Synthesis and Crystal structure of Novel Organic Hybrid Functional Material

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It has been a growing interest in crystal growth process, particularly, in view of the increasing demand of materials for technological applications. Molecular organic compounds with one or more aromatic systems in conjugated positions, leading to the formation of charge transfer systems have been intensely studied. In the view of this in the present study we describe the crystal structure of organic salt formed between 4-amino-3,5-dimethyl-pyrazole and citric acid possessing good NLO efficiency. The 3,5-dimethyl-1H-pyrazol-4-amine cation and dihydrogen citrate anion are interconnected through water molecule via charge assisted N^{+}–H···O and O–H···O hydrogen bonds along with strong N–H···O and O–H···O and C–H···O hydrogen bonds in the crystal structure which leads finally a close packed structure shown in Fig.2.

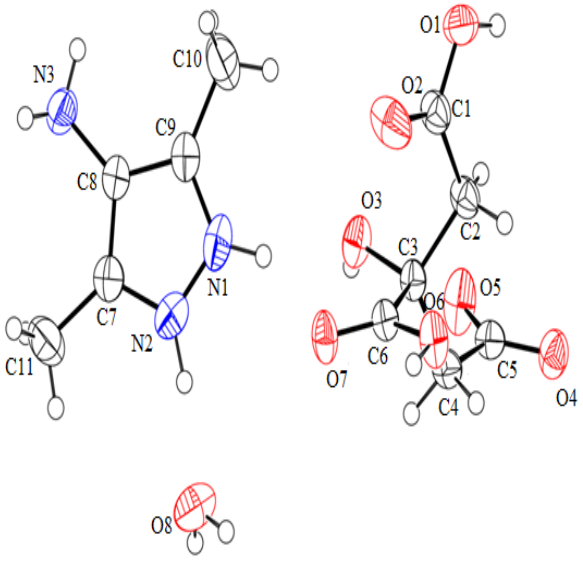

Figure 1. ORTEP diagram showing 50% probability ellipsoid of organic salt

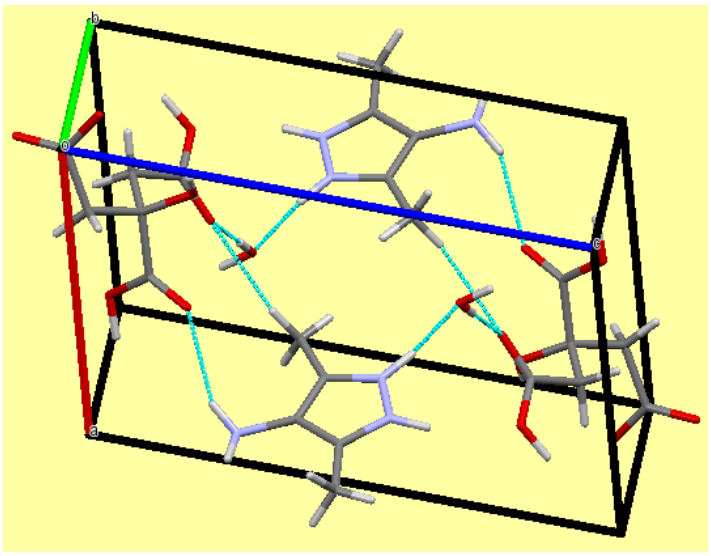

Figure 2. Asymmetric unit of title compound