

1. Record Nr.	UNINA9910583353203321
Autore	UI-Islam Shahid
Titolo	The impact and prospects of green chemistry for textile technology [[electronic resource] /] / edited by Shahid UI-Islam and B. S. Butola
Pubbl/distr/stampa	Duxford, United Kingdom ; ; Cambridge, MA ; ; Kidlington, United Kingdom : , : Woodhead Publishing, An imprint of Elsevier, , [2019] ©2019
ISBN	0-08-102492-4 0-08-102491-6
Descrizione fisica	1 online resource (570 pages)
Collana	The Textile Institute Book Series
Disciplina	660
Soggetti	Green chemistry Textile industry - Technological innovations Dyes and dyeing Textiles Textile industry Green Chemistry Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Green chemistry in the wet processing of textiles -- Sustainable colorants -- Metal mordants and biomordants -- Sustainable cyclodextrin in textile applications -- Recent advances in application of chitosan and its derivatives in functional finishing of textiles -- Enzymes for green chemical processing of cotton -- The sonochemical functionalization of textiles -- Nonthermal plasma: A promising green technology to improve environmental performance of textile industries -- Textile finishing with biomacromolecules: A low environmental impact approach in flame retardancy -- Antimicrobial textiles -- Insect-repellent textiles using green and sustainable approaches -- UV-protective textiles -- Significance of bioadsorption process on textile industry wastewater -- Application of chitosan derivatives as promising adsorbents for treatment of textile wastewater -- Recent advances in remediation of synthetic dyes from wastewaters using sustainable and low-cost adsorbents -- Treatment of industrial dyes

using chitosan-supported nanocomposite adsorbents.

---

## Sommario/riassunto

The Impact and Prospects of Green Chemistry for Textile Technology provides a review and summary of the role of green chemistry in textiles, including the use of green agents and sustainable technologies in different textile applications. The book systematically covers the history and chemistry of eco-friendly colorants, chitin, chitosan, cyclodextrin, biomordants, antimicrobial, UV protective, flame retardant, insect repellent textiles, and advanced pre- and post-treatment technologies, such as the sonochemistry and plasma methods currently employed in functional modifications. The book also pays attention to the remediation of textile effluents using novel, sustainable and inexpensive adsorbents. Written by high profile contributors with many years of experience in textile technology, the book gives engineers and materials scientists in the textile industry the information they need to effectively deploy these green technologies and processes.

---