

Figure 1. Layered crystal structure of C_{60} -basic zinc benzoate cocrystal

Keywords: MOF, fullerene, cocrystal

MS37-P3 Alternatives to “co-crystal – salt” transitions in glycine co-crystals at low temperature and high pressure: two new examples as a follow-up to a glycine – glutaric acid study

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The effects of temperature and pressure on the co-crystals of glycine with DL-tartaric and phthalic acids (**GT** and **GP**, respectively) have been studied by X-ray diffraction and Raman spectroscopy in a comparison with those in **GG**. Like for **GG**, for both **GT** and **GP** neither cooling nor increasing pressure resulted in a co-crystal to salt transition. On cooling, no phase transitions were observed in **GT** or **GP**, contrasting the situation with **GG**. On hydrostatic compression both **GT** and **GP** underwent reversible phase transformations, accompanied by fracture. In the high-pressure phases the main structural framework was preserved, the number of crystallographically independent molecules in the unit cell increased; the type of intermolecular H-bonds linking DL-tartaric molecules into dimers in **GT** changed in every second dimer from hydroxy-group to hydroxy-group in the low-pressure phase for the hydroxy-group – carboxy-group in the high-pressure phase.

The work was supported by the Russian Foundation for Basic Research (RFBR) (Grants No. 14-03-31866 mol_a, 16-33-60089 mol_a_dk), and RAS (Project 44.3.4).

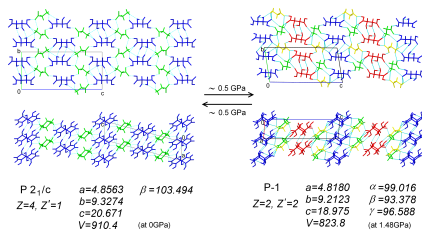


Figure 1. Structural changes in **GT** due to the phase transition at high pressure.

Keywords: glycine, co-crystal, hydrogen bond, high-pressure