“No product design without process design (control)”

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Product design is increasing in its importance.
Product design means to improve the properties to improve of a product in order to improve its performance and to avoid negative features.

In case of crystalline products, positive, improved properties can be found e.g. in the “right”:

- size distribution (close to monosize, certain percentage larger or smaller than a certain value,…)
- purity
- modification (polymorph, solvat)
- shape (crystal form: no needles or plates)

Negative features are, of course, the opposite of the positive features resulting in problems with purity, dust content, solubility, stability, shelf life, filterability, bioavailability, etc.

Many of the mentioned product properties can already be prefixed or even generated in a well controlled production (crystallization) process.
Unfortunately, the opposite can be prefixed, too, that means via the “wrong” production path way or a “wrong” process design, it is impossible to achieve products with certain properties, even though it is in principle (due to the use of the “right” row products) possible.
This interrelation is quite often underestimated.

The lecture will highlight problem fields of interrelation based on case studies of this kind.