

beam of *unpolarized* light may, conversely, always be regarded as a mixture of two equal rays oppositely polarized, in *any* two planes at right angles to each other.

(130.) If a ray reflected from any medium at the polarizing angle (and therefore wholly polarized) be received on a second surface of the same medium at the same angle of incidence, *and in a plane coincident with* that of the first reflexion, it undergoes partial reflexion just as an unpolarized ray would do, and both the reflected and refracted portions retain their polarization. But if the plane of the second incidence be at right angles to that of the first, *no portion of the light is reflected*, but the whole passes into the refracted ray, retaining its polarization,—just in the same manner as, had it been incident on our doubly refracting prism held with its edge at right angles to its plane of polarization, it would have wholly passed into the extraordinary ray. *Vice versâ*, if the ray extraordinarily refracted by such a prism be received on a glass plate at the polarizing angle of incidence, no reflexion will take place if the edge of the prism be parallel to the plate. Hence we are entitled to conclude that it is the very same property which is impressed on light in both cases, and that a ray polarized by reflexion differs in no respect from one which has received this property by passing through a doubly refracting crystal.

(131.) A ray partially polarized by reflexion at a greater or less incidence than that at which it would have been completely so, may be wholly polarized, or nearly so, by repeated reflexions at the same angle.