particles, out of which, according to the atomic view, molar substances were constituted. If the particles of any substance, when set free to follow their most natural movements by solution, by fusion, or by volatilisation, meet again during the process of solidification in definite, always recurring forms, the conclusion seems obvious that the individual and ultimate particles possess marked peculiarities in the different directions of space. And it is almost inconceivable that these peculiarities should consist in anything else than in distinct primitive forms, arranged in varying, but geometrically definable, meshes of a network. Accordingly, different systems have been elaborated ever since the age of Häüy, which have the object of easily classifying, recognising, and measuring crystalline structures, or, more ambitiously, of discovering the number of simple forms and arrangements of networks of which our spatial conceptions admit. It is satisfactory to be able to state that investigations of the latter kind, carried on from seemingly different beginnings, have resulted in the recognition of a certain limited number of forms of symmetry. This symmetry is referred to points, called