1. Record Nr. UNINA9911009141003321

Autore	Arya Aditya
Titolo	Molecular Diagnostics for Viral Diseases : Challenges and Emerging Concepts / / edited by Aditya Arya, Mairaj Ahmed Ansari
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	981-9670-97-7
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (447 pages)
Collana	Medical Virology: From Pathogenesis to Disease Control, , 2662-9828
Altri autori (Persone)	AnsariMairaj Ahmed
Disciplina	579.2 616.96
Soggetti	Virology Biology - Technique Genomics Medical microbiology Medicine Diagnosis Genomic Analysis Medical Microbiology Clinical Medicine
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Introduction to Molecular Diagnostics and Viral Diseases -- 2. Molecular Diagnosis of COVID-19: Challenge and Pitfalls -- 3. Choice of Samples for Molecular Diagnosis of Viral Disease -- 4. Molecular and Serological Approaches for the Diagnosis of Human Orthoflaviviruses -- 5. Molecular Diagnosis of Human Immunodeficiency Virus (HIV) Infection -- 6. Recent Progress in Molecular Diagnostics of Hepatitis Viruses -- 7. Introduction to Molecular Diagnosis of Meningitis -- 8. Trends in meningitis prevalence and the need for molecular diagnosis -- 9. Molecular Diagnosis of Human Papillomavirus: Current trends and recent approaches in Molecular Diagnosis -- 10. Molecular Diagnostics for Mosquito-Borne Viral Diseases - Challenges and Emerging Concepts -- 11. Molecular Diagnosis of Enterovirus: Concepts and Challenges -- 12. Advanced Molecular Techniques in Diagnosis of Viral

Diseases -- 13. Molecular Diagnosis beyond Nucleic Acid Testing (NAT).

Sommario/riassunto

This book provides up-to-date information on the molecular diagnosis of viral diseases, including COVID–19, zika virus, human immunodeficiency virus (HIV), viral hepatitis, meningitis, and human papilloma virus (HPV). It covers global trends, the impact of viruses on society, and the need for molecular diagnostics. Initial chapters include information on popular molecular diagnostic methods and up-to-date strategies like Nucleic Acid Testing (NAT) and immunological methods, with an understanding of the challenges in their development. Further chapters emphasize emerging and next-generation diagnostic tools such as Specific High-sensitivity Enzymatic Reporter un-LOCKing (SHERLOCK), DNA Endonuclease Targeted CRISPR Trans Reporter (DETECTR), and Heating Unextracted Diagnostic Samples to Obliterate Nuclease (HUDSON), which boast a sensitivity of up to attomolar. The book also discusses high-end platforms like QIAsymphony. It is supplemented with illustrations and figures to aid conceptual understanding. The book is relevant for researchers in virology, clinicians involved in the therapy of viral diseases, and professionals in pathology labs interested in learning about advanced molecular diagnostic approaches for viral diseases.

2. Record Nr. UNINA9911049112903321

Autore	Das Alok Prasad
Titolo	Sustainable Municipal Waste Management with a Zero Waste Approach / / edited by Alok Prasad Das, Kosala Sirisena, Dipalee Bhanja
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
ISBN	3-032-05950-X
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (638 pages)
Collana	Sustainable Environmental Waste Management Strategies, , 3005-1630
Altri autori (Persone)	Das
Disciplina	304.2
Soggetti	Sustainability Refuse and refuse disposal Environmental engineering Civil engineering Waste Management/Waste Technology Environmental Civil Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	An introduction to municipal solid waste pollution and its sustainable management -- Algae in municipal waste treatment -- Harnessing the foundation of biomedical waste management for fostering environmental and health risks -- Application of algal biotechnology in municipal wastewater treatment -- Potential of extremophiles in sustainable waste management.-Challenges and innovations in biomedical waste management (bmw) a focus on sustainable technologies and zero waste approaches -- Global ecological threat and management of electronic waste and its leachates effects on human health and the environment -- Smart and innovative technologies for waste disposal tools for sustainable environmental management -- Microbial processes for sustainable municipal waste management -- Ecological impacts of synthetic microfiber pollutants in aquatic ecosystems -- Bioremediation as a greener technology for municipal waste to energy conversion -- Innovative strategies for sustainable municipal waste management -- Integrating municipal solid wastes as refuse derived fuels in cement co-processing a circular economy approach for sustainable resource management -- Life cycle

assessment (lca) studies to evaluate the environmental and economic impacts of different waste management strategies and technologies -- Sustainable waste management practices and their profound impact on environmental conservation.-Industrial symbiosis and circular economy in zero waste management approaches -- The potential of using industrial biobased sludge as a feedstock for sustainable biochar production -- Synergizing ai energy recovery, and sustainability in solid waste management.-Insights into the advances in microbial technology for the remediation of aromatic hydrocarbons of petroleum origin -- Petroleum hydrocarbon pollutants from waste engine oil in municipal waste concern and remediation strategies.

Sommario/riassunto

This book includes a variety of cases detailing novel municipal waste management strategies, including use of microorganisms, harnessing artificial intelligence and machine learning technologies, and implementing advanced waste management techniques. Sustainable municipal waste management, coupled with a zero waste approach and circular economy principles, represents a pivotal strategy for addressing the escalating challenges posed by municipal waste pollution. Municipal waste encompasses a diverse array of materials generated from households, businesses, institutions, and public spaces, including organic waste, plastics, paper, metals, and glass. As urbanization accelerates and consumption patterns evolve, the volume of municipal waste continues to surge, exerting significant pressures on ecosystems, public health, and natural resources. Municipal waste pollution arises from improper disposal practices, inadequate waste management infrastructure, and unsustainable consumption habits. Sources of municipal waste in the environment include landfills, incineration facilities, illegal dumping sites, and littering, contributing to soil, water, and air pollution. The indiscriminate disposal of waste leads to a number of adverse effects and impacts, including habitat destruction, wildlife entanglement, groundwater contamination, greenhouse gas emissions, and the proliferation of disease vectors. To address these challenges, innovative approaches blended with sustainability principles are essential. With these strategies, communities can transition toward more resilient and resource-efficient waste management systems.