Electronic Supplementary Information

Using fast scanning calorimetry for detecting guest-induced polymorphism by irreversible phase transitions in nanogram scale

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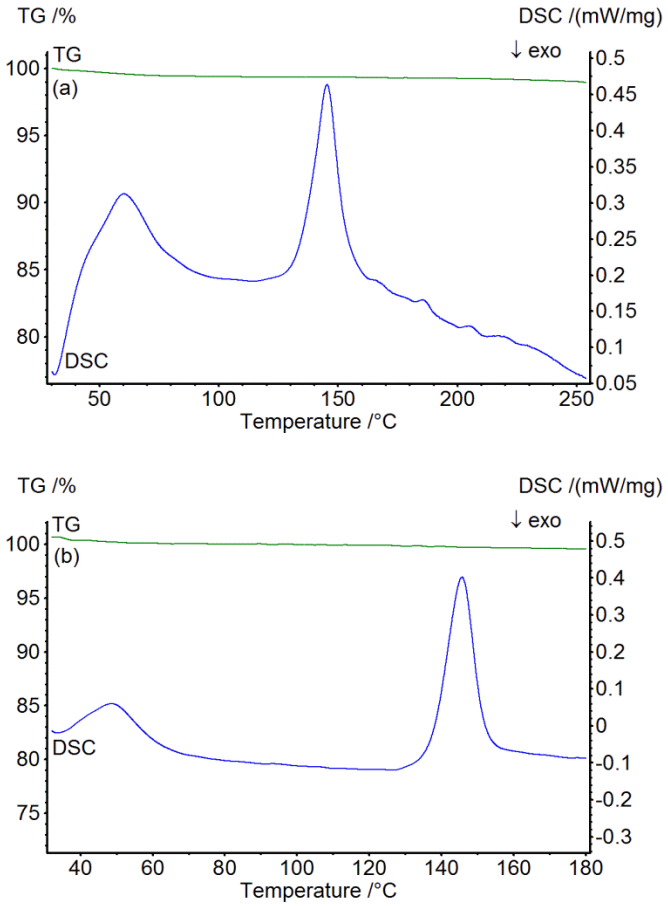

Figure S1. Curves of simultaneous TG/DSC for (a) initial form **I** and (b) form **I** after its powder in initial state was saturated with vapor of $(CH_3)_2CO$ at P/P_0= 1 and 25°C.

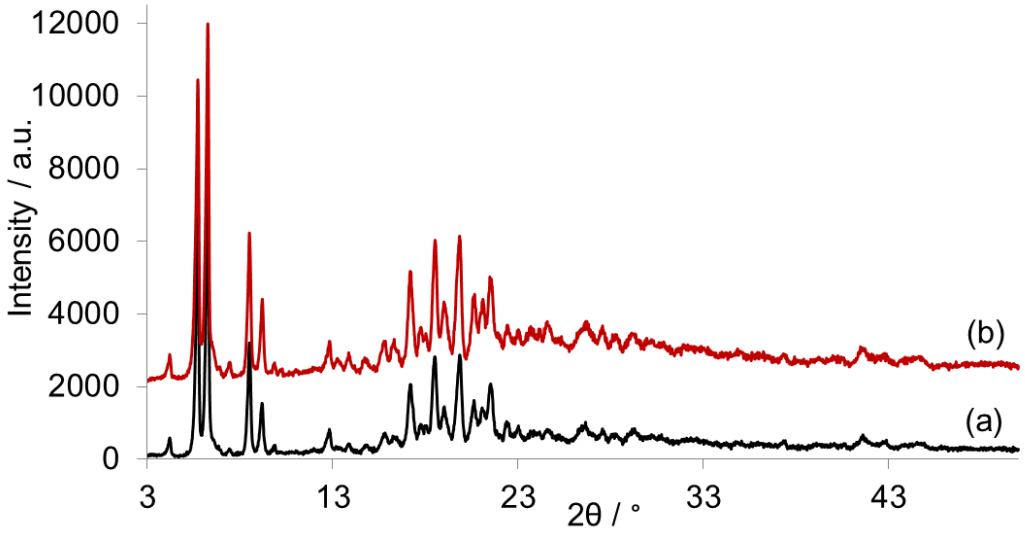

Figure S2. PXRD data for saturated products of form **I** with (a) acetone, (b) acetonitrile.

