1. Record Nr. UNINA9910298584403321

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Titolo	Bionic Functional Structures by Femtosecond Laser Micro/nanofabrication Technologies / / by Guoqiang Li
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2018
ISBN	981-13-0359-2 978-981-13-0359-3
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XV, 128 p. 115 illus., 84 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	541.2
Soggetti	Nanotechnology Nanochemistry Atoms Physics Materials—Surfaces Thin films Lasers Photonics Atoms and Molecules in Strong Fields, Laser Matter Interaction Surfaces and Interfaces, Thin Films Optics, Lasers, Photonics, Optical Devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Key technological of bionic structure surfaces induced by femtosecond laser -- Bionic structure induced by femtosecond laser -- PDMS surface wetting based on metal template by femtosecond laser -- Three-dimensional porous metal micro/nano cage structure by femtosecond laser with ethanol assisted -- Superhydrophilic/ underwater superoleophobic microcone arrays by sucrose solution assisted femtosecond laser -- Conclusion and Outlook.
Sommario/riassunto	This thesis combines advanced femtosecond laser micro/nanofabrication technologies and frontier bionic design principles to prepare diverse biomimetic micro/nanostructures to

realize their functions. By studying the formation mechanism of the micro/nanostructures, the author identifies various artificial structural colors, three-dimensional micro/nanocage arrays, and fish-scale inspired microcone arrays in different processing environments. Multiple functions such as enhanced antireflection, hydrophobicity, and underwater superoleophobicity are achieved by precisely adjusting laser-machining parameters. This novel design and method have extensive potential applications in the context of new colorizing technologies, microfluidics, microsensors, and biomedicine.