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Autore	Bhushan Bharat
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction: Water Supply and Management -- Overview of Arid Desert Conditions, Water Sources, and Desert Plants and Animals -- Selected Water Harvesting Mechanisms – Lessons from Living Nature -- Bioinspired Flat and Conical Surfaces for Water Harvesting -- Bioinspired Triangular Patterns on Flat Surfaces for Water Harvesting -- Commercial Applications, Projections of Water Collection, and Design of Water Harvesting Towers -- Bioinspired Water Desalination and Water Purification Approaches Using Membranes -- Selected Oil-water Separation Techniques - Lessons from Living Nature -- Bioinspired Oil-Water Separation and Water Purification Approaches Using Superliquiphobic/philic Porous Surfaces and External Stimuli -- Closure.
Sommario/riassunto	This book presents an overview of arid desert conditions and natural mechanisms for water harvesting from fog and condensation, providing

data on various bioinspired surfaces for water collection. It discusses consumer to military and emergency applications. It presents various designs for water harvesting towers and projections for water collection, and describes innovative approaches to bioinspired water desalination, water purification and oil-water separation. Fresh water sustains human life and is vital for health. However, water scarcity affects more than 40% of the global population and is projected to rise, especially in some of the world’s most impoverished countries. Additionally, water contamination is one of the most critical environmental and natural resource concerns of the 21st century. This book addresses these topics with a presentation of the development of sustainable and environmentally friendly bioinspired surfaces for water harvesting from fog and condensation, as well as bioinspired oil-water separation techniques for removing oil contaminants from oil-water mixtures and oil-water emulsions. Intended for novices as well as experts in the field, the book offers actionable insight for practitioners, solution seekers, and the generally curious alike. It serves as an excellent accompanying text for one-semester courses in biomimetics, water supply and management, or environmental engineering.