1. Record Nr. UNINA9910809167703321

Titolo	Membrane and desalination technologies / / edited by Lawrence K. Wang, ... [et al.]
Pubbl/distr/stampa	New York, : Humana Press, 2010
ISBN	1-283-08375-2 9786613083753 1-59745-278-5
Edizione	[1st ed. 2011.]
Descrizione fisica	1 online resource (728 p.)
Collana	Handbook of environmental engineering ; ; v. 13
Altri autori (Persone)	WangLawrence K
Disciplina	660/.28424
Soggetti	Saline water conversion Water - Purification - Membrane filtration Water treatment plants Pollution
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 and index.
Nota di contenuto	MEMBRANE TECHNOLOGY: PAST, PRESENT AND FUTURE -- PREPARATION OF POLYMERIC MEMBRANES -- ADVANCED MEMBRANE FOULING CHARACTERIZATION IN FULL-SCALE REVERSE OSMOSIS PROCESSES -- MEMBRANE FILTRATION REGULATIONS AND DETERMINATION OF LOG REMOVAL VALUE (LRV) -- TREATMENT OF INDUSTRIAL EFFLUENTS, MUNICIPAL WASTES AND POTABLE WATER BY MEMBRANE BIOREACTORS -- TREATMENT OF FOOD INDUSTRY WASTES BY MEMBRANE FILTRATION -- MEMBRANE SEPARATION: BASICS AND APPLICATIONS -- MEMBRANE SYSTEMS PLANNING AND DESIGN -- ADSORPTION DESALINATION – A NOVEL METHOD -- MEMBRANE PROCESSES FOR RECLAAMTION OF MUNICIPAL WASTEWATER -- POTABLE WATER BIOTECHNOLOGY, MEMBRANE FILTRATION AND BIOFILTRATION -- DESALINATION OF SEAWATER BY THERMAL DISTILLATION AND ELECTRODIALYSIS TECHNOLOGIES -- DESALINATION OF SEAWATER BY REVERSE OSMOSIS -- MEMBRANE TECHNOLOGIES FOR POINT-OF-USE AND POINT-OF-ENTRY APPLICATIONS -- MEMBRANE TECHNOLOGIES FOR OIL-WATER SEPARATION -- GAS-SPARGED ULTRAFILTRATION: RECENT TRENDS, APPLICATIONS AND FUTURE

CHALLENGES -- APPENDIX: CONVERSION FACTORS FOR ENVIRONMENTAL ENGINEERS.

Sommario/riassunto

In this essential new volume, Volume 13: Membrane and Desalination Technologies, a panel of expert researchers provide a wealth of information on membrane and desalination technologies. An advanced chemical and environmental engineering textbook as well as a comprehensive reference book, this volume is of high value to advanced graduate and undergraduate students, researchers, scientists, and designers of water and wastewater treatment systems. This is an essential part of the Handbook of Environmental Engineering series, an incredible collection of methodologies that study the effects of pollution and waste in their three basic forms: gas, solid, and liquid. Chapters adopt the series format, employing methods of practical design and calculation illustrated by numerical examples, including pertinent cost data whenever possible, and exploring in great detail the fundamental principles of the field. Volume 13: Membrane and Desalination Technologies is an essential guide for researchers, highlighting the latest developments in principles of membrane technology, membrane systems planning and design, industrial and municipal waste treatments, desalination requirements, wastewater reclamation, biofiltration, and more. -- Coverage of the principles of membrane and desalination technologies and the fundamentals of water and wastewater treatment -- Emphasis on industry standards, trends in the field, municipal & industrial full-scale operations, POU and POE applications -- Examples of actual operating water and wastewater treatment plants based on membrane technology. -- Examples of actual desalination plants based on both membrane and non-membrane technologies -- Reference of practical use to scientists, researchers, educators and designers of water and wastewater treatment systems. Contents: Membrane Technology. Preparation of Polymeric Membranes. Advanced Membrane Fouling Characterization. Membranes Testing. Membrane Bioreactors. Treatment of Food Wastes. Membrane Separation: Industrial and Municipal Operations. Membrane Systems Design. Adsorption Desalination. Municipal Wastewater Reclamation. Biotechnology and Membrane Filtration. Thermal Distillation and Electrodialysis Technologies. Reverse Osmosis Desalination. Membrane for Point-of-Use and Point-of-Entry Applications. Oil-Water Separation. Gas-sparged Ultrafilatration.