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Nota di contenuto	Introduction -- Roughness-Induced Superliquiphilic/phobic Surfaces: Lessons from Nature -- Modeling of Contact Angle for a Liquid in Contact with a Rough Surface for Various Wetting Regimes -- Lotus Effect Surfaces in Nature -- Fabrication Techniques used for Superliquiphilic/phobic Structures -- Strategies of Micro-, Nano- and Hierarchically Structured Lotus-like Surfaces -- Fabrication and Characterization of Mechanically Durable Superhydrophobic Surfaces -- Fabrication and Characterization of Micropatterned Structures Inspired by Salvinia Molesta -- Characterization of Rose Petals and Fabrication and Characterization of Superhydrophobic Surfaces with High and Low Adhesion -- Modeling and Strategies of Superoleophobic/philic Surfaces -- Fabrication and Characterization of Superoleophilic/phobic

	Surfaces -- Shark-Skin Surface for Fluid-Drag Reduction in Turbulent Flow -- Black Skimmer Surfaces for Fluid-Drag Reduction in Turbulent Flow -- Gecko Adhesion -- Structure and Mechanical Properties of Nacre -- Self-Healing Materials -- Outlook.
Sommario/riassunto	This book presents an overview of the general field of biomimetics and biologically inspired, hierarchically structured surfaces. It deals with various examples of biomimetics, which include surfaces with roughness-induced super-phobicity/philicity, self-cleaning, antifouling, low drag, low/high/reversible adhesion, drag reduction in fluid flow, reversible adhesion, surfaces with high hardness and mechanical toughness, vivid colors produced structurally without color pigments, self-healing, water harvesting and purification, and insect locomotion and stinging. The focus in the book is on the Lotus Effect, Salvinia Effect, Rose Petal Effect, Superoleophobic/philic Surfaces, Shark Skin and Skimmer Bird Effect, Rice Leaf and Butterfly Wing Effect, Gecko Adhesion, Insects Locomotion and Stinging, Self-healing Materials, Nacre, Structural Coloration, and Nanofabrication. This is the first book of this kind on bioinspired surfaces, and the third edition represents a significant expansion from the previous two editions.