POLARIZATION

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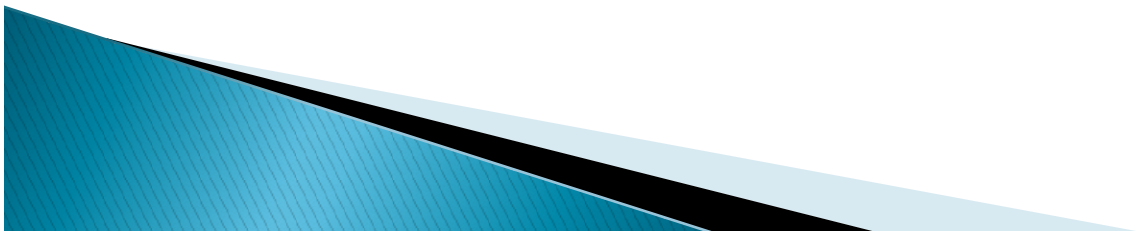
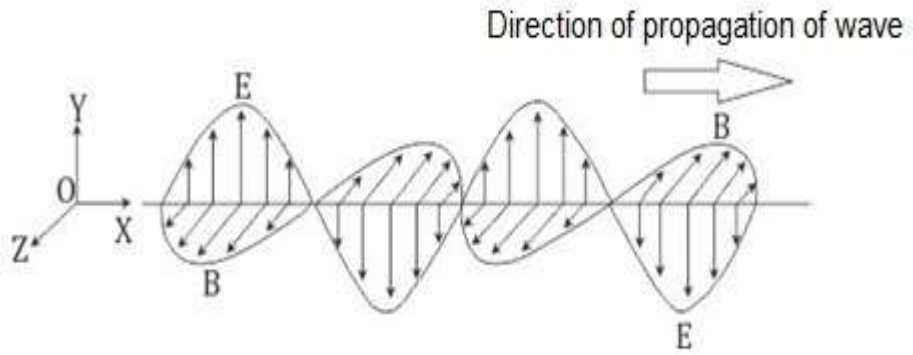
- Elementary ideas of polarisation
- Brewster's law
- Double refraction
- Positive and Negative crystal
- Quarter and Half wave plate
- Production of plane ,circularly and elliptically polarised light
- Optical activity



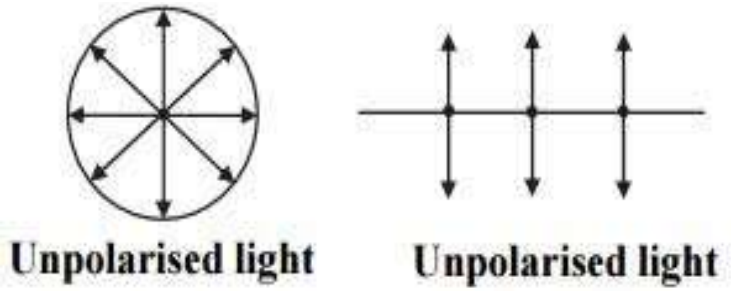
- The phenomena of interference and diffraction clearly established the wave nature of light.

- But these phenomena failed to explain the wave nature of light (transverse /longitudinal)or the mode of vibration(linear,circular,elliptical).

- The phenomenon of polarisation establishes the transverse nature of light waves.

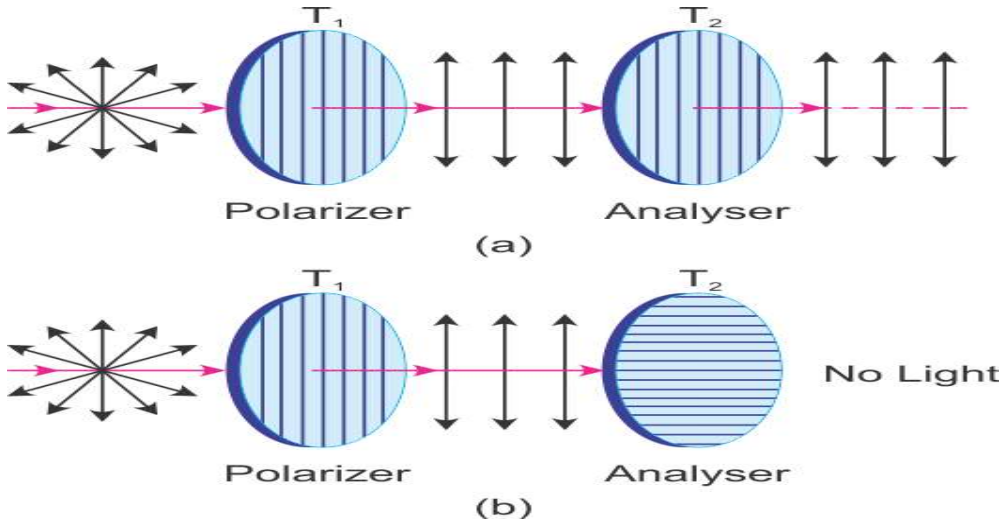


- An ordinary light consists of a large no.of waves emitted by the atoms or the molecules of the light source.
- Each atom produces a wave with its own orientation of electric field vector E.
- This resultant light wave with oscillations in all directions is called unpolarised light.



- We can confine the vibrations of electric field vector in one direction perpendicular to the direction of propogation by using polaroids,Nicol prism or Tourmaline crystal.

- The light in which the electric field vector of all waves oscillates only in one direction is called plane polarised or linearly polarised.This phenomenon is known as polarisation.



THANK YOU.....