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Functional Textiles for Improved Performance, Protection and Health-N. Pan
2016-08 The textile industry is increasingly based on ongoing innovation and development of higher performance products, and the field of functional textiles is no exception. This book explores the development of textiles with a wide range of functions, with the aim of improving the performance of the product in terms of the protection and health benefits that it can offer. The book is split into two parts. Part one focuses on functional textiles for improved performance and protection, with chapters reviewing antistatic, flame retardant and infrared functional textiles, among many others. Chapters in part two examine the uses of functional textiles in a medical context, including superhydrophobic materials, antibacterial textiles and insect-repellent materials. With its distinguished editors and contributions from some of the world's leading authorities, Functional Textiles for improved performance, protection and health is invaluable for textile scientists, technologists and engineers as well as those designing and manufacturing textiles. It is also a suitable reference for the academic sector. Examines the use of functional textiles in a medical context, including superhydrophobic materials, antibacterial textiles and insect-repellent materials. Topics range from textile chemicals and their interaction with skin to novel pesticide protective clothing. Considers anti-ultraviolet protection of clothing and flame retardant textiles.

High Performance Technical Textiles-Roshan Paul 2019-05-06 An authentic resource for the fundamentals, applied techniques, applications and recent advancements of all the main areas of technical textiles. Created to be a comprehensive reference, High Performance Technical Textiles includes the review of a wide range of technical textiles from household to space textiles. The contributors—noted experts in the field from all the continents—offer in-depth coverage on the fibre materials, manufacturing processes and techniques, applications, current developments, sustainability and future trends. The contributors include discussions on synthetic versus natural fibres, various textile manufacturing techniques, textile composites and finishing approaches that are involved in the manufacturing of textiles for a specific high performance application. Whilst the book provides the basic knowledge required for an understanding of technical textiles, it can serve as a springboard for inspiring new inventions in hi-tech fibres and textiles. This important book: Contains a unique approach that offers a comprehensive understanding of the manufacturing and applications of technical textiles. Includes a general overview to the fundamentals, current techniques, end use applications as well as the most recent advancements. Explores the current standards in the industry and the ongoing research in the field. Offers a comprehensive and single source reference on the topic. Written for academics, researchers and professionals working in textile.
and related industries, High Performance Technical Textiles offers a systematic, structured, logical and updated source of information for understanding technical textiles.

**Sports Materials**-Thomas Allen 2020-01-24 Advances in materials are crucial to the development of sports equipment, from tennis rackets to skis to running shoes. Materials-driven improvements in equipment have helped athletes perform better, while enhancing safety and making sport more accessible and enjoyable. This book brings together a collection of 10 papers on the topic of sports materials, as published in a Special Issue of Applied Sciences. The papers within this book cover a range of sports, including golf, tennis, table tennis and baseball. State-of-the-art engineering techniques, such as finite element modelling, impact testing and full-field strain measurement, are applied to help further our understanding of sports equipment mechanics and the role of materials, with a view to improving performance, enhancing safety and facilitating informed regulatory decision making. The book also includes papers that describe emerging and novel materials, including auxetic materials with their negative Poisson’s ratio (fattening when stretched) and knits made of bamboo charcoal. This collection of papers should serve as a useful resource for sports engineers working in both academia and industry, as well as engineering students who are interested in sports equipment and materials.

**Functional Finishes for Textiles: Improving Comfort, Performance and Protection**-Roshan Paul 2018-11-13 Functional finishes for textiles reviews the most important fabric finishes in the textile industry. It discusses finishes designed to improve the comfort and other properties of fabrics, as well as finishes which protect the fabric or the wearer. Each chapter reviews the role of a finish, the mechanisms and chemistry behind the finish, types of finish and their methods of application, application to particular textiles, testing and future trends. Describes finishes to improve comfort, performance, and protection of fabric or the wearer Examines the mechanisms and chemistry behind different types of finishes and their methods of application, testing and future trends Considers environmental issues concerning functional finishes

**Advances in Functional Finishing of Textiles**-Mohammad Shahid 2020-06-10 This book provides a comprehensive overview of the field of functional finishing of textiles, describing the state-of-the-art research and well-established techniques applied in the textile industry, and covering all areas of textile dyeing and finishing. It is intended for academic researchers and professionals in related scientific and engineering fields, including textile engineering, chemistry, nanotechnology, material science, biotechnology and environmental science. The book also provides reference material for stakeholders looking for innovative technologies and insights into the environmental and sustainability issues in the development of functional textiles and related products.

**Sustainable Practices in the Textile Industry**-Luqman Jameel Rather 2021-08-24 The increasing environmental and health concerns owing to the use of large quantities of water and hazardous chemicals in conventional textile finishing processes has lead to the design and development of new dyeing strategies and technologies. Sustainable Practices in the Textile Industry comprises 13 chapters from various research areas dealing with the application of different sustainable technologies for enhancing the dyeing and comfort properties of textile materials with substantial reduction in wastewater problems. Chapters focus on the sophisticated methods for improving dye extraction and dyeing properties which will minimize the use of bioresource products. This book also brings out the innovative ways of wet chemical processing to alleviate the environmental impacts arising from this sector. This book also discusses innovations in eco-friendly methods for textile wet processes and applications of enzymes in textiles in addition to the advancements in the use of nanotechnology for wastewater remediation.

