lich discovered another crystalline property of certain chemically pure substances. He found that some substances can crystallise in more than one distinct and definite form. The alums and vitriols are typical of isomorphism. As typical of the second property, which was termed by him dimorphism or polymorphism, we have the well-known mineral calc-spar, which is dimorphous with aragonite, both having the same chemical constitution and properties. A typical example of dimorphism is the mineral rutile, which is chemically the same substance as the mineral anatase, both being chemically pure titanic oxide. Among the elements, pure sulphur crystallises in two different forms. The property of dimorphism seemed at first to contradict the inference which Mitscherlich had drawn from his first discovery—*viz.*, that the crystalline shape is expressive of the number and chemical connection of the smallest particles or atoms; but the further discovery, that if of two isomorphous bodies one is dimorphous, the other is likewise so, gave again a great support to the geometrical conception of atomic complexes—*i.e.*, to the idea that chemical individuality is ultimately to be explained not only by the number, but also by the mutual fixed position and shape, of the atoms. And yet it seemed a long way, and is a long way still, from the external, visible, and well-marked shape of a crystal, with its peculiar and well-defined geometrical, elastic, optical, and thermal properties, to the primitive molecule, made up of still more simple atoms, in the form, number, and arrangement of which we are again and again tempted to see the nature of chemical or qualitative individuality. To obtain a clear view in this way would be to work our way from

44. Polymorphism.