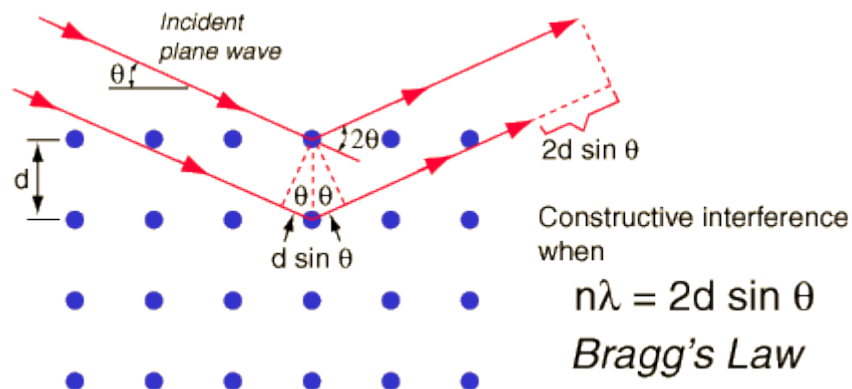


Answer on Question #58132-Physics-Optics

What is Bragg's Law?

Answer



When x-rays are scattered from a crystal lattice, peaks of scattered intensity are observed which correspond to the following conditions:

1. The angle of incidence = angle of scattering.
2. The pathlength difference is equal to an integer number of wavelengths.

The condition for maximum intensity contained in Bragg's law above allow us to calculate details about the crystal structure, or if the crystal structure is known, to determine the wavelength of the x-rays incident upon the crystal.

Bragg's Law:

$$n\lambda = 2d \sin \theta$$