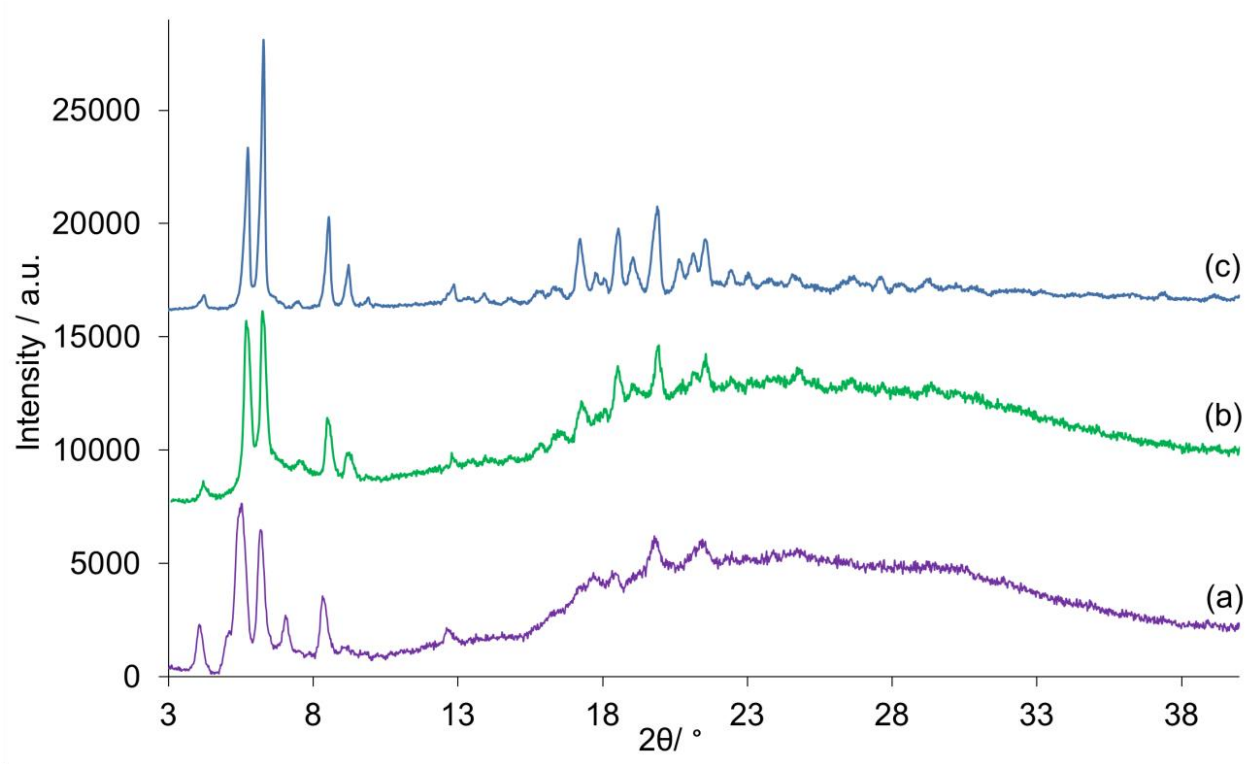

Figure S3. PXRD data of (a) form **III**, (b) form **I** prepared by heating form **III** to 130°C and cooling to RT, and (c) initial form **I**.