**Innovative and Emerging Technologies for Textile Dyeing and Finishing**-Luqman Jameel Rather 2021-02-17 With the public enhanced awareness towards eco-preservation, eco-safety and health concerns, environmentally benign, nontoxic and sustainable bioresource materials produced mainly from non-food crops have revolutionized all industrial sectors particularly textile industry. In recent years, textile industries
in developed countries are getting increasing interest in global interest due to the varied and changing world market conditions in terms of price, durability and fiber mixtures as well as design, colors, weight, ease of handling and product safety. The increasing environmental and health concerns owing to the use of large quantities of water and hazardous chemicals in conventional textile finishing processes lead to the design and development of new dyeing strategies and technologies. Effluents produced from these textiles wet processing industries are very diverse in chemical composition, ranging from inorganic finishing agents, surfactants, chlorine compounds, salts, total phosphate to polymers and organic products. This aspect forced western countries to exploit their high technical skills in the advancements of textile materials for high quality technical performances, and development of cleaner production technologies for cost effective and value-added textile materials. Therefore, vast and effective research investigations have been undertaken all over the world to minimize the negative environmental impact of synthetic chemical agents through the sustainable harvest of eco-friendly bioresource materials. The book will discuss following research developments in academic and industry: Improvement in dye extraction and its applications Impact of textile dyeing on environment Textile finishing by natural and ecofriendly means Natural dyes as environmental-friendly bioresource products Textile effluent remediation via physical, chemical and biological processes.

**Advances in Functional and Protective Textiles**-Shahid ul-Islam 2020-07-04 Advances in Functional and Protective Textiles explores the latest research in the use of textile materials for protective clothing. The book's international roster of researchers in industry and academia describe innovative applications in defense, medical, sports, fire protection, radiation protection, and more. This book is an invaluable resource for readers seeking to produce textiles with self-cleaning, antimicrobial, super-hydrophobic, UV-protective, insect repellent, flame retardant or anti-feling properties. Particular attention is given to textile fibers, including cotton, wool, viscose, and other synthetic fibers whose properties solve many problems. Sustainable approaches to the processing of textiles for protective properties are also addressed, as are hazards. Introduces the advanced testing and modeling methods that are necessary for the production of protective textiles Describes the properties of the latest advanced chemicals and materials used to make protective textiles and clothing Covers every step in the development of protective clothing, from the engineering of novel materials, to advanced fabrication methodologies and applications.

**Physico-chemical Aspects of Textile Coloration**-Stephen M. Burkinshaw 2016-02-08 The production of textile materials comprises a very large and complex global industry that utilises a diverse range of fibre types and creates a variety of textile products. As the great majority of such products are coloured, predominantly using aqueous dyeing processes, the coloration of textiles is a large-scale global business in which complex procedures are used to apply different types of dye to the various types of textile material. The development of such dyeing processes is the result of substantial research activity, undertaken over many decades, into the physico-chemical aspects of dye adsorption and the establishment of 'dyeing theory', which seeks to describe the mechanism by which dyes interact with textile fibres. Physico-Chemical Aspects of Textile Coloration provides a comprehensive treatment of the physical chemistry involved in the dyeing of the major types of natural, man-made and synthetic fibres with the principal types of dye. The book covers: fundamental aspects of the physical and chemical structure of both fibres and dyes, together with the structure and properties of water, in relation to dyeing; dyeing as an area of study as well as the terminology employed in dyeing technology and science; contemporary views of intermolecular forces and the nature of the interactions that can occur between dyes and fibres at a molecular level; fundamental principles involved in dyeing theory, as represented by the thermodynamics and kinetics of dye sorption; detailed accounts of the mechanism of dyeing that applies to cotton (and other cellulosic fibres), polyester, polyamide, wool, polycrylonitrile and silk fibres; non-aqueous dyeing, as represented by the use of air, organic solvents and supercritical CO2 fluid as alternatives to water as application medium. The up-to-date text is supported by a large number of tables, figures and illustrations as well as footnotes and widespread use of references to published work. The book is essential reading for students, teachers, researchers and professionals.
involved in textile coloration.

**Advanced Functional Textiles and Polymers**
Shahid Ul-Islam 2019-11-12 This book on advanced functional textiles and polymers will offer a comprehensive view of cutting-edge research in newly discovered areas such as flame retardant textiles, antimicrobial textiles, insect repellent textiles, aroma textiles, medical-textiles, smart textiles, and nano-textiles etc. The second part the book provides innovative fabrication strategies, unique methodologies and overview of latest novel agents employed in the research and development of functional polymers.

