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Titolo	Lab-on-a-Chip Devices and Micro-Total Analysis Systems [[electronic resource]] : A Practical Guide / / edited by Jaime Castillo-León, Winnie E. Svendsen
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-08687-1
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (246 p.)
Disciplina	620 620.0042 620.1064 620.5 629.8
Soggetti	Nanotechnology Engineering design Control engineering Robotics Mechatronics Fluid mechanics Nanotechnology and Microengineering Engineering Design Control, Robotics, Mechatronics Engineering Fluid Dynamics
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 and index.
Nota di contenuto	Microfluidics and lab-on-a-chip devices: history and challenges -- Basic microfluidics theory -- Design and simulation of lab-on-a-chip devices -- A considered approach to Lab-on-a-chip fabrication -- Fluidic platforms and components of Lab-on-chip devices -- Fluidic platforms and components of Lab-on-Chip devices -- Microfluidic electrochemical biosensors: fabrication and applications --

	Applications of paper-based diagnostics -- Microfluidics in planar microchannels: Synthesis of chemical compounds on-chip.
Sommario/riassunto	This book covers all the steps in order to fabricate a lab-on-a-chip device starting from the idea, the design, simulation, fabrication and final evaluation. Additionally, it includes basic theory on microfluidics essential to understand how fluids behave at such reduced scale. Examples of successful histories of lab-on-a-chip systems that made an impact in fields like biomedicine and life sciences are also provided.