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Altri autori (Persone)	SeiduRaphael Kanyire TawiahBenjamin
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Sommario/riassunto	This book addresses the essential need for innovative materials and processing techniques in manufacturing, making it a vital resource in

the increasingly critical era of sustainable production. Globally, as industries face mounting pressure to reduce their environmental and social impact, this book comes in handy as it discusses the latest innovations in materials highlighting the important role of eco-friendly biodegradable textile materials revolutions and sustainable dye developments; and examines cutting-edge processing techniques that enhance the sustainability of textile production. Techniques such as waterless dyeing, energy-efficient manufacturing processes, and the integration of smart technologies for resource management are explored in detail. Other themes focusing on natural fibres from renewable resources, recycled materials, and recent innovations in fibre technology that contribute to sustainability will be discussed. Lifecycle assessment of textile materials and processing techniques evaluating the environmental impact of textiles from production to disposal has been discussed in detail with case studies illustrating the potential for large-scale adoption. The regulatory and certification regimes for sustainable textiles have been discussed extensively considering the unique challenges of the various economic blocs. The books conclude with a thorough discussion of the perception and acceptance of sustainable textiles by consumers. The multidisciplinary approach of this book - incorporating evidence from materials science, textile engineering, environmental science, and social perspective provides a holistic discourse on sustainability, making it suitable for ESG professionals, Environmental Science, Textile Science and Engineering, as well as Material Science students of all levels.