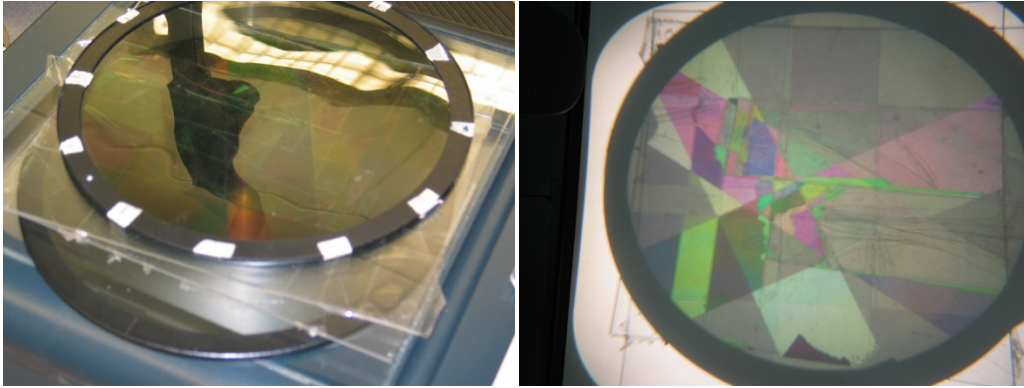


Polarization and Birefringence



Purpose: To demonstrate how plain light can be turned into polarized light and the effects that a birefringent material has on polarized light.

Location: Room 146; shelf P3

Plain light passes through the first polarizer and becomes polarized along that fast axis. It then passes through the birefringent tape which changes the path length that the light travels. The path length is changed more depending on the thickness of the tape that it passes through. The more tape, the greater the change in path length. It is not apparent without the second polarizer, but this results in a color change of the light along the different axes. When the second polarizer is added it becomes clear that a change has happened. Rotating the polarizer allows different colors on different axes to be seen.

To see a student demonstration of this go to:
www.youtube.com/watch?v=KRrmK79u2fU