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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Chapter 01 – The Carbonic Anhydrase Promoted Carbon Dioxide Capture -- Chapter 02 – Carbon capture via mixed-matrix membranes containing nanomaterials and metal-organic frameworks -- Chapter 03 – Biogas as a Renewable Energy Source. Focusing on Principles and Recent Advances of Membrane-Based Technologies for Biogas Upgrading -- Chapter 04 – Developments of carbon-based membrane materials for water treatment -- Chapter 05 – Removal of Pharmaceuticals and personal care products in aquatic environment by membrane technology -- Chapter 06 – Hydrodynamic Enhancement by Dynamic Filtration for Environmental Applications -- Chapter 07 – Membrane Preparation for Unconventional Desalination by Membrane Distillation and Pervaporation -- Chapter 08 – Role and characterization of nano-based membranes for environmental applications -- Chapter 09 – Membrane technologies for sustainable and eco-friendly microbial energy production -- Chapter 10 – Membrane Reactors for Renewable Fuel Production and Their Environmental Benefits -- Chapter 11 – Waste Management and

	Conversion to Pure Hydrogen by Application of Membrane Reactor Technology -- Chapter 12 – Advances in Pd membranes for hydrogen production from residual biomass and wastes.
Sommario/riassunto	This book introduces recent developments of membrane technologies applied to gas and water treatments, energy processes and environmental issues. Novel knowledge and mechanisms on membrane fabrication and usage in energy, chemical, and environmental engineering are detailed in 12 book chapters from France, UK, Spain, China, Nigeria, Iran and Pakistan. The information in this book will be useful for engineers, students, and experts in these fields.