

Building upon Supramolecular Synthons: *Some Aspects of Crystal Engineering*

Abstract

Crystal engineering, a subject originally conceived to bring rationale in understanding and design of new crystal structures, is a mature discipline today that expands its horizons beyond the scope of molecular crystals and demands more than X-ray crystallography. The concept of supramolecular synthons, which was introduced almost two decades ago mainly as a unit of retrosynthesis has played a key role in this growth of the subject. This talk will touch upon these evolving roles of supramolecular synthons and crystal engineering.

How does slight change in the nature of halogen atoms affect the structures and the property thereafter? How can one learn from the concepts of crystal engineering to fabricate nano-patterns on solid substrates and enhance structural diversity in two-dimensional crystal engineering? How does changing nature of solvents affect solution assemblies? How do the solution assemblies relate to the crystallization outcome? In a nutshell, this talk will try to address the evolving importance of supramolecular synthons from solid state into solution, as a retro-analytical tool for crystallization.