As a continuation of our team studies of hybrid crystals with acid-base ionic and a weak noncovalent interaction including hydrogen-bonding, where these interactions play an important roles in areas as diverse as protein and crystal engineering [1]. The aim of this work contribute to study (synthesis and X-ray single crystal structures) of new organic-inorganic hybrid compounds which allows to the development of materials with novel properties [2]. Recently, we have obtained single crystals of new organic/inorganic hybrid compounds including a new structure which is interesting to study its NLO properties. More further, the crystallographic studies usually map and analyze the deformation density, which is the difference between the actual electron density of the molecule and the density calculated for the promolecule, a molecular superposition of spherical atoms [3]. From X-ray data diffraction we studied the electron density, while the deformation density reveals the redistribution of valence electron density caused by chemical bonding and intermolecular interactions.


Keywords: organic-inorganic hybrid compound, single crystal, electron density