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| 1. Record Nr. | UNINA9910254629103321 |
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| Titolo | Biomimetics : Bioinspired Hierarchical-Structured Surfaces for Green Science and Technology // by Bharat Bhushan |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016 |
| ISBN | 3-319-28284-0 |
| Edizione | [2nd ed. 2016.] |
| Descrizione fisica | 1 online resource (607 p.) |
| Collana | Biological and Medical Physics, Biomedical Engineering, , 1618-7210 |
| Disciplina | 574.011 |
| Soggetti | Biophysics Biological physics Nanotechnology Surfaces (Physics) Interfaces (Physical sciences) Thin films Tribology Corrosion and anti-corrosives Coatings Materials—Surfaces Biological and Medical Physics, Biophysics Surface and Interface Science, Thin Films Tribology, Corrosion and Coatings Surfaces and Interfaces, Thin Films |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references at the end of each chapters and index. |
| Nota di contenuto | Introduction -- Roughness-Induced Superomniphobic Surfaces: Lessons from Nature -- Modeling of Contact Angle for a Liquid in Contact with a Rough Surface -- Lotus Effect Surfaces in Nature -- Fabrication Techniques used for Structures with Superhydrophobicity, Self-Cleaning, Low Adhesion/Low Drag with Antifouling Properties -- Fabrication and Characterization of Micro-, Nano- and Hierarchical Structured 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,
Fabrication and Characterization of Oleophobic/philic Surfaces --
Shark-Skin Surface for Fluid-Drag Reduction in Turbulent Flow --
Gecko Adhesion -- Outlook.

Sommario/riassunto

This revised, updated and expanded new edition presents an overview of biomimetics and biologically inspired structured surfaces. It deals with various examples of biomimetics which include surfaces with roughness-induced superomniphobicity, self-cleaning, antifouling, and controlled adhesion. The focus in the book is on the Lotus Effect, Salvinia Effect, Rose Petal Effect, Oleophobic/philic Surfaces, Shark Skin Effect, and Gecko Adhesion. This new edition also contains new chapters on the butterfly wing effect, bio- and inorganic fouling and structure and Properties of Nacre and structural coloration.
