Structural tunning of hydrogen-bonded motifs in response of an external stimuli to form 2D-sheet and 3D-HOFs from 1D-chain in the solid-state

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Abstract: Molecules in their solid-state are tightly packed through various mode of interaction and their crystal forms are highly fragile in response to an external stimuli/disturbance, especially if they are connected through weak hydrogen-bonds. In this presentation, we are going to highlight the transformation of anion templated hydrogen-bonded 1D motifs to 2D-sheet[1] and 3D-HOFs[2], respectively in response to an external stimulus such as light and heat. During this transformation, molecule covers a remarkable distance in their corresponding crystal forms, stabilized by an anion•••π interactions. In this presentation, we will discuss complete process with mechanistic studies.

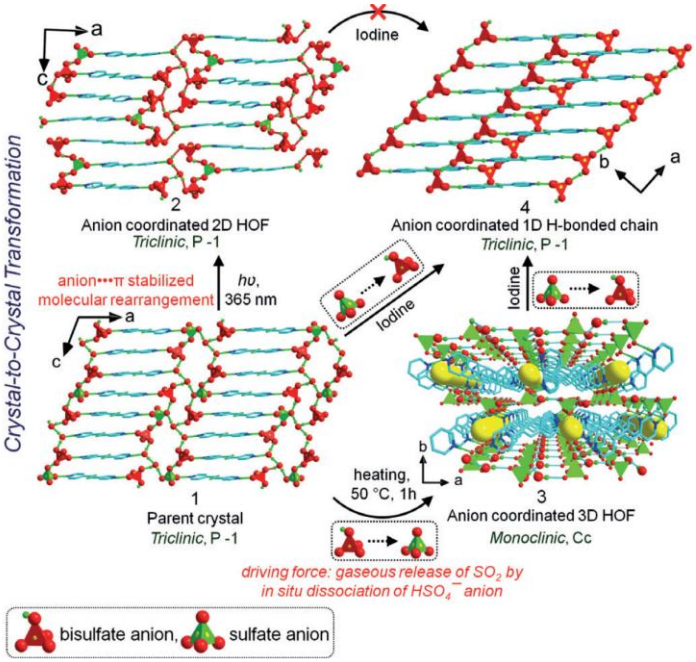

Figure 1. Schematic representation of crystal-to-crystal transformation of anion templated hydrogen-bonded motifs in response to an external stimulus.

References:

1. Ashutosh S. Singh, Ranjay K. Tiwari, Mandy M. Lee, Jogendra N. Behera, Shih-Sheng Sun, V. Chandrasekhar *Chem. -Eur. J.* **2017**, *23*, 762 – 766.
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