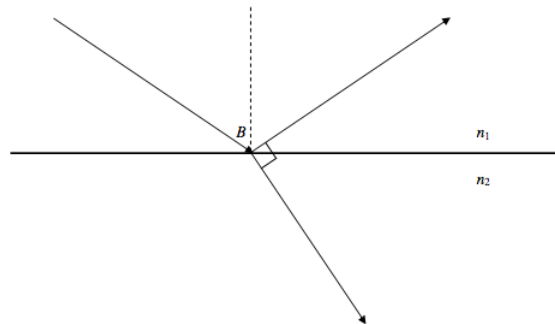


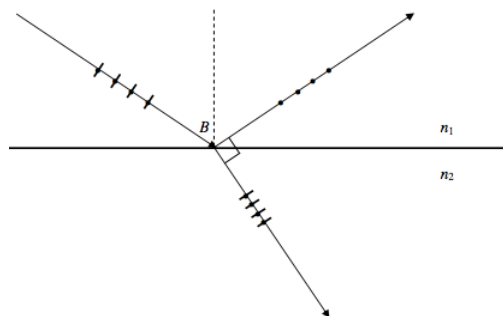
2.3: Light Incident at the Brewster Angle

If a ray of light is incident at an interface between two media in such a manner that the reflected and transmitted rays are at right angles to each other, the angle of incidence, B , is called the Brewster angle.



A moment's thought will show that, if the refractive indices are n_1 and n_2 , $\tan B = n_2/n_1$. For example, at an air ($n_1 = 1$) to glass ($n_2 = 1.5$) interface the Brewster angle is 56 degrees.

If a ray of unpolarized light is incident at the Brewster angle, the reflected ray is totally plane-polarized. The is no component of the oscillating electric field that is in the plane



of the paper and at right angles to the direction of propagation of the reflected ray. The transmitted ray, having lost some of the component of the electric field at right angles to the plane of the paper (i.e. the dots) is partially plane polarized.

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