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	<ul> <li>2.2.4 Grinding by Ultrasonic Energy</li> <li>2.2.5 Rotor Stator Dispersing System2.2.6 Agitator Ball Mill; 2.3 References; 3 Crystallization; 3.1 Fundamentals of Crystallization; 3.1.1 Thermodynamics and Kinetics; 3.1.2 Crystallization Apparatus and Process; 3.1.2.1 Melt Crystallization; 3.1.2.4 Precipitation and Reaction Crystallization; 3.1.3 Crystal Defects; 3.2 Crystallization of Energetic Materials; 3.2.1 Introduction; 3.2.2 Crystallization and Product Quality; 3.2.2.1 Definition of Product Quality; 3.2.2.2 Process Problems and Product Quality</li> <li>3.2.2.3 Product Quality of Energetic Materials3.2.3 Crystallization of HMX and RDX; 3.2.4 Crystallization of CL 20; 3.2.5 Crystallization of NTO; 3.2.5.1 Kinetics of NTO Crystallization; 3.2.5.2 Control of Size and Shape by Recrystallization; 3.2.6.3 Seeded Cooling Crystallization; 3.2.5.4 Scale-up of Crystallizer; 3.2.6 Phase Stabilized Ammonium Nitrate (PSAN); 3.2.6.1 Introduction; 3.2.6.2 Understanding and Measuring of the Phase Transitions; 3.2.6.3 Improving the Phase Behavior; 3.2.6.4 Production Process; 3.2.7 Crystallization of ADN; 3.3 Simulation; 3.3.1 Introduction</li> <li>3.2 Molecular Modeling of Energetic Materials3.3.2.1 Molecular Structure of Energetic Materials; 3.3.2.2 Molecular Modeling of Dimethylnitramine; 3.3.2.3 Molecular Modeling of RDX; 3.3.2.4 Molecular Modeling of HNIW (CL 20); 3.3.2.5 Molecular Modeling of Processing Aids; 3.3.2.6 The Crystal Surface; 3.3.2.7 Crystal Morphology; 3.3.2.8 A Procedure for Molecular Modeling of Processing Aids; 3.3.2.6 The Crystal Surface; 3.3.2.7 Orystal Morphology; 3.3.2.8 A Procedure for Molecular Modeling of Processing Aids; 3.3.2.6 The Crystal Morphology; 3.3.2.10 Simulations; 3.3.2.9 Case Study: RDX Crystal Morphology; 3.3.2.10 Simulations; 3.3.2.9 Case Study: RDX Crystal Morphology; 3.3.2.10 Simulations; 3.3.2.9 Case Study: RDX Crystal Morphology; 3.3.2.10 Simulation of Other Phenomena; 3.3.3 Simulation of Crystallization Processes; 3.3.1 Scope of the Calculation Procedure</li> <li>3.3.2</li></ul>
Sommario/riassunto	Incorporation of particular components with specialized properties allows one to tailor the end product's properties. For instance, the sensitivity, burning behavior, thermal or mechanical properties or stability of energetic materials can be affected and even controllably varied through incorporation of such ingredients. This book examines particle technologies as applied to energetic materials such as propellants and explosives, thus filling a void in the literature on this subject.Following an introduction covering general features of energetic materials, the first section of this b