1. Record Nr. UNINA9911006529103321

Titolo	Nanolithography and patterning techniques in microelectonics / / edited by David G. Bucknall
Pubbl/distr/stampa	Cambridge, : Woodhead Pub. Boca Raton, FL, : CRC Press, c2005
ISBN	1-280-56833-X 9786610568338 1-61583-186-X 1-84569-090-7
Descrizione fisica	1 online resource (424 p.)
Collana	Woodhead Publishing in materials
Altri autori (Persone)	BucknallDavid G
Disciplina	621.3815/31 686.2315
Soggetti	Microlithography Nanotechnology
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	Prelium; Contents; Block copolymer nanolithography; Surface-induced structure formation of polymer blends; Rapid prototyping of functional microfabricated devices by soft lithography; Chemomechanical surface modification of materials for patterning; Patterning of polymer thin films; Ion beam patterning; Nanofabrication by shadow deposition through nanostencils; Photolithography beyond the diffraction limit; Ink-jet printing as a tool in manufacturing and instrumentation; Actuators and patterns for microfluidic control; Manipulation of biomolecules and reactions Nonlithographic patterning: application of inkjet printing in organic-based devicesHigh-resolution, printing techniques for plastic electronics; Index
Sommario/riassunto	Currently surface patterning is achieved by means of optical lithographic techniques but with industry moving towards the fabrication of devices with size features of 100 nm less, the technological community is looking for alternative approaches to materials fabrication at the nanoscale. By using nanolithography

scientists can drive patterning currents through surfaces while building a 3D structure from a series of patterned layers. Electron induced chemical lithography can create ultra-high resolution templates for the site selective immobilisation of molecules, to form functional, hierarchic