

图书基本信息

书名：<<创新加工薄膜与纳米晶粉INNOVATIVE PROCESSING OF FILMS AND NANOCRYSTALLINE POWDERS>>

13位ISBN编号：9781860943164

10位ISBN编号：1860943160

出版时间：2002-12

出版人：World Scientific Pub Co Inc

作者：Choy, Kwang-Leong (EDT)

页数：294

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<创新加工薄膜与纳米晶粉INNOV>>

内容概要

The use of advanced engineering ceramic films and powders for structural and functional applications is expanding rapidly. Improved materials and innovative methods of fabrication are needed to enhance the engineering performance and reduce the production costs. This book highlights innovative/cost-effective material-processing methods, at a mature production stage and also in development. In addition, issues and strategies associated with scaling-up are emphasized.

书籍目录

Preface
List of Contributors
Chapter 1 Review of Advances in Processing Methods: Films and Nanocrystalline Powders Kwang-Leong Choy
Chapter 2 Process Principles and Applications of Novel and Cost-Effective ESAVD Based Methods Kwang-Leong Choy
1. Background
2. Fundamental of ESAVD
2.1. Definition
2.2. Process Principles
2.3. Process Parameters
2.4. Electrostatic Atomisation and Spraying
2.5. Electrical Field
2.6. Thermal Field
2.7. Microstructure of ESAVD Deposits
2.8. Advantages
2.9. Comparison of ESAVD with Other Electro spraying Techniques
2.10. Applications
3. Case Studies
3.1. ESAVD of Thick Films
3.2. ESAVD of Thin Films
3.3. Other Variants of ESAVD
4. Conclusions and Outlook
Acknowledgements
References
Chapter 3 Application of Pulsed Injection MOCVD to the Deposition of Oxide Single Layers and Superlattices Jean-Pierre Sdnateur, Catherine Dubourdieu, V. Galindo, Francois Weiss and Adolfas Abrutis
1. Introduction
2. Deposition of Oxide Films from the Metal-Organic Vapour Phase
3. Experimental Set-up and Characterisation
4. Results
4.1. Oxide Films Grown by Pulsed Injection CVD
4.2. Oxide Multilayered Structures Deposited by Pulsed Injection CVD.
5. Conclusions
References
Chapter 4 Novel Synthesis Nanocrystalline Diamond Films Stanislaw Mitura
1. Introduction
2. Experimental
2.1. Nucleation of Diamond Particles
2.2. Synthesis of Nanocrystalline Diamond Coatings
3. Characterisation
3.1. Structural Investigations
3.2. Characterisation of the Raman Spectra
3.3. AES and Micro X-ray Investigations of Substrate/Film Interface
3.4. Tribological Investigations
3.5. Corrosion Resistance
4. Medical Applications
4.1. Pre-clinic Investigation
4.2. Examples in Medicine
5. Mechanical Applications
6. Applications in Jewellery
7. Conclusions
References
Acknowledgements
.....
Index

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>