Abstract

Single crystals of Zinc Tris (thiourea) Sulphate (ZTS) exhibiting high transparency were grown by slow evaporation technique. Single crystal X-ray diffraction analysis reveals that the crystal belongs to orthorhombic system. The optical absorption study reveals the transparency of the crystal and is noticed in the entire visible region and the cut-off wavelength has been found to be 270 nm. The optical band gap was found to be at 3.55 eV. The dependence of extinction co-efficient (K) and the refractive index (n) on the wavelength have been observed. The electrical properties of the grown crystal have also been studied using the Cole–Cole plot.
Growth, Optical and Electrical Properties of zinc tris (thiourea) sulphate (ZTS) Single Crystals


Index Terms

Computer Science
Applied Sciences

Keywords
Single crystal slow evaporation technique Single crystal X-ray diffraction