

Thermal Analysis as an Integrated Tool in Organic Materials Discovery

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Thermal analytical methods can play a primary role in systematic development of novel organic solid state materials. Using reliable design rules to engineer crystalline organic solids is a science that is still somewhat in its infancy and screening platforms continue to provide key information to identify and predict 'sweet spots' in the phase chemistry of these materials that correspond with novel solid forms. Such 'materials discovery' is of critical interest in developing products for a range of industry sectors – pharmaceutical, agrochemical, catalysts, energetic materials, optoelectronics *et al.* – as modification of solid state form offers a route to fundamentally influence physical properties and hence enhance performance of products and

Extension of such approaches to multi-component solid forms (including solvates, co-crystals and salts) has yielded key information and this presentation will explore case studies where hyphenated thermo-spectroscopic methods have played a key role in interrogating the properties of novel crystalline systems.

