

1. Record Nr.	UNINA9910461522603321
Titolo	Powder metallurgy research trends [[electronic resource] /] / Lotte J. Smit and Julia H. Van Dijk, editors
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2009
ISBN	1-61470-603-4
Descrizione fisica	1 online resource (321 p.)
Altri autori (Persone)	SmitLotte J DijkJulia H. Van
Disciplina	671.3/7
Soggetti	Powder metallurgy Metallurgy Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	<p>""POWDER METALLURGYRESEARCH TRENDS""; ""POWDER METALLURGYRESEARCH TRENDS""; ""CONTENTS""; ""PREFACE""; ""FORMATION OF CORROSION STABILITY OFFE-BASED POWDERED ANDCOMPACTED MATERIALS""; ""ABSTRACT""; ""INTRODUCTION""; ""MATERIALS AND METHODS""; ""CORROSION AND ELECTROCHEMICAL TESTS""; ""RESULT AND DISCUSSION""; ""1. Corrosion of finely dispersed iron-based systems""; ""1.2. Influence of Milling Medium Chemical Nature on Corrosion Stability""; ""1.3. Effect of Structural-Phase Composition on Corrosion Stability""; ""1.4. Milling in Heptane and Heptane with an Organosilicon Additives""</p> <p>""2. CORROSION OF FINELY DISPERSED FE-SI SYSTEMS""""3. PITTING STABILITY OF COMPACTED NANOCRYSTALLINESYSTEMS FE+FE3C IN NEUTRAL MEDIA""; ""CONCLUSION""; ""REFERENCES""; ""POWDER PRODUCTION VIA SPRAY ROUTE""; ""1. OVERVIEW""; ""2. MELT ATOMIZATION (MA)""; ""2.1. Introduction""; ""2.2. Atomization""; ""2.3. Applications""; ""2.4. Effect of Operating Parameters""; ""2.5. Recent Advances and Future Trends""; ""3. SPRAY DRYING AND PYROLYSIS""; ""3.1. Introduction""; ""3.2. Theory and Mathematical Modeling""; ""Shrinkage Period""</p> <p>""Transition from Shrinkage to Constant-Diameter (Induction Period)"""" Constant-Diameter Period""; ""3.3. Effect of Operating Conditions"";</p>

""3.4. Recent Advances and Future Trends""; ""4. FLAME SPRAY PYROLYSIS""; ""4.1. Introduction""; ""4.2. Mechanism of Particle Formation""; ""4.3. Recent Advances and Future Trends""; ""5. OTHER METHODS""; ""5.1. Emulsion Combustion Method""; ""5.2. Spray Freeze Drying""; ""6. SUMMARY""; ""REFERENCES""; ""GOVERNING FACTORS OF PHYSICAL AND CHEMICAL BEHAVIOR OF REACTIVE POWDER MATERIALS""; ""ABSTRACT""; ""INTRODUCTION""; ""1. MODEL OF REACTING POWDER LAYER""
""2. THERMAL PROCESSES IN REACTING POWDER BODY""""3. THE PROCESSES OF MODIFICATION OF POWDER BODY AT COMPRESSION""; ""4. FILTRATIONAL PROCESSES IN THE SATURATED POROUS MEDIUM""; ""5. MACROKINETICS OF CHEMICAL CONVERSIONS""; ""6. THE SCHEME OF COMPUTER SIMULATION OF MECHANOCHEMICAL PROCESSES""; ""RESULTS AND DISCUSSION""; ""REFERENCES""; ""POWDER ADDITIVE PROCESSING WITH LASER ENGINEERED NET SHAPING (LENSA®)""; ""ABSTRACT""; ""1. INTRODUCTION""; ""2. LASER MATERIALS AND ADDITIVE PROCESSING""; ""2.1. Laser-Matter Interactions""; ""2.2. Laser Materials Processing""
""2.3. Laser Rapid Manufacturing""""3. MATERIALS DEVELOPMENT WITH LENSEA®""; ""3.1. Metallic Materials""; ""3.2. Metallic Matrix Composites and Graded Materials""; ""3.3. Cermets""; ""4. LENSEA® PROCESS CONTROL""; ""4.1. Solidification Behavior""; ""4.2. Effects of Process Parameters""; ""4.3. Real Time Closed-Loop Control Systems""; ""5. THERMAL BEHAVIOR DURING THE LENSEA® PROCESS""; ""5.1. Thermal Imaging Method""; ""5.2. Thermocouple Method""; ""5.3. Numerical Simulation""; ""6. BENEFIT ANALYSIS FOR LENSEA® PROCESSING""; ""7. TRENDS AND CHALLENGES""; ""7.1. Metallic Glasses""
""7.2. Nanocrystalline Materials""