**Designing Apparel for Consumers**
M-E Faust 2014-04-03 Given its importance for consumer satisfaction and thus brand success, apparel fit is a major challenge for retailers and brands across the industry. Consequently there have been major developments in sizing research and how it can be used in apparel design. This book reviews how these developments are affecting clothing design for different groups of consumers. Part one identifies various aspects of body shape, size, volume and the psychological aspects of designing apparel. This section covers topics such as body shape and its influence on apparel size and consumer choices, sizing systems, body shape and weight distribution (with a discussion of the Body Volume Index (BVI) versus the Body Mass Index (BMI)), and the psychological and sociological factors influencing consumers’ choice of apparel. Part two outlines the challenges in understanding the sizing and shape requirements and choices of particular customer groups. This section discusses apparel designed for infants and children, older consumers, overweight and obese consumers, plus size Black and Latino women, apparel design for Asian and Caucasian ethnic groups, sizing requirements for male apparel, maternity apparel, intimate apparel for varying body shapes, and the challenges of designing headwear to fit the size and shape of Western and Asian populations. Designing apparel for consumers provides an invaluable reference for apparel designers, manufacturers, and R&D managers in the textile industry, as well as postgraduate students and academic researchers in textiles. Reviews developments affecting clothing design for different groups of consumers Identifies various aspects of body shape, size, volume and the psychological aspects of designing apparel Outlines the challenges in understanding sizing and shape requirements and choices of particular customer groups

**The Types, Properties, and Applications of Conductive Textiles**
Sandra Varnaitė-Žuravliova 2019-11-04 This book provides basic knowledge about the principles, roles, types and evaluation methods of antistatic and conductive textile materials, which are used for protection against charge dissipation, incendiary discharge, intense electrostatic fields and electromagnetic interference (EMI). It also discusses the basic properties of different types of conductive fibers and filaments and the manufacturing processes of conductive textile products. Although such materials are typically produced as shields against charge dissipation and EMI, they are also used in other special applications, such as sensors, antennas, flexible heaters, and specialized apparel. The book will be useful for students, pedagogues and other academics. It will also be of interest to the general reader who wants to expand their knowledge of the applications and properties of conductive textiles.

**Functional Textiles and Clothing 2020**
Abhijit Majumdar 2020-12-19 This volume contains select papers presented during the Functional Textiles and Clothing Conference 2020 held at Indian Institute of Technology Delhi. The volume covers recent developments, challenges and opportunities in the field of functional and protective clothing; functional printing and finishing; sustainable production and supply chain; and testing and characterisation. This volume will be of interest to researchers, professional engineers, entrepreneurs, and market stakeholders interested in functional textiles and clothing.

**Polymer Blends and Compatibilization**
Volker Alstättd 2018-07-02 This book is a printed edition of the Special Issue "Polymer Blends and Compatibilization" that was published in Materials

**Advances in Ergonomics in Design**
Francisco Rebelo 2017-06-22 This book provides readers with a timely snapshot of ergonomics research
and methods applied to the design, development and prototyping – as well as the evaluation, training and manufacturing – of products, systems and services. Combining theoretical contributions, case studies, and reports on technical interventions, it covers a wide range of topics in ergonomic design including: ecological design; educational and game design; cultural and ethical aspects in design; user research and human–computer interaction in design; as well as design for accessibility and extreme environments, and many others. The book places special emphasis on new technologies such as virtual reality, state-of-the-art methodologies in information design, and human–computer interfaces. Based on the AHFE 2017 International Conference on Ergonomics in Design, held on July 17–21, 2017, in Los Angeles, California, USA, the book offers a timely guide for both researchers and design practitioners, including industrial designers, human–computer interaction and user experience researchers, production engineers and applied psychologists.

**Smart Textiles**- Nazire D. Yilmaz 2018-12-06

Smart Textiles: Wearable Nanotechnology provides a comprehensive presentation of recent advancements in the area of smart nanotextiles giving specific importance to materials and production processes. Different materials, production routes, performance characteristics, application areas and functionalization mechanisms are covered. The book provides a guideline to students, researchers, academicians and technologists who seek novel solutions in the related area by including groundbreaking advancements in different aspects of the diverse smart nanotextiles fields. This ground-breaking book is expected to spark an inspiration to allow future progress in smart nanotextiles research. The diversity of the topics, as well as the expert subject-matter contributors from all over the world representing various disciplines, ensure comprehensiveness and a broad understanding of smart nanotextiles.

**Value Added Textile Yarns-Manufacturing Techniques and its uses**-Dr. S. S. Bhattacharya

“Value added textile yarns” means a thread increases its value from the conventional ones with respect to price and aesthetic and functional properties or all at a time. These may be the changes of either bulk, colour, using different raw materials, any changes of technical parameters periodically or randomly etc. along the length of the yarns. Value added also refers to the worth added to a product during production process, means the difference between the selling price and the cost of production is more from the normal product. The more the difference, more will be the value added. The global market of “Value added Textile Yarns” and its products is leaping forward as the conscious of the mankind is gradually increasing. The textile products are lighter, stronger, less effective by the environment are getting popularity in each field of engineering. The book deals from the basic value added yarns, like doubled or folded yarns, to the modern concept of novelty yarns in different fields, like fancy yarns, conductive yarns, medