

1. Record Nr.	UNINA9910958131803321
Titolo	4M2006 : second International Conference on Multi-Material Micro Manufacture : 20-22 September 2006, Grenoble, France // edited by Wolfgang Menz, Stefan Dimov and Bertrand Fillon ; organised by FP6 4M Network of Excellence ; sponsored by The European Commission
Pubbl/distr/stampa	Oxford, : Elsevier, 2006
ISBN	1-280-72878-7 9786610728787 0-08-046629-X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (445 p.)
Altri autori (Persone)	MenzW (Wolfgang) DimovS. S. <1959-> FillonBertrand
Disciplina	670.42
Soggetti	Microtechnology Microelectromechanical systems
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	Front Cover; Second International Conference on Multi-Material Micro Manufacture; Copyright Page; Welcome Proceedings; 4M2006 Conference Committee; Sponsors; A roadmapping study in Multi-Material Micro Manufacture; Abstract; Keywords; 1. Introduction; 2. Study Scope; 3. Methodology; 4. Results: Applications; 5. Results: Technologies; 6. Conclusions; Acknowledgements; References; Table of Contents; Keynote Papers; Lab on a Chip : advances in packaging for MEMS and Lab on a Chip; Abstract; Keywords; Introduction; 1. Several representative Constraints in projects using microfluidic 2 Standards wafer level Solutions3 Specific solutions for low temperature sealing at the CEA Leti; 4 Conclusions; Acknowledgements; Reference; Micro- and nano- structuring using ion beams; Abstract; Keywords; 1. Introduction; 2. Ion-beam interactions with materials; 3. Ion projection technique; 4. Ion projection maskless direct nanopatterning; 5. Ion projection maskless direct nanopatterning; 7. Conclusion and Outlook; References; Micromoulding

- precision processing for controlled products; Abstract; Keywords; 1. Introduction; 2. Extreme processing conditions; 3. In-process measurements

4. Product evaluations5. Materials; 6. Process technology; 6. Concluding comments; Acknowledgements; 7. References; Automatic nanohandling station inside a scanning electron microscope; Abstract; Keywords; 1. Introduction; 2. Setup of the Nanohandling Cell; 3. Control System of the Robot Cell; 4. Real-Time Visual Feedback in SEM; 5. Automatic Handling of TEM Lamellae; 6. Stereoscopic Depth Detection in an SEM; 7. Setup of the Nanocharacterization station; 8. Nanoindentation and CNT Characterization; Acknowledgments; References; Recent evolution of electrical discharge machining; Abstract

Keywords1. Introduction; 2. Finish machining by EDM; 3. Metal surface modification; 4. EDM of insulating materials; 5. Micro EDM process; 6. Conclusions; Acknowledgments; Reference; Major FP6 Projects; A dynamics-driven approach to precision machines design for micro-manufacturing and its implementation perspectives; Abstract; Keywords; 1. Introduction; 2. Tool-workpiece loops and machine tool vibration; 3. Stiffness, Mass and damping; 4. Design processes of the precision machine; 5. Conclusions; Acknowledgements; References

A new technology platform for fully integrated polymer based micro optical fluidic systemsAbstract; Keywords; 1. Introduction; 2. Micro Optical Concepts; 3. Micro Fluidic Concepts; 5. Fabrication Technologies; 6. Conclusion; Acknowledgements; References; Market Studies on 4M Technologies and Applications; Market forecasts for roll-to-roll electronics manufacturing; Abstract; Keywords; 1. Introduction; 2. Silicon versus Roll-to-Roll Electronics; 3. New Markets for Roll to Roll Electronics Manufacturing; 4. Technical Path to Roll to Roll Manufacturing

5. Maintaining European Union Industry and Growth

Sommario/riassunto

This work covers the latest state-of-the-art research results from leading European researchers in advanced micro technologies for batch processing of metals, polymers, and ceramics, and the development of new production platforms for micro systems-based products. These contributions are from leading authors at a platform endorsed and funded by the European Union R&D community, as well as leading universities, and independent research and corporate organizations. This comprehensive collection of indexed and peer reviewed articles contains a CD with search functionality.* Contains au