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Application of Crystallographic Information to Pharmaceutical Problems. Matthew L. Peterson, TransForm Pharmaceuticals, Inc. 29 Hartwell Ave., Lexington, MA 02421, mpeterson@transformpharma.com

The topics presented will showcase the application of X-ray crystallography, highlighting its use as a powerful complement to more standard analytical techniques within the pharmaceutical preformulation and development arena. Utilization of crystal structure information to rationalize dramatic increases in stability of pharmaceutical compounds in the crystalline state versus the amorphous state will be addressed. Advances in crystal engineering, focusing predominantly on the design of novel materials with enhanced physicochemical properties, will also be discussed. Finally an analysis of polymorphism using the CSD, along with some simple molecular modeling techniques, will be shown.