MANCHESTER 1824 **Crystal Shape Alteration using Combined** Wet-milling and Temperature Cycling Approaches

Petros Neoptolemou

The Universit ancheste

Academic Supervisor: Dr Thomas Vetter



- A process model accounting for the evolution of particle size and shape distributions has been developed and tested.
- It was shown that crystallization/milling/dissolution cycles can be highly effective in getting more equant-shaped particles of a desired size.
- Using modelling and experimental work, we will investigate whether heuristics for the design of these cyclic processes can be defined
- To do the experimental part, a shape measurement device, capable of measuring needles and platelets accurately will be developed and used in the experimental campaigns

Solute - Solvent System

- Caffeine crystals were grown in:
- Pure ethanol solution.
- Grown in a seeded
- batch crystalliser. Applied slow cooling
- Low stirring rate.





Figure 9: Caffeine β-polymorph crystals grown in ethanol solution.

6. References

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petros.neoptolemou@manchester.ac.uk Crystallization Chemistry And Particle Process Engineering Research Group School of Chemical Engineering and Analytical Science The University of Manchester, UK