

## Conformational and enantiotropic polymorphism of a 1:1 cocrystal involving ethenzamide and ethylmalonic acid

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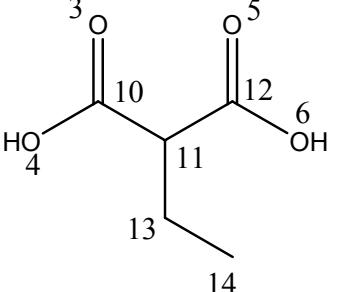
*Email: reginald\_tan@ices.a-star.edu.sg*

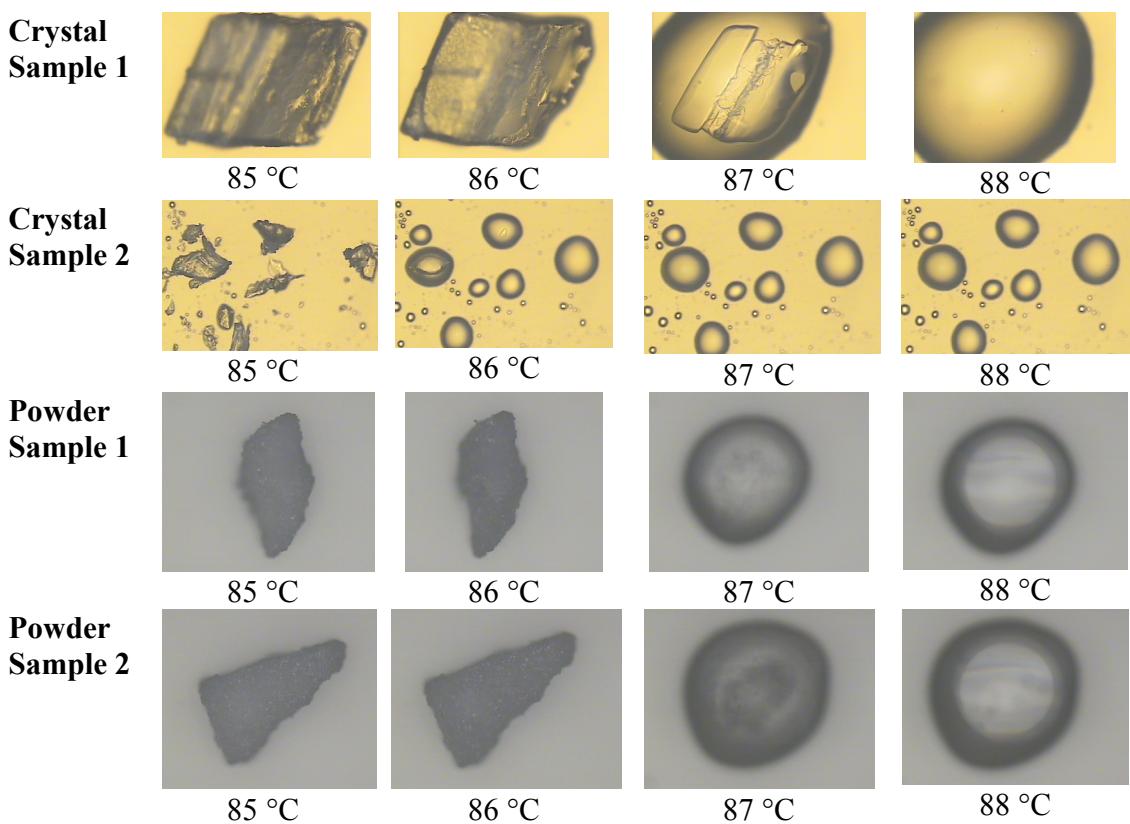
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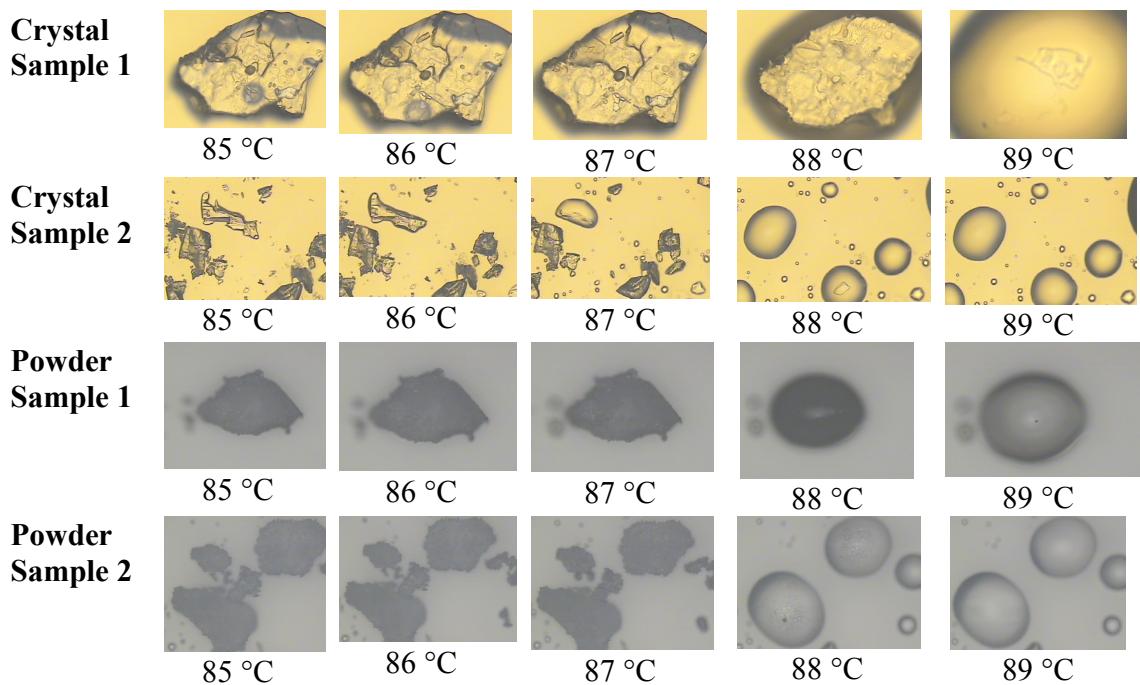
- Table S1.** Comparison of torsion angles in different conformers of EMA molecule.  
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**Table S1. Comparison of torsion angles in EMA molecules.**

