

## Rationalization of Crystallization Processes from the Study of the Organization of Molecules in Solution

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Crystallization from solution is one of the most important methods to purify and obtain crystalline materials. Even so, our current knowledge on the mechanism of molecular assembly in solution to form a crystal is incipient. Understanding how this process occurs is, therefore, not only a fundamental scientific question, but also a matter of technological interest, as it may allow the control of the molecular packing, morphology, and size distribution of precipitated materials.

In this communication, different aspects of the crystallization process will be discussed from an experimental and theoretical perspective. Three main topics will be addressed: (i) interplay between solute and solvent molecules; (ii) relation between solute organization and crystallization of different crystal phases; (iii) effect of impurities.

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