

Abstract Submitted
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Optical properties of L-arginine doped potassium dihydrogen phosphate crystals JAYESH GOVANI, FELICIA MANCIU, Department of Physics, University of Texas at El Paso, El Paso, TX -79968, U.S.A, MIHIR JOSHI, KETAN PARIKH, DIPAK DAVE, Department of Physics, Saurashtra University, Rajkot, Gujarat- 360 005, India — Potassium dihydrogen phosphate (KDP) exhibits superior nonlinear-optical properties and it has been exploited for variety of applications. Single crystals of organic nonlinear optical material of pure and L-arginine doped potassium dihydrogen phosphate (KDP) were grown by slow evaporation technique from its aqueous solution. The crystal structures of the grown crystals were determined using powder XRD. The powder X-ray diffraction patterns indicated a single phase with the unit cell parameters being unaltered by doping. Infrared and Raman spectroscopies were employed to study the active doping of potassium dihydrogen phosphate crystals with L-arginine amino acid. IR absorption spectra confirmed that the successful doping of L-arginine was achieved by exhibiting the presence of vibrational lines at 1401 cm^{-1} , 1637 cm^{-1} , 1716 cm^{-1} and 3127 cm^{-1} . This affirmation is supported with more evidences from FT-Raman measurements

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