Record Nr. UNINA9910876578203321 Microengineering of metals and ceramics . Part II Special replication **Titolo** techniques, automation and properties / / volume editors, Detlef Lohe and Jurgen Haubelt Weinheim, : Wiley-VCH, c2005 Pubbl/distr/stampa **ISBN** 1-281-84299-0 9786611842994 3-527-61673-X 3-527-61695-0 Descrizione fisica 1 online resource (308 p.) Collana Advanced micro & nanosystems;; v4 Altri autori (Persone) LoheDetlef HausseltJurgen Disciplina 620.14 Soggetti Micromechanics Ceramic materials - Microstructure Metals - Microstructure Microtechnology Injection molding of ceramics Injection molding of metals Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and indexes. Nota di bibliografia Nota di contenuto Advanced Micro & Nanosystems Volume 4 Microengineering of Metals and Ceramics; Preface; Foreword; Contents; List of Contributors; IV Replication Techniques - Micro Casting, Micro Electro Forming and Further Techniques; 13 Microcasting; 14 Microelectroforming of Metals; 15 Further Ceramic Replication Techniques; V Automation and Quality Assurance; 16 Automation of the Powder Injection Molding Process; 17 Microassembly - Approaches to Meet the Requirements of Accuracy; 18 Quality Assurance and Dimensional Measurement Technology; VI Properties of Materials and Microcomponents 19 Analysis of Microstructure, Surface Topography and Mechanical

> Properties of Microcast Specimens Made of the Dental Gold Alloy Stabilor G20 Microstructure, Surface Topography and Mechanical

Properties of Molded ZrO2 Microspecimens; 21 Tribological Characterization of Mold Inserts and Materials for Microcomponents; 22 Development of a Simulation Tool for Wear in Microsystems; Subject Index

Sommario/riassunto

Microstructures, electronics, nanotechnology - these vast fields of research are growing together as the size gap narrows and many different materials are combined. Current research, engineering sucesses and newly commercialized products hint at the immense innovative potentials and future applications that open up once mankind controls shape and function from the atomic level right up to the visible world without any gaps. Continuing from the previous volume, authors from three major competence centres for microengineering here cover all aspects of specialized replication techniques an