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Sommario/riassunto	Membrane processes today play a signifi cant role in the replacement therapy for acute and chronic organ failure diseases. Current extracorporeal blood purifi cation and oxygenation devices employ membranes acting as selective barriers for the removal of endogeneous and exogeneous toxins and for gas exchange, respectively. Additionally, membrane technology offers new interesting opportunities for the design of bioartificial livers, pancreas, kidneys, lungs etc. This book reviews the latest developments in membrane systems for bioartificial organs and regenerative medicine, investigates how membrane technology can improve the quality and efficiency of biomedical devices, and highlights the design procedures for membrane materials covering the preparation, characterization, and sterilization steps as well as transport phenomena. The different strategies pursued for the development of membrane bioartifi cial organs, including crucial issues related to blood/cell-membrane

interactions are described with the aim of opening new and exciting frontiers in the coming decades. The book is a valuable tool for tissue engineers, clinicians, biomaterials scientists, membranologists as well as biologists and biotechnologists. It is also a source of reference for students, academic and industrial researchers in the topic of biotechnology, biomedical engineering, materials science and medicine.