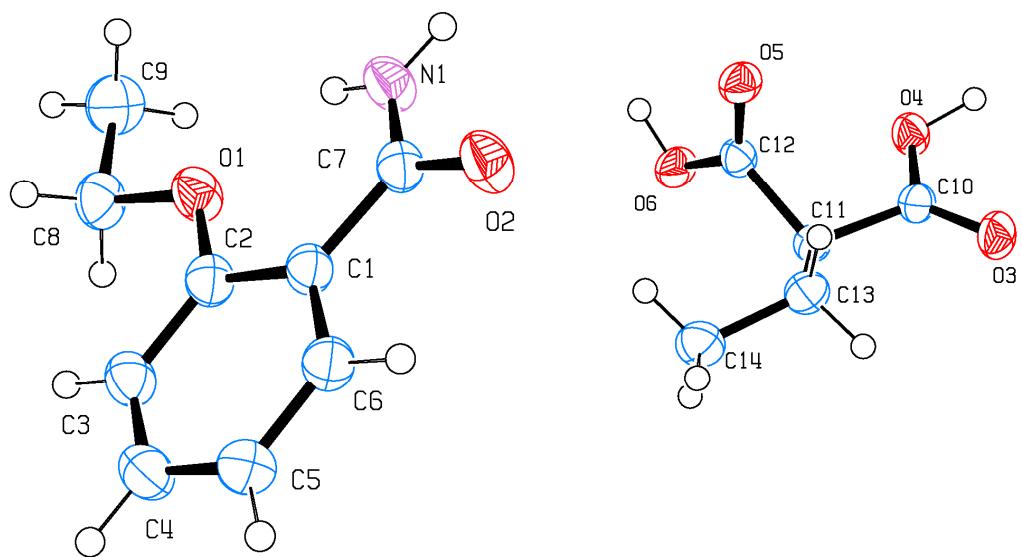
|  | $\tau_1 = \text{C13-C11-C12-O5}$<br>$\tau_2 = \text{C10-C11-C12-O5}$<br>$\tau_3 = \text{C13-C11-C12-O6}$<br>$\tau_4 = \text{C10-C11-C12-O6}$ |             |
|---|--|-------------|
| Torsion angle ( $\tau$ )  | Form I   | Form II     |
| $\tau_1$  | 57.15(17)  | 122.24(19)  |
| $\tau_2$  | -67.01(16)   | -112.15(19) |
| $\tau_3$  | -123.15(13)  | -57.3(2)    |
| $\tau_4$  | 112.70(13)   | 68.32(19)   |