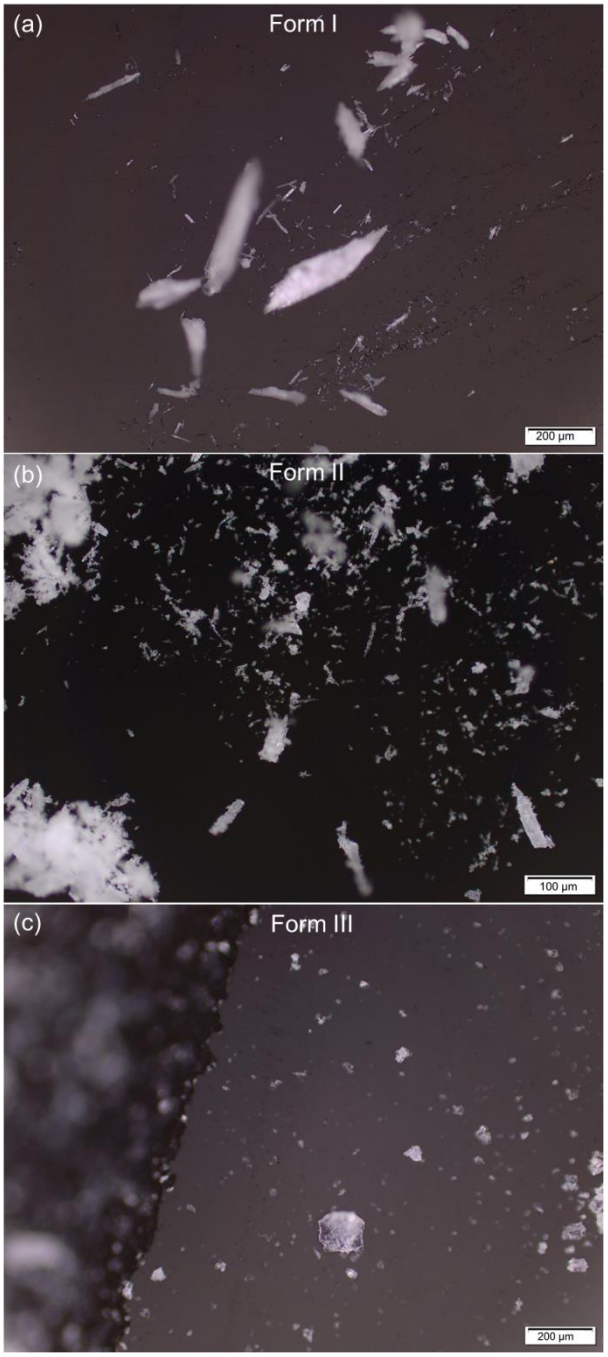

Figure S4. Optical microscope pictures at RT in polarized light of (a) initial form **I**, and samples of (b) form **II**, (c) form **III** prepared by saturation of form **I** with propionitrile and ethanol, respectively, and subsequent drying in vacuum for 3 hours at RT.

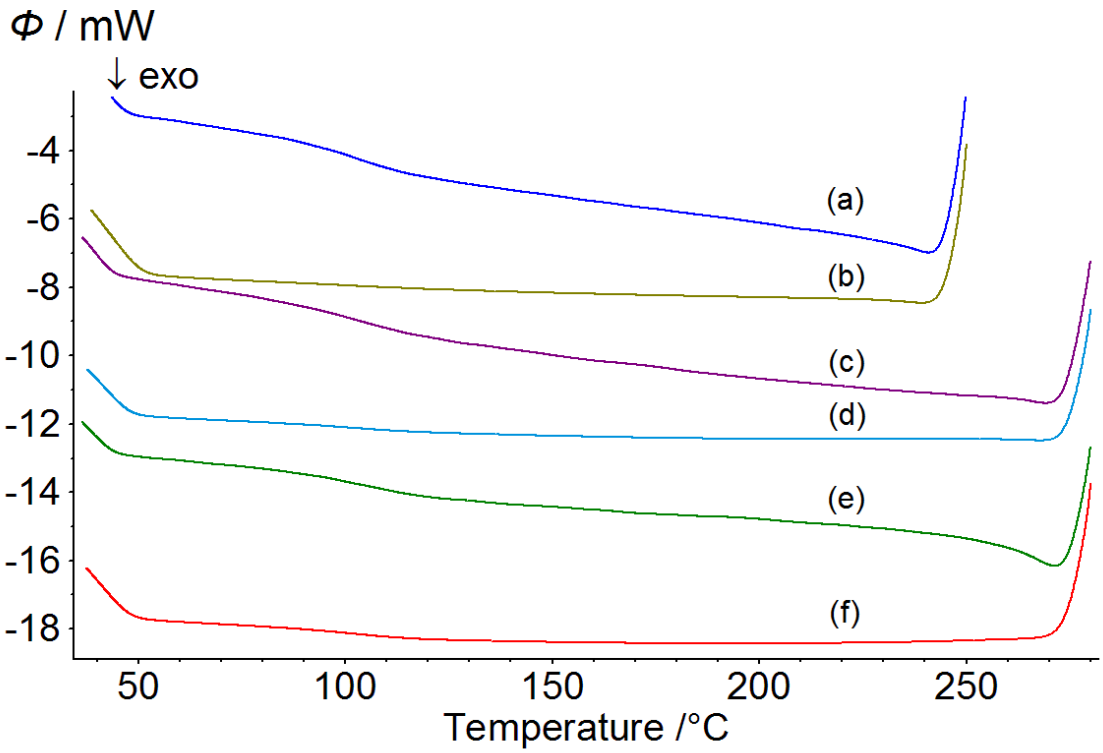

Figure S5. FSC cooling curves of the melted microcrystalline samples of (a, b) **I**, (c, d) **II**, and (e, f) **III**. FSC curves (b, d, f) were determined with a film of silicone oil between crystalline sample and sensor surface. Cooling rate is 1000 K s^{-1} rate. The samples were melted in the first heating run with the same rate. Melts of forms **I** (a curve), **II** (c curve), **III** (e curve) exhibit a glass transition at (T_g) 102, 103, 99°C, respectively.

