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Metastable zone width, Growth, Structural, Thermal, Spectral and SHG studies of Triglycine Sulpho Salicylate (TGSS) single crystals

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Abstract : Triglycinesulphate crystal is a well known ferroelectric crystal. In this work TGS salt mixed with salicylic acid to prepare TGSS salt .Solubility, metastable zone width and induction period for TGSS salt were measured at different supersaturation ratios. The critical nucleation parameters were evaluated based on the classical theory of homogeneous nucleation. Using the optimized nucleation parameters, single crystals of TGSS salt were grown by slow evaporation technique. Structural, spectral, thermal and SHG studies were carried out for the grown crystals and the results are discussed.

Key words : TGS; Nucleation; bulk crystal; growth from solutions; XRD;FTIR; supersaturation; TG/DTA; SHG.

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