

Synthesis, Spectral, Thermal, Optical and Dielectric Studies of Some Organic Arylidene Derivatives

Authors : S. Sathiyamoorthi, P. Srinivasan, K. Suganya Devi

Abstract : Arylidene derivatives are the subclass of chalcone derivatives. Chalcone derivatives are studied widely for the past decade because of its nonlinearity. To seek new organic group of crystals which suit for fabrication of optical devices, three-member organic arylidene crystals were synthesized by using Claisen-Schmidt condensation reaction. Good quality crystals were grown by slow evaporation method. Functional groups were identified by FT-IR and FT-Raman spectrum. Optical transparency and optical band gap were determined by UV-Vis-IR studies. Thermal stability and melting point were calculated using TGA and DSC. Variation of dielectric loss and dielectric constant with frequency were calculated by dielectric measurement.

Keywords : DSC and TGA studies, nonlinear optic studies, Fourier Transform Infrared Spectroscopy, UV-vis-NIR spectra

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