Professor Dana, in his *System of Mineralogy*, New Haven (U.S.), 1837, follows Naumann for the most part, both in crystallography and in mineral classification. In the latter part of the subject, he has made the attempt, which in all cases is a source of confusion and of failure, to introduce a whole system of new names of the members of his classification.

The geometry of crystallography has been investigated in a very original manner by M. Bravais, in papers published in the Journal of the Ecole Polytechnique, entitled *Mémoires sur les Systèmes formés par des Points.* 1850. *Etudes Crystallographiques.* 1851.

Hermann Kopp (*Einleitung in die Krystallographie*, Braunschweig, 1849) has given the description and measurement of the angles of a large number of laboratory crystals.

Rammelsberg (*Krystallographische Chemie*, Berlin, 1855) has collected an account of the systems, simple forms and angles of all the laboratory crystals of which he could obtain descriptions.

Schabus of Vienna (*Bestimmung der Krystallgestalten* in *Chemischen Laboratorien erzeugten Producte*, Wien, 1855; a successful Prize Essay) has given a description, accompanied by measurements, of 90 crystalline species from his own observations.

To these attempts made in other countries to simplify and improve crystallography, I may add a remarkable Essay very recently made here by Mr. Brooke, and suggested to him by his exact and familiar knowledge of Mineralogy. It is to this effect. All the crystalline forms of any given mineral species are derived from the *primitive form* of that species; and the degree of symmetry, and the *parameters*, of this form determine the angles of all derivative forms. But how is this primitive form selected and its parameters determined? The selection of the kind of the primitive form depends upon the *degree of symmetry* which appears in all the derivative forms; according to which they belong to the *rhombohedral*, *prismatic*, *square pyramidal*, or some other *system*: and this determination is commonly clear. But the parameters, or the angles, of the primitive form, are commonly determined by the *cleavage* of the mineral. Is this a sufficient and necessary ground of such determination? May not a simplification be effected, in some cases, by taking some other parameters? by taking a primitive form which belongs to the proper system, but which has some other angles than those given by cleavage? Mr. Brooke has tried whether, for instance, crystals of the rhombohedral system may not be referred with advantage to primitive rhombohedrons which have, in all