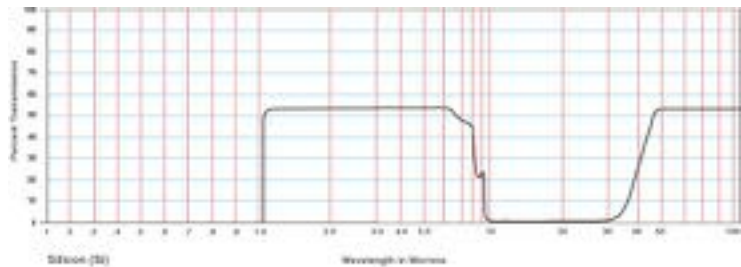
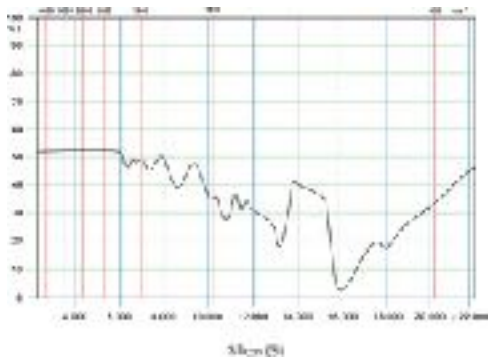


Optical Materials

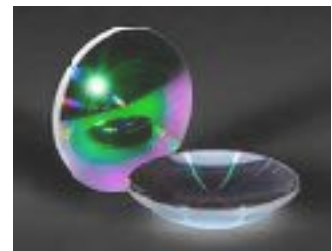
Silicon (Si) Optical Crystals

Silicon (Si) is commonly used as a window material for far infrared transmission. Although the material has an absorbance edge at about 8 microns, it transmits in the 50 to 100+ micron range, making it a useful alternative to CsI for aqueous samples analyzed by IR spectroscopy. It is also useful for some ATR applications.



Optical Properties- Silicon (Si) Optical Crystals

Transmission Range: 1.2 μ m to 10 μ m & 48 to >100 μ m
Refractive Index: 3.42 at 10 μ m
Reflection Loss: 46% at 10 μ m (2 surfaces)



Physical Properties- Silicon (Si) Optical Crystals

Melting Point: 1420° C
Hardness (Knoop): 1150 kg/mm²
Young's Modulus: 131 GPa
Modulus of Rupture: 9000
Structure: Cubic



Chemical Properties- Silicon (Si) Optical Crystals

Solubility: insoluble in water. Insoluble in most acids and bases. Soluble in HF and HN



future in focus...