Record Nr. UNINA9910410043203321 Engineered Antimicrobial Surfaces / / edited by S. Snigdha, Sabu **Titolo** Thomas, E. K. Radhakrishnan, Nandakumar Kalarikkal Pubbl/distr/stampa Singapore:,: Springer Singapore:,: Imprint: Springer,, 2020 **ISBN** 981-15-4630-4 Edizione [1st ed. 2020.] 1 online resource (XI, 163 p. 32 illus., 21 illus. in color.) Descrizione fisica Collana Materials Horizons: From Nature to Nanomaterials, , 2524-5384 Disciplina 620.44 Materials—Surfaces Soggetti Thin films Medical microbiology Biomedical engineering Surfaces and Interfaces, Thin Films Medical Microbiology Biomedical Engineering and Bioengineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Includes bibliographical references. Nota di bibliografia Chapter 1: The Need for Engineering Antimicrobial Surfaces -- Chapter Nota di contenuto 2: A Thirst For Polymeric Antimicrobial Surfaces/Coatings For Diverse Applications -- Chapter 3: Potential Target Sites That Are Affected By Antimicrobial Surfaces -- Chapter 4: Carbon Nanotube-based Antimicrobial and Antifouling Surfaces -- Chapter 5: Engineered Phyllosilicate Clay Based Antimicrobial Surfaces.-Chapter 6: Modulating Surface Energy And Surface Roughness For Inhibiting Microbial Growth -- Chapter 7: Antimicrobial metal-based nanomaterials and their industrial and biomedical applications. Sommario/riassunto This volume looks at the different aspects involved in controlling microbial growth and the techniques employed in obtaining sterile surfaces. It covers research on coatings, nano-materials, herbal materials, naturally occurring antimicrobials in designing antimicrobial

surfaces. It discusses issues of antibiotic resistance, synthesis techniques, toxicity, and current and potential applications of

a broad range of scientists, industrial practitioners, graduate and

antimicrobial surfaces, and this book will serve as a useful reference to

undergraduate students, and other professionals in the fields of polymer science and engineering, materials science, surface science, bioengineering and chemical engineering.