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Titolo	Functional Surfaces in Biology III : Diversity of the Physical Phenomena / / edited by Stanislav N. Gorb, Elena V. Gorb
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Descrizione fisica	1 online resource (xv, 268 pages) : illustrations
Collana	Biologically-Inspired Systems, , 2211-0607 ; ; 10
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Soggetti	Botany Zoology Biology - Technique Biophysics Biomaterials Plant Science Biological Techniques
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter1. Introduction -- Chapter2. Adhesion of parasitic worms (Paolo Galli, WeiLim Wong, Peter Ladurn) -- Chapter3. Clingfish adhesion (Petra Ditsche-Kuru) -- Chapter4. Possible role of gradients in insect adhesion (Stanislav Gorb) -- Chapter5. Cell adhesion to soft/hard substrates (Selhuber-Unkel) -- Chapter6. Ontogenetic shift in insect adhesion (Dagmar Voigt and Daniel Zurek) -- Chapter7. Biochemistry aspects of insect adhesion (Betz Oliver) -- Chapter8. Modelling of biological adhesion (Popov Valentin and Alex Filippov) -- Chapter9. Bed bug adhesion (Reinhardt Klaus) -- Chapter10. Pollinia adhesion to insect surfaces (Thielen Marc) -- Chapter11. Surface effects of carnivorous plants (Speck Thomas and Holger Bohn) -- Chapter12. Treefrog adhesion (Jon Barnes) -- Chapter13. Attachment discs of arachnics (Jonas Wolff) -- Chapter14. Attachment devices of parasitic flies (Dennis Petersen and Stanislav Gorb) -- Chapter15. Snail adhesion (Andrew Smith).
Sommario/riassunto	This book is devoted to the rapidly growing area of science dealing

with structure and properties of biological surfaces in their relation to particular functions. This volume, written by a team of specialists from different disciplines, covers various biological surface functions: sensing, coloration, attachment, drag reduction, moisture harvesting, etc. Because biological surfaces have a virtually endless potential of technological ideas for the development of new materials and systems, inspirations from biology could also be interesting for a broad range of topics in surface engineering. This volume together with two previous volumes “Functional Surfaces in Biology” (vols. 1 & 2 published in 2009) taken together, present a good reference for a novice in the field. The book is intended for use by researchers who are active, or intend to become active, in the field. The appeal of this topic is expected to be broad, ranging from classical biology, biomechanics and physics to such applied fields as materials science and surface engineering.