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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Fundamentals of Gas Permeation through Membranes -- Gas Separation Membrane Materials and Structures -- Membrane Fabrication/Manufacturing Techniques -- Membrane Modules and Process Design -- Application of Gas Separation Membranes -- Characterization of Membranes.
Sommario/riassunto	This book describes the tremendous progress that has been made in the development of gas separation membranes based both on

inorganic and polymeric materials. Materials discussed include polymer inclusion membranes (PIMs), metal organic frameworks (MOFs), carbon based materials, zeolites, as well as other materials, and mixed matrix membranes (MMMs) in which the above novel materials are incorporated. This broad survey of gas membranes covers material, theory, modeling, preparation, characterization (for example, by AFM, IR, XRD, ESR, Positron annihilation spectroscopy), tailoring of membranes, membrane module and system design, and applications. The book is concluded with some perspectives about the future direction of the field.