Solid-State Properties of Pharmaceutical Materials
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DESCRIPTION

Presents a detailed discussion of important solid-state properties, methods, and applications of solid-state analysis

• Illustrates the various phases or forms that solids can assume and discusses various issues related to the relative stability of solid forms and tendencies to undergo transformation

• Covers key methods of solid state analysis including X-ray powder diffraction, thermal analysis, microscopy, spectroscopy, and solid state NMR

• Reviews critical physical attributes of pharmaceutical materials, mainly related to drug substances, including particle size/surface area, hygroscopicity, mechanical properties, solubility, and physical and chemical stability

• Showcases the application of solid state material science in rational selection of drug solid forms, analysis of various solid forms within drug substance and the drug product, and pharmaceutical product development

• Introduces appropriate manufacturing and control procedures using Quality by Design, and other strategies that lead to safe and effective products with a minimum of resources and time
ABOUT THE AUTHOR

Stephen R. Byrn, PhD is Charles B. Jordan Professor of Medicinal Chemistry in the School of Pharmacy, Purdue University. Dr. Byrn has founded and directed several programs at Purdue University including CAMP, the Center for AIDS Research, the Molecules to Market program, and Purdue's graduate programs in regulatory and quality compliance. Dr. Byrn has served as chair of the Pharmaceutical Sciences Advisory Committee to the FDA and Chair of the Drug Substances Technical Committee, Product Quality Research Initiative. Dr. Byrn is co-founder of SSCI, Inc. a cGMP research and information Company.

George Zografi, PhD is the Edward Kremers Professor Emeritus of Pharmaceutical Sciences, School of Pharmacy, University of Wisconsin-Madison. He was the recipient of the APhA Ebert Prize in 1984 and 2001, the AAPS Dale E. Wurster Award for Pharmaceutics in 1990 and its Distinguished Scientist Award in 1995, as well as the Volwiler Research Achievement Award of the American Association of Colleges of Pharmacy.

Xiaoming (Sean) Chen, PhD is currently the Director of Formulation Development in Antares Pharma Inc. Prior to that, he held various positions in pharmaceutical product development at Schering-Plough, OSI Pharmaceuticals, Astellas Pharma, and Shionogi Inc. He has published over a dozen of papers in peer-reviewed journals and is a co-inventor of four US patents.

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