

SPS-XRPD Workshop



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Using Containerless Methods to Synthesize and Characterize Amorphous Pharmaceuticals

Monday, 7 May 2018 13:50 (25 minutes)

This talk will focus on the application of non-contact (containerless) methods, such as acoustic levitation, to access metastable and amorphous forms of organic compounds. The complete absence of extrinsic nucleation sites in containerless conditions enables deep supercooling and/or extreme supersaturation to be achieved for a wide variety of compositions. The ability to extend the glass forming range in metal oxides by using containerless methods is well established; a similar capability to make amorphous and non-equilibrium forms of organic compounds is a relatively recent innovation. The presentation will be illustrated with details of instruments, examples of using containerless methods to synthesize new materials and to make in-situ measurements on materials during processing. The potential for using the tools to investigate and characterize large scale processing methods such as spray drying will be outlined. Ongoing experiments and plans for expansion of the current capabilities will be described and discussed in the context of developing pipeline drugs that require delivery in special dosage forms.

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