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Abstract

Gallium doped Potassium Dihydrogen Phosphate (KDP) single crystals are grown by Shankarnarayan –Ramasamy growth technique. Slow cooling method was adapted for the growth with variation in doping concentration, there is modification in growth habit, non linear optical properties of doped crystals. Powder XRD determines the parameters of unit cell of doped KDP crystals. EDAX study shows presence of gallium ion in appropriate sites in unit cell. The Fourier Transform Infra Red (FTIR) spectrum reveals strong absorption bands due to gallium 3+ ion. UV spectra show improvement in optical transmittance. TGA –DTA determines the composition of materials and to predict their thermal stability at temperatures.

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Index Terms

Computer Science

Fabrication

Keywords

Kdp Solution Growth Xrd Ft-ir Edax uv-vis Tga -dta