Record Nr. UNINA9910815163203321 Autore Kan Chi-wai Titolo A novel green treatment for textiles : plasma treatment as a sustainable technology / / Chi-wai Kan Pubbl/distr/stampa Boca Raton:,: CRC Press,, [2015] ©2015 **ISBN** 0-429-06376-8 1-4398-3944-1 Edizione [1st ed.] Descrizione fisica 1 online resource (298 p.) Collana Sustainability: Contributions through Science and Technology Classificazione SCI013000SCI013010TEC010000 Disciplina 660.044 660/.044 Plasma chemistry - Industrial applications Soggetti Textile fibers - Etching Bleaching Dyes and dyeing Textile chemistry Green chemistry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Front Cover; Contents; List of Figures; List of Tables; Series Preface; Foreword: Preface: Acknowledgements: About the Author: Chapter 1: Introduction; Chapter 2: Textile Materials; Chapter 3: Processes for Treating Textile Fibres; Chapter 4: What Is Plasma?; Chapter 5: Application of Plasma in the Pretreatment of Textiles; Chapter 6: Application of Plasma Treatment in the Dyeing of Textiles; Chapter 7: Application of Plasma Treatment in the Printing of Textiles; Chapter 8: Application of Plasma Treatment in Finishing of Textiles Chapter 9: Sustainability and Development of Plasma Treatment in Textile Wet ProcessingBack Cover Sommario/riassunto Focusing on green chemistry and sustainability, this book discusses how plasma treatment has been used to modify textile properties. The book highlights the benefits of generating plasma and the reaction

mechanisms between the surface of a textile and plasma species. The text addresses factors such as the nature of plasma gas, gas flow rate,

system pressure, and discharge power that affect the final results of plasma treatments. An opening chapter presents current brown methods of treating textiles, exploring the environmental, economic and social costs of these methods. Throughout the book, the author presents the twelve principles of green chemistry and how they can be applied to the textile industry. --