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Titolo	Bacterial Volatile Compounds as Mediators of Airborne Interactions [[electronic resource] /] / edited by Choong-Min Ryu, Laure Weisskopf, Birgit Piechulla
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ISBN	981-15-7293-3
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Descrizione fisica	1 online resource (340 pages)
Disciplina	581.23
Soggetti	Microbiology Plant science Botany Biomedical engineering Plant Sciences Applied Microbiology Biomedical Engineering/Biotechnology Bacteris Ecologia química Botànica econòmica Compostos orgànics Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Chapter 1: The domain of bacteria and their metabolic potentials -- Chapter 2: The domain of bacteria and their metabolic potentials -- Chapter 3: Structural diversity of bacterial volatiles -- Chapter 4: In vivo and in vitro volatile organic compound (VOCs) analyses in bacterial diagnostics: case studies in agriculture and human diseases -- Chapter 5: How plants might recognize bacterial volatiles -- Chapter 6: Contribution of bacterial biogenic volatiles to chemical ecology -- Chapter 7: Bacterial volatile-mediated plant abiotic stress resistance -- Chapter 8: Integration of bacterial volatile organic compounds with plant health -- Chapter 9: Volatile interplay between

	microbes – friends and foes -- Chapter 10: Role and function of bacterial volatiles in tritrophic interactions -- Chapter 11: Cyanobacterial VOCs as allelopathic tools -- Chapter 12: Collection, detection, identification and analysis of bacterial VOCs -- Chapter 13: Using bacteria-derived Volatile Organic Compounds (VOCs) for industrial processes -- Chapter 14: Formulation and agricultural application of bacterial volatile compounds.
Sommario/riassunto	This book covers the fundamentals of bacterial volatile-mediated communication with other organisms, starting with the biosyntheses of volatile organic compounds (VOC), interactions with plants and animals, interactions with microbes, tools for data analysis, and their applications. With this foundation in place, the book subsequently focuses on understanding the effect of bacterial volatiles on plant growth promotion, discusses plant immunity, and lastly shares insights into future research directions. The book is divided into fourteen-in-depth chapters, each of which is designed to enrich readers' understanding of bacterial volatile compounds' functions and various applications. The pivotal roles of bacterial volatile compounds make this book essential reading for scientists and students of all biological disciplines seeking to fully understand microorganism responses and environmental adaptations. In addition to its value as a fundamental book for graduate students, it offers a clearly structured reference guide for all individuals working in microbiology.