http://www.geology.19thcenturyscience.org/books/1858-Whewell-HistSci/README.htm

the species, nearly the same angles. The advantage to be obtained by such a change would be the simplification of the laws of derivation in the derivative forms: and therefore we have to ask, whether the indices of derivation are smaller numbers in this way or with the hitherto accepted fundamental angles. It appears to me, from the examples given, that the advantage of simplicity in the indices is on the side of the old system: but whether this be so or not, it was a great benefit to crystallography to have the two methods compared. Mr. Brooke's Essay is a Memoir presented to the Royal Society in 1856.

2. *Optical Properties of Minerals.*

The *Handbuch der Optik*, von F. W. G. Radicke, Berlin, 1839, contains a chapter on the optical properties of crystals. The author's chief authority is Sir D. Brewster, as might be expected.

M. Haidinger has devoted much attention to experiments on the *pleochroism* of minerals. He has invented an instrument which makes the dichroism of minerals more evident by exhibiting the two colors side by side.

The pleochroism of minerals, and especially the remarkable clouds that in the cases of Iolite, Andalusite, Augite, Epidote, and Axinite, border the positions of either optical axis, have been most successfully imitated by M. de Senarmont by means of artificial crystallizations. (*Ann. de Chim.* 3 *Ser.* xli. p. 319.)

M. Pasteur has found that Racemic Acid consists of two different acids, having the same density and composition. The salts of these acids, with bases of Ammonia and of Potassa, are hemihedral, the hemihedral faces which occur in the one being wanting in the other. The acids of these different crystals have circular polarization of opposite kinds. (*Ann. de Chim.* 3 *Ser.* xxviii. 56, 99.) This discovery was marked by the assignation of the Rumford Medal to M. Pasteur in 1856.

M. Marbach has discovered that crystals of chlorate of soda, which apparently belongs to the cubic or tessular system, exhibit hemihedral faces of a peculiar character; and that the crystals have circular polarization of opposite kinds in accordance with the differences of the plagihedral faces. (*Poggendorf's Annalen*, xci. 482.)

M. Seybolt of Vienna has found a means of detecting plagihedral faces in quartz crystals which do not reveal them externally. (*Akad. d. Wissenschaft zu Wien*, B. xv. s. 59.)