

lamented countryman, Dr. Wollaston, who re-examined and verified the laws of double refraction in Iceland spar announced by Huyghens. Attention being thus drawn to the subject, the geometry of Laplace soon found a means of explaining at least one portion of the mystery of this singular phenomenon, by the Newtonian theory of light, applied under certain supposed conditions; and the reasoning which led him to the result (at that time quite unexpected), may justly be regarded as one of his happiest efforts. The prosecution of the subject, which had now acquired a high degree of interest, was encouraged by the offer of a prize on the part of the French Academy of Sciences; and it was in a memoir which received this honorable reward on that occasion, in 1810, that Malus, a retired officer of engineers in the French army, announced the great discovery of the *polarization of light* by ordinary reflection at the surface of a transparent body.

(286.) Malus found that when a beam of light is reflected from the surface of such a body at a certain angle, it acquires precisely the same singular property which is impressed upon it in the act of double refraction, and which Newton had before expressed by saying that it possessed *sides*. This was the first circumstance which pointed out a connection between that hitherto mysterious phenomenon and any of the ordinary modifications of light; and it proved ultimately the means of bringing the whole within the limits, if not of a complete explanation, at least of a highly plausible theoretical representation. So true is, in science, the remark of Bacon, that no natural phenomenon can be adequately studied *in itself alone*, but, to be understood, must be considered *as it stands connected with all nature*.

(287.) The new class of phenomena thus disclosed were immediately studied with diligence and success, both abroad by Malus and Arago, and at home by our countryman Dr. Brewster, and their laws investigated with a care proportioned to their importance; when another and apparently still more extraordinary class of phenomena presented itself in the production of the