1. Record Nr. UNINA9910450074803321

Titolo	Selected papers from the 14th Annual Solid Freeform Fabrication Symposium, University of Texas, Austin, Texas, 4-6 August 2003 [[electronic resource] /] / guest editors, David Bourell and R. Ian Campbell
Pubbl/distr/stampa	Bradford, West Yorkshire, England, : Emerald Group Pub., c2004
ISBN	1-280-51549-X 9786610515493 1-84544-410-8
Descrizione fisica	1 online resource (72 p.)
Altri autori (Persone)	BourellDavid Lee CampbellR. I (R. Ian)
Disciplina	620/.0042/0285
Soggetti	Solid freeform fabrication Industrial design Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Cover title. Issued as: Rapid prototyping journal, v. 10, no. 1 (2004). "Special issue."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents; Abstracts & keywords; Editorial; Electrophotographic printing of part and binder powders; Direct-write deposition of fine powders through miniature hopper-nozzles for multi-material solid freeform fabrication; Comparisons between thermal modeling and experiments: effects of substrate preheating; Characterization of H13 steel produced via electron beam melting; Precision extruding deposition and characterization of cellular poly-1- caprolactone tissue scaffolds; Modeling and characterization of novel, low-cost, direct-write waveguide Freeform fabrication of zinc-air batteries and electromechanical assembliesNote from the publisher
Sommario/riassunto	A solid freeform fabrication (SFF) technique is described where powder is deposited layer-by-layer using electrophotographic printing. In the electrophotography process, powder is picked up and deposited using

an electrostatically charged surface. A test bed was designed and constructed to study the application of electrophotography to SFF. It can precisely deposit powder in the desired shape on each layer. A polymer toner powder was used to build small components by thermally fusing each layer of printed powder using a hot compaction plate. The feasibility of 3D printing using this approach w