Crystallography informed crystal growth: A Personnel Perspective.

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The focus of the presentation will be on crystal growth informed by a strong crystallographic insight. Consequently, the presentation will focus on selected examples drawn from polymorphism and cocrystallisation experience over the years.

The point of the presentation is to examine the vitality of an approaching crystal growth with crystallography insight. This is underpinned by the relationship between crystal growth, packing networks and crystal growth.

Consequently the talk will consider assembly {which way} and the relationship to morphology where the strongest interaction define the fastest growth direction and materialise as corner in a morphology. Multiple crystal forms define the crystal landscape and crystallisation through an appreciation of nucleation and growth alongside the crystallography allows a rich appreciation of what is possible. Within the crystallisation and crystallographic landscape, being mindful of the thermodynamics and kinetics is an advantageous {single versus double eutectics}, and the solubility as the first phase diagram is the entry point into a successful outcome or an appreciation of the complexity.



The overarching concept is the notion of the growth unit will be considered, and the relationship to synthon will be examined, and the way in which the crystal packing landscape that evolves to inform an insight into the crystallisation process.