Record Nr. UNINA9910896178703321 Autore Ahmed Shakeel Titolo Nanoscale Textile Coatings for Enhanced Performance / / edited by Shakeel Ahmed, Shahid Adeel Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 981-9759-22-6 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (388 pages) Collana Engineering Materials, , 1868-1212 Altri autori (Persone) AdeelShahid Disciplina 677.68 Soggetti **Building materials** Coatings Nanoscience Nanotechnology Wood, fabric, and textiles **Nanophysics** Nanoengineering Impact of Nanotechnology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction to Nanoscale Textile Coatings -- Nanoscale Textile Coatings for Enhanced Performance -- Materials Used For Creating Nanoscale Textile Coatings -- Methods of Application of Nanoscale Coatings to Textiles -- Nanoscale Coatings for Textile Self-cleaning --Nanoscale Coatings for Outdoor Gear Textiles -- Nanoscale Coatings for Textile Sensors -- Nanoscale coating for flavonoid based natural colorants -- Anthocyanin-Based Natural Dyes and Nanoscale Coatings -- Nanocellulose; Its Synthesis and Application in Textiles --Application Of Nanotechnology In The Development Of Smart Textiles For Allied Industries -- Impact of Nanotechnology in Separation of Plant Colorants and their appliance for Wastewater Remediation -- Eco-Friendly Impact of Nano Technology in Synthetic Dyes: Synthesis and Application -- Impact Of Nanotechnology On Extraction And

Application Of Carotene And Anthocyanin Based Natural Colorants.

applications of nanoscale textile coatings. It covers materials used for

This book provides an overview of the latest developments and

Sommario/riassunto

(creating) these coatings, the different methods of applying them to textiles, and the various ways in which the coatings can improve the performance of the textiles. In addition to providing a technical understanding of the subject, the book also includes case studies and real-world examples of using nanoscale coatings in the textile industry, including areas such as fashion, outdoor gear, and medical textiles. Additionally, the book explores the potential future applications of this technology, as well as the challenges and limitations that need to be overcome in order to bring these innovations to market. This book is a valuable resource for textile engineers, materials scientists, and anyone interested in the exciting field of nanoscale textile coatings. It also addresses the environmental impact of textile coatings and their safety for human use and disposal.