1. Record Nr. UNINA9910254024903321

Autore	Coppola Sara
Titolo	Manipulation of Multiphase Materials for Touch-less Nanobiotechnology : A Pyrofluidic Platform / / by Sara Coppola
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-31059-3
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (121 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	620.5
Soggetti	Materials—Surfaces Thin films Nanotechnology Biotechnology Surfaces and Interfaces, Thin Films Nanotechnology and Microengineering Microengineering
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 at the end of each chapters.
Nota di contenuto	Introduction -- Pyro-electric effect and polymers self-assembling -- Pyro-Electrohydrodynamic printing and multi jets Dispenser -- Pyro-EHD lithography, fabrication and employment of 3D microstructures -- High resolution patterning of biomaterials for tissue engineering -- Biodegradable microneedles for transdermal drug delivery -- Conclusions and perspectives.
Sommario/riassunto	The thesis presents an original and smart way to manipulate liquid and polymeric materials using a “pyro-fluidic platform” which exploits the pyro-electric effect activated onto a ferroelectric crystal. It describes a great variety of functionalities of the pyro-electrohydrodynamic platform, such as droplet self-assembling and dispensing, for manipulating multiphase liquids at the micro- and nanoscale. The thesis demonstrates the feasibility of non-contact self-assembling of liquids in plane (1D) using a micro engineered crystal, improving the dispensing capability and the smart transfer of material between two

different planes (2D) and controlling and fabricating three-dimensional structures (3D). The thesis present the fabrication of highly integrated and automated ‘lab-on-a-chip’ systems based on microfluidics. The pyro-platform presented herein offers the great advantage of enabling the actuation of liquids in contact with a polar dielectric crystal through an electrode-less configuration. The simplicity and flexibility of the method for fabricating 3D polymer microstructures shows the great potential of the pyro-platform functionalities, exploitable in many fields, from optics to biosensing. In particular, this thesis reports the fabrication of optically active elements, such as nanodroplets, microlenses and microstructures, which have many potential applications in photonics. The capability for manipulating the samples of interest in a touch-less modality is very attractive for biological and chemical assays. Besides controlling cell growth and fate, smart micro-elements could deliver optical stimuli from and to cells monitoring their growth in real time, opening interesting perspectives for the realization of optically active scaffolds made of nanoengineered functional elements, thus paving the way to fascinating Optogenesis Studies.

2. Record Nr. UNINA9910254919903321

Autore	Ivanov Dmitry
Titolo	Global Supply Chain and Operations Management : A Decision-Oriented Introduction to the Creation of Value / / by Dmitry Ivanov, Alexander Tsipoulanidis, Jörn Schönberger
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-24217-2
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXI, 445 p. 205 illus.)
Collana	Springer Texts in Business and Economics, , 2192-4341
Disciplina	658.7
Soggetti	Operations research Management science Production management Operations Research and Decision Theory Operations Research, Management Science Operations Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Note generali	Includes index.
Nota di contenuto	Basics of Supply Chain and Operations Management -- Examples from Different Industries, Services and Continents -- Processes, Systems, and Models -- Operations and Supply Chain Strategy -- Sourcing Strategy -- Production Strategy -- Facility location planning and network design -- Distribution and transportation network design -- Factory Planning and Process Design -- Layout planning -- Demand Forecasting -- Production and Material Requirements Planning -- Inventory Management -- Routing and Scheduling -- Appendix:Case-study:Re-designing the material flow in a global manufacturing network. .
Sommario/riassunto	This textbook presents global supply chain and operations management from a comprehensive perspective, combining value creation networks and interacting processes. It focuses on the operational roles in the networks and presents the quantitative and organizational methods needed to plan and control the material, information and financial flows in the supply chain. Each chapter of the book starts with an introductory case study. Numerous examples from various industries and services help to illustrate the key concepts. The book explains how to design operations and supply networks and how to incorporate suppliers and customers. As matching supply and demand is a core aspect of tactical planning, the book focuses on it before turning to the allocation of resources for fulfilling customer demands. Providing readers with a working knowledge of global supply chain and operations management, this textbook can be used in core, special and advanced classes. Therefore, the book targets a broadrange of students and professionals involved with supply chain and operations management. Special focus is directed at bridging theory and practice.