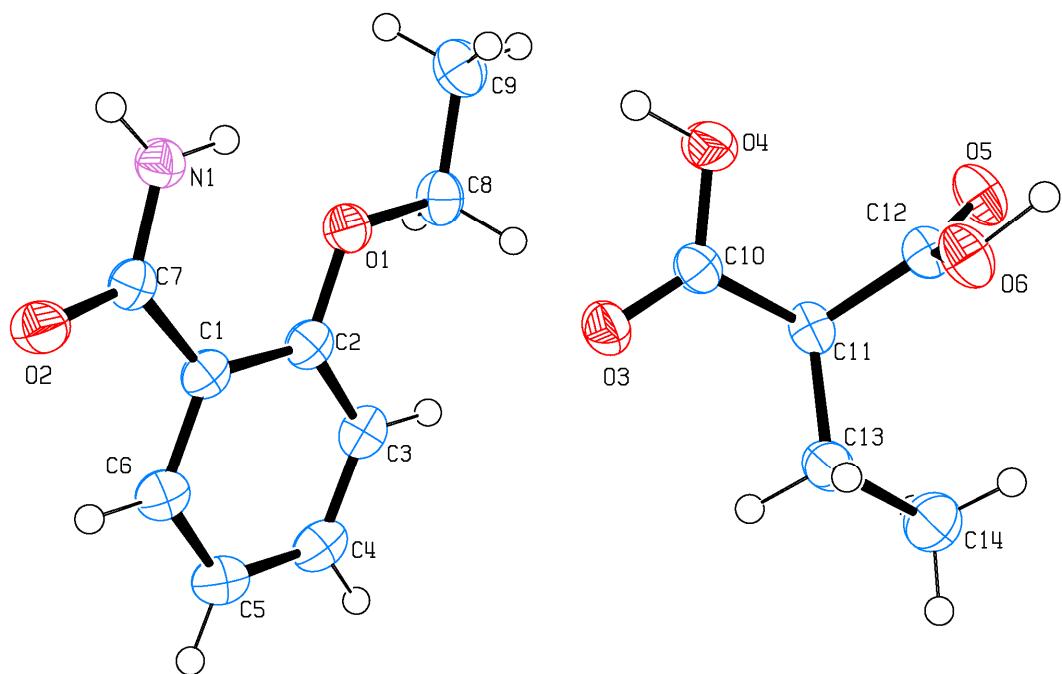
**Figure S1.** Hot-stage microscopy experiments on EA•EMA cocrystal Form I.



