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Descrizione fisica	1 online resource (207)
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Nota di contenuto	part Section I Microfluidic Devices for Diagnostics -- chapter 1 Handheld Microfluidics for Point-of-Care In Vitro Diagnostics / Baichen Li -- chapter 2 Body-Worn Microfluidic Sensors / Mary M. Rodgers -- chapter 3 Fabrication and Applications of Paper-Based Microfluidics / Xuan Mu -- chapter 4 Printed Wax-Ink Valves for Multistep Assays in Paper Analytical Devices / Jacqueline C. Linnes -- chapter 5 Mycofluidics: Miniaturization of Mycotoxin Analysis / Jonathan H. Loftus, Gregor S. Kijanka, and Richard O'Kennedy -- chapter 6 Planar Differential Mobility Spectrometry for Clinical Breath Diagnostics / Erkinjon G. Nazarov -- part Section II Applications in Disease Detection -- chapter 7 Rapid Diagnosis of Infectious Diseases Using Microfluidic Systems / Hardik Jeetendra Pandya -- chapter 8 Microfluidics for Tuberculosis Diagnosis: Advances, Scalability, and Challenges / Bhavna G. Gordhan -- part Section III: Practical Aspects of Developing a Commercial Diagnostic Device -- chapter 9 Starting with the End in Mind by Developing Diagnostics around User Needs / Mark David Lim -- chapter 10 Incorporating the Needs of Users into the Development of Diagnostics for Global Health: A Framework and Two Case Studies / Jacqueline C. Linnes.
Sommario/riassunto	This book provides a current view of the research and commercial

landscape of diagnostics devices, particularly those that utilize microscale technologies, intended for both patient and laboratory use. Common diagnostic devices that are based on microfluidic principles include glucose sensors for diabetic patients and over-the-counter pregnancy tests. Other diagnostic devices are being developed to quickly test a patient for bacterial and viral infections, and other diseases. The chapters, written by experts from around the world, discuss how to fabricate, apply, and market microfluidic diagnostic chips -- for lab and at-home use. Most importantly, the book also contains a discussion of topics relevant to the private sector, including patient-focused, market-oriented development of diagnostics devices. --Provided by publisher.