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Nota di contenuto	Exploring the Potential of Non-Woven Wet Wipes in Advancing Hygiene Practices -- A Perspective on Biomimicry in Medical Textiles -- Development of Molten Metal Splash Resistant Jute-Cotton Based Union Fabric -- Lightweight Multilayered Filter Material for NBC Protective Clothing -- Development of Cold Weather Protective Clothing Using Knitted Fabric -- Development of Inherent Flame-retardant Textiles for Protection against Molten Metal -- Development and Evaluation of Mosquito Repellent and Antibacterial Microcapsules containing Catnip

Essential Oil using Complex Coacervation Approach -- Sustainable Chemical-Free Reactive Dyeing on Chemical-Free Pretreated Cotton -- Enhancing UV Protection, Antimicrobial Properties, and Flame Retardancy of Cotton Fabrics Coated with MgO-Al2O3 Nanocomposites -- Application of Antimicrobial and Blood Repellant Finish on Polyester/Cotton Blend -- Printing by Natural Minerals -- Optimization of Dyeing Cotton Khadi Fabric with African Tulip Flower by Statistical and Unitary Methods -- Dyeing of Cotton Fabric with Natural Dye Extracted from Parthenium Weed -- Investigation on the Performance of Dyed Textiles Treated with Colorless Multifunctional Biomaterial -- Studies on Multifunctional Efficacy of Vanillin and Its Derivatives on Textile Substrates -- Impact of Synthetic Textile Waste on the Environment and Assessment of Measures Available to Tackle It -- Textile Waste as Sustainable Substrate for Seed Germination and Plant Growing -- Fabric Waste Minimization in Readymade Garment Units: A Step towards Sustainability in Textile Industry -- Utilizing Soybean Protein Fabric as a Means of Sustainable Development -- Investigating the Environmental Sustainability of Military Combat Uniforms: An Integrated Analysis of Material Sourcing, Production Pro-cesses, and Disposal Practices -- Impact of Fiber Blend and Finishing Processes on Filtration and Related Properties of Needle Punched Composite Nonwoven -- Advancing Sustainability with 3D Printed Auxetic Textile Structures: Design and Simulation for Technical Applications -- Exploring the Impact of Jute Fabric Reinforcement on the Mechanical Characteristics of Poly Lactic Acid Composites: A Research Study -- Prototype Development of Smart Vest for Search and Rescue (SAR) Dogs -- Review on Design and Development of Woven Textiles for Anti-Gravity/Micro-Gravity Explorations -- AI: Emerging Future Prospects in Fashion Industry -- Design and Development of 3D Printed PLA Blocks for Textile Printing.

Sommario/riassunto

This book presents peer-reviewed articles from the 7th International Conference on Technical Textiles and Nonwovens, ICTN 2023, held from 12th to 14th December 2023 at the Indian Institute of Technology Delhi (IIT Delhi) in India. It brings together leading entrepreneurs, researchers, academicians, experts, and students from all over the world to share a common platform to present and share recent research investigations, technological advancements, and exchange ideas and global views on the future perspectives and development in the field. The book covers various topics related to advancements in materials, engineering and technology as well as sustainable practices in the area of nonwovens, medical textiles, sports textiles, protective textiles, textile composites, nano-finishing, smart textiles, and so on.