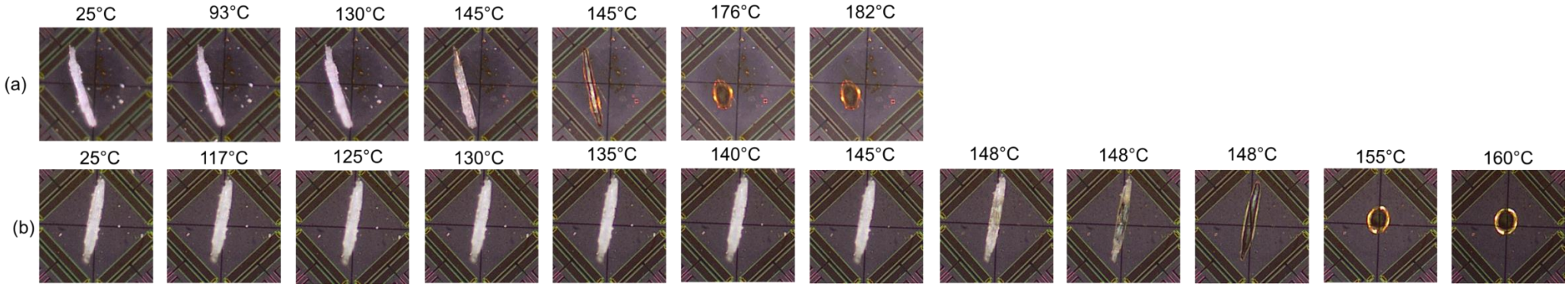

Figure S6. Visible changes of microcrystalline samples in polarized light of (a) initial form **I** and (b) form **II** at heating with a rate of 1000 K s^{-1} and isothermal steps of 30 s to take pictures at given temperatures. The images shown at the same temperatures were taken at the beginning and the end of the isothermal periods. A nitrogen atmosphere is used in the experiment.

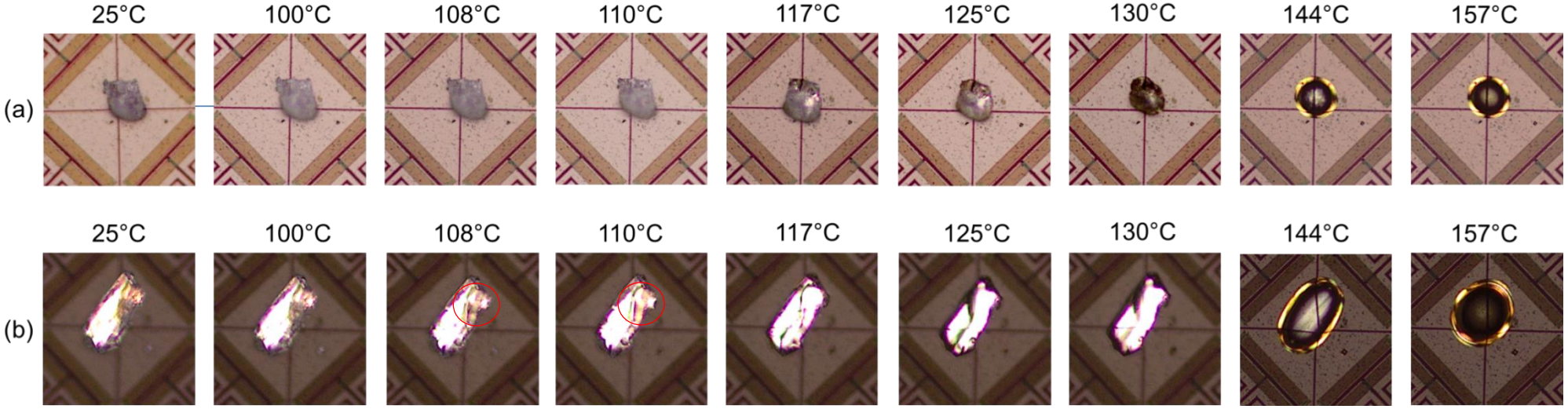

Figure S7. Visible changes of microcrystalline **III** samples in polarized light at heating with a rate of 1000 K s^{-1} and isothermal steps of (a) 30 s and (b) 60 s to take pictures at shown temperatures. A nitrogen atmosphere is used in the experiment.
Red circles mark the place where a change in the morphology and shape of the crystalline aggregate is observed at heating from 108 to 110 °C.

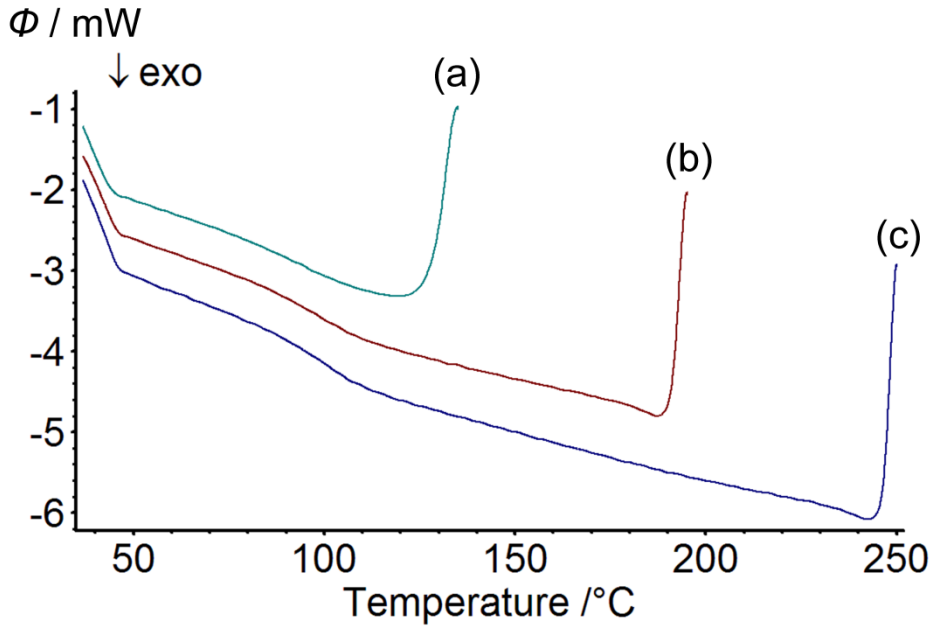

Figure S8. Consecutive FSC cooling curves for initial form **III** after (a) the first heating run to 135°C; (b) the second heating run to 195°C; (c) the third heating run to 250°C. Cooling rate is 1000 K s^{-1}.

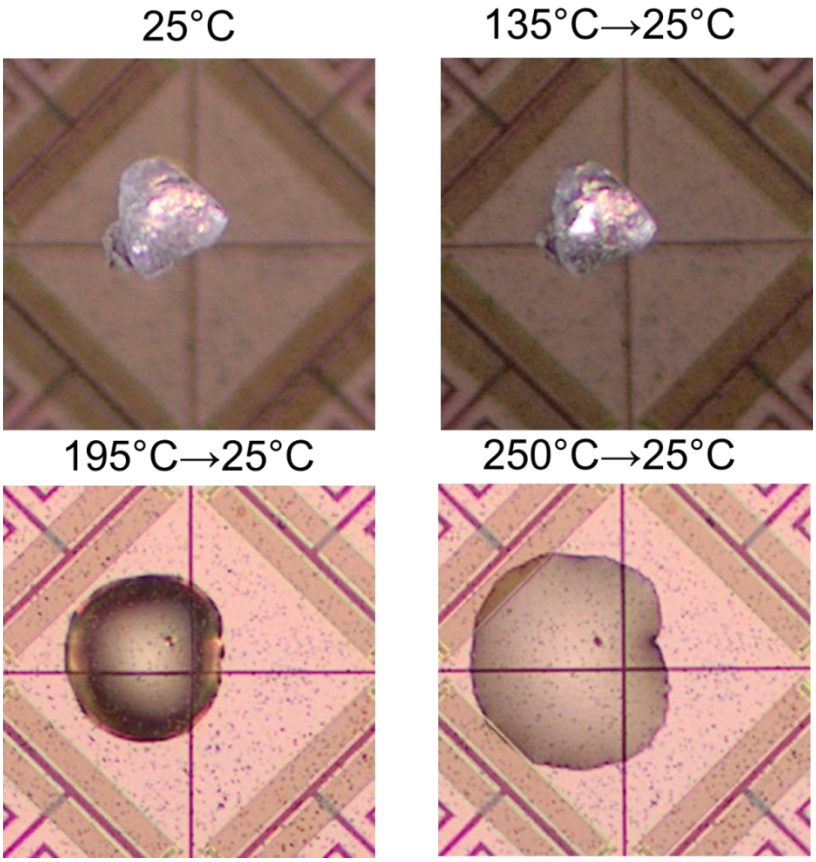

Figure S9. Optical microscope pictures of the initial microcrystalline sample of form **III** in polarized light at RT= 25°C, of the same sample after the first, second and third heating run to the temperatures shown in the same FSC experiment as in the Figure S8.