

Summary: Diploma thesis covers characterization of molecular crystals by X-ray structural analysis. N-carbamimidazolisonikotinamid and 1-phenylguanidin were chosen, because their potential use in second harmony generation. Their salts with inorganic acids were prepared and determined their structures. Phase transition of 4,6-diaminopyrimidinium nitrate was studied by x-ray diffraction and differential scanning calorimetry. This phase transition is accompanied by thermosalient effect, causing that the crystals jump.

Keywords: thermosalient, jumping crystal, X-ray diffraction, non-linear optics, N-carbamimidazolynikotinamid, 1-phenylguanidin, 4,6diaminopyrmidin.