1. Record Nr. UNINA9910298639103321

Titolo	Bioaerosol Detection Technologies / / edited by Per Jonsson, Göran Olofsson, Torbjörn Tjärnhage
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2014
ISBN	1-4419-5582-8
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (340 p.)
Collana	Integrated Analytical Systems, , 2196-4475
Disciplina	541.34515
Soggetti	Analytical chemistry Biotechnology Environmental monitoring Solid state physics Spectrum analysis Microscopy Analytical Chemistry Monitoring/Environmental Analysis Solid State Physics Spectroscopy and Microscopy 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 and index.
Nota di contenuto	Introduction and Bioaerosol Detection Terminology -- History of the Early Biodetection Development -- Physical and Biological Properties of Bioaerosols -- Dispersion in the Atmosphere -- Aerosol Sampling and Transport -- Light Scattering and Particle Charge Techniques for the Detection of Biological Warfare Agents -- Bioaerosol Detection with Fluorescence Spectroscopy -- Bioaerosol Detection with Atomic Emission Spectroscopy -- Mass Spectrometry Techniques in the Analysis of Bioaerosols: Development and Advancement -- Detection of Bioaerosol by Raman Spectroscopy -- Biological Detection with Terahertz Spectrocopy -- Introduction to Stand-off Detection of Biological Warfare Agents -- Spectrally Resolved Laser-Induced Fluorescence Lidar Based Standoff Biodetection System -- Standoff

Aerosol Size Determination Based on Multiple Field-of-View Elastic Scattering -- Trends in Biological Detection. .

Sommario/riassunto

This book is intended to give technological background and practical examples, but also to give general insight into the on-going technology development in the area of biodetection. The content is therefore suitable for an array of stakeholders (decision makers, purchasing officers, etc.) and end-users of biodetection equipment within the areas of health, environment, safety and security, and military preparation. The book is divided into three sections. The first section discusses the fundamental physical and biological properties of bioaerosol's. The second section goes into more detail and discusses in-depth the most commonly used detection principles. The third section of the book is devoted to technologies that have been used in standoff applications. The last section of the book gives an overview of trends in bioaerosol detection. The reader of this book will gain knowledge about the different biodetection technologies and thus better judge their capabilities in relation to desired applications.