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**Energy of Intermolecular Interactions from Charge Density Data in Molecular Crystals.** Mikhail Yu. Antipin<sup>1,2</sup>, Konstantin A. Lyssenko<sup>2</sup>. <sup>1</sup>New Mexico Highlands Univ., Las Vegas, NM 87701, USA<sup>1,2</sup>; Inst. of Organoelement Compounds, Russian Academy of Sciences, Moscow, Russia.

Charge density distribution in several organic crystals was described from multipole refinement of precise X-ray diffraction experiments. Several characteristics of intermolecular interactions, such as intermolecular hydrogen bonds, specific contacts with halogen atoms and stacking interactions have been considered in terms of their energy. It was found that energies of intermolecular interactions are in a good agreement with data obtained by quantum calculations. Individual impacts of intermolecular interactions helped to estimate from diffractive data energy of crystal structure that was found to be in good correspondence with experimental data on sublimation energy.