1. Record Nr. UNINA9911018652103321

Autore	Shahid Mohammad
Titolo	Advancements in Textile Finishing : Techniques, Technologies, and Trends / / edited by Mohammad Shahid, Santosh Biranje, Mohd Yusuf, Ravindra Adivarekar
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	981-9663-85-7
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (444 pages)
Altri autori (Persone)	BiranjeSantosh YusufMohd AdivarekarRavindra
Disciplina	620.1
Soggetti	Building materials Sustainability Nanotechnology Natural products Polymers Wood, fabric, and textiles Nanoengineering Natural Products
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. An Overview of Finishing Techniques for Textiles -- Chapter 2. Mechanical and chemical processes of textile finishing industries -- Chapter 3. Sustainable Yarn Sizing -- Chapter 4. Sustainable Textile Finishes for Wellness -- Chapter 5. Advancements in Sustainable Textile Finishes -- Chapter 6. Enhancing Comfort Through Functional Finishes in Outdoor Textiles -- Chapter 7. Phase Change Composite Materials on Temperature Regulation and Comfort in Fabric -- Chapter 8. Flame Retardant Finishes for Textiles: Sustainability, Current Challenges and Future Perspectives -- Chapter 9. Polymeric Materials in Textile Finishing for Enhanced Performance and Sustainability -- Chapter 10. Emerging Trends and Technologies in Polymers for Textile Finishing -- Chapter 11. Bio-derived polymers for Eco-Friendly Textile

Finishing -- Chapter 12. Microencapsulation in Textile Finishing: Challenges and Recent trends -- Chapter 13. Nanomaterials in Textile Finishing for Advanced Functionality and Sustainability -- Chapter 14. Recent Applications of Nanotechnology in Textile Finishing -- Chapter 15. Leveraging Biological Catalysts in Textile Industry: Enzyme-based Textile Finishing -- Chapter 16. Advances in Biotechnology Applications in Sustainable Textile Finishing and Functionalization -- Chapter 17. Biotechnology for surface modification of polyester fibres -- Chapter 18. Radiation and Plasma Treatment in Textile Finishing -- Chapter 19. Advancements in Plasma Technology for Textile Surface Modification -- Chapter 20. Biological and physicochemical procedures for treating textile finishing effluents.

Sommario/riassunto

This book highlights the latest advancements in textile finishing, covering various techniques, technologies, and trends. It begins with an overview of mechanical and chemical processes used in the textile industry, emphasizing sustainable practices like yarn sizing and textile finishes for wellness. Functional finishes in outdoor textiles for enhanced comfort are also discussed. The book explores advancements in polymeric materials and emerging trends in polymers for textile finishing. It delves into eco-friendly innovations using bio-derived polymers and the application of microencapsulation in textile finishing. It also covers enzyme-based techniques and biotechnology applications for surface modification of polyester fibers, offering sustainable alternatives. Plasma technology advancements for textile surface modification and innovations in conductive and smart textiles are thoroughly explored. Environmental impacts and sustainable solutions are highlighted throughout. With contributions from global experts, this book provides comprehensive insights into future practices in textile finishing, focusing on sustainability and technological progress.