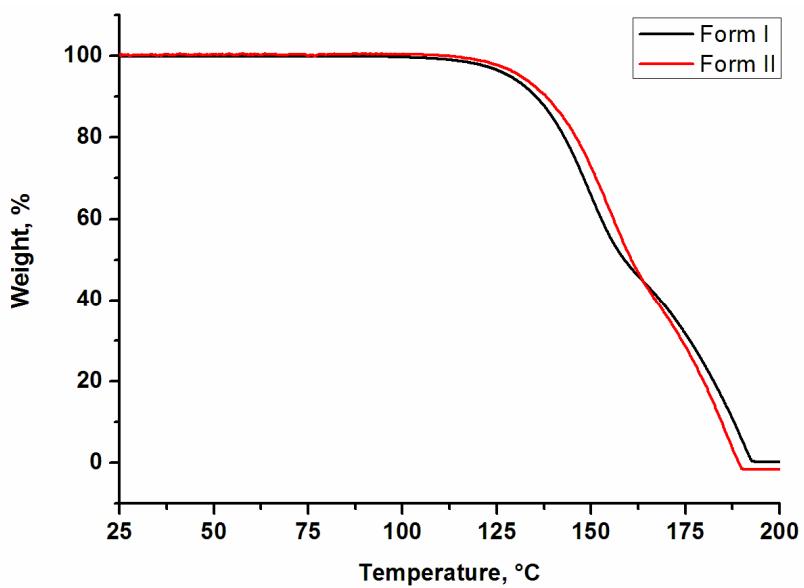
**Figure S2.** Hot-stage microscopy experiments on EA•EMA cocrystal Form II.



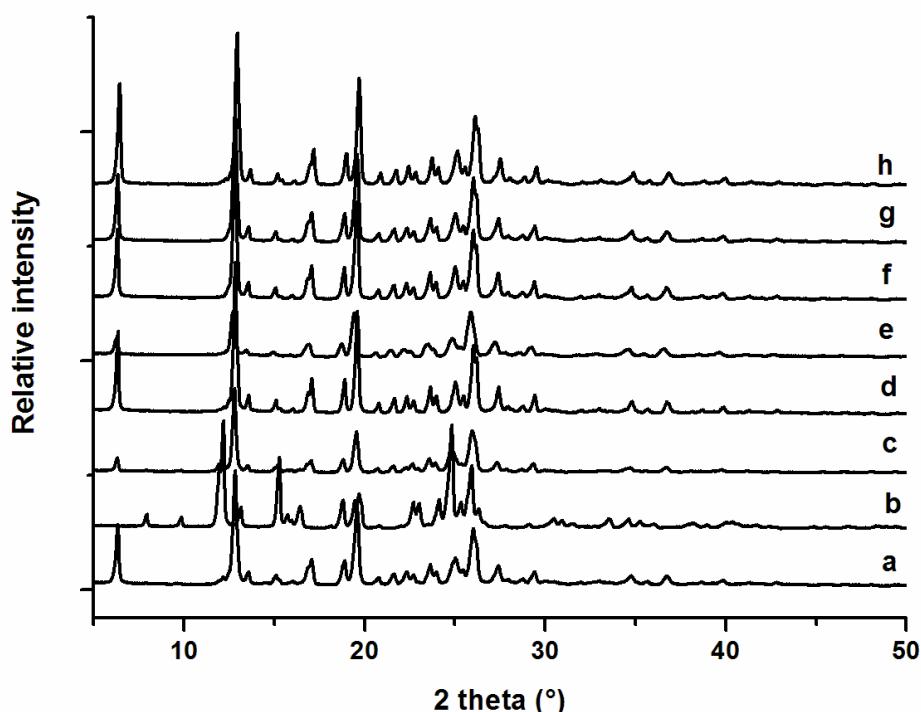
**Figure S3.** ORTEP diagram for Form I of the EA•EMA cocrystal showing the atom numbering. Thermal ellipsoids were drawn at 50 % probability.



**Figure S4** ORTEP diagram for Form II of the EA•EMA cocrystal showing the atom numbering. Thermal ellipsoids were drawn at 50 % probability.



**Figure S5** TGA traces of Forms I and II of EA•EMA cocrystal.



**Figure S6.** Comparison of PXRD patterns of (a) Form II, (b) Form I, sample obtained from (c) slurry experiment on a 1:1 physical mixture of Form I and II, (d) slurry experiment on Form I, (e) NG on Form I, 30 min, (f) NG on Form I, 60 min, (g) NG on Form II, 30 min, (h) NG on Form II, 60 min. Notice that Form I converts to Form II in slurry experiment and extended grinding.