

1. Record Nr.	UNINA9910983481803321
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Titolo	Microbial Approach of Biofiltration in Industrial Wastewater Treatment for the Sustainability of Environment // edited by Maulin P. Shah
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031481505 303148150X
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (312 pages)
Collana	Environmental Science and Engineering, , 1863-5539
Disciplina	628.35
Soggetti	Water Hydrology Environmental protection Civil engineering Microbial ecology Environmental management Soft condensed matter Soil and Water Protection Microbial Ecology Environmental Management Soft and Granular Matter
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Microorganisms in bioreactor -- Algal biochar for removal of refractory pollutants -- Application of membrane technology for wastewater treatment -- Role of microfiltration (mf) in the treatment of wastewater -- Advancements in nano filtration -- A scope of membrane-based approach in the treatment of wastewater and its applications -- Advances in electrospun nanostructured membranes for wastewater treatment: Challenges and opportunities -- Photocatalytic membrane reactors for wastewater treatment: TiO ₂ -based membranes -- Advances in analytical methods for the monitoring of chemical pollutants in Industrial effluent water -- Chemical contaminants of water: evaluation methods, environmental risk, and treatment process

-- Treatment of industrial waste water: nanofiltration- A unique approach -- Bio-membrane based solutions for wastewater treatment -- Application of composite membrane-based technology in treatment of textile industry effluents.

Sommario/riassunto

The ever-increasing number of pollutants released into the environment drives the search for new treatment technologies or the modification of existing ones. In this sense, innovation in biofiltration systems seems promising, and therefore, a book on the current developments and innovations on its subject is very appropriate. Biofiltration is a relatively emerging new technology applied to the treatment of wastewater and other toxic substances. Over the past two decades, this technology has become an economically viable process for treating the wide variety of unruly pollutants released into the environment. For example, it is speculated that the US biofiltration market will reach more than \$100 million by 2020. This book aims to show how innovation in biofiltration can provide effective solutions to overcome the serious problem of water pollution worldwide. The removal of contaminants will result from the combined effects of biological oxidation, adsorption, and filtration processes. Many physicochemical and operational factors influence the performance, treatment costs, and long-term stability of biofilters for wastewater treatment. This book focuses on identifying factors that affect biofiltration, explains their influence, and provides guidelines on how to control these factors to optimize better control over the control of pollutants present in wastewater treatment plants. The fundamental basis of treatment in biofilters is the action of microorganisms that degrade pollutants, and consequently, the book also discusses in depth the microbial ecology of biofiltration.
