Record Nr. UNINA9910812689303321 **Titolo** Biomimetic architectures by plasma processing: fabrication and applications / / edited by Surojit Chattopadhyay Pubbl/distr/stampa Boca Raton, FL:,: CRC Press Oakville:,: Apple Academic Press:,: Pan Stanford Publishing,, [2015] ©2015 0-429-08591-5 **ISBN** 981-4463-95-7 Edizione [1st ed.] Descrizione fisica 1 online resource (246 p.) Disciplina 621.044 Soggetti Plasma engineering **Biomimetics** Nanostructured materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references at the end of each chapters. Nota di bibliografia Nota di contenuto Front Cover; About the Cover; Contents; Preface; Introduction; Chapter 1: Photonic Structures in the Animal Kingdom: Valuable Inspirations for Biomimetic Applications; Chapter 2: Anti-Reflecting Nanostructures; Chapter 3: Plasma-Processed Biomimetic Nano- and Micro-Structures: Chapter 4: Wetting Properties of Natural and Plasma-Processed Biomimetic Surfaces; Chapter 5: Biomimetic Superhydrophobic Surface Fabrication by Plasma Processing; Chapter 6: Biomimetic Interfaces of Plasma-Modified Titanium Alloy Plasma-processed biomimetic structures are an extremely focused and Sommario/riassunto small subset of biomimetics. Although other methods can also be adopted, experimental synthesis of biomimetic structures mainly focuses on plasma processing. This book deals with the theoretical description of photonic structures available in nature, and the physics and applications of biomimetic structures prepared in the laboratory. It discusses anti-reflection properties of moth eye- or cicada wing-type nanostructured materials on semiconductor surfaces, with emphasis on plasma fabrication procedures. It also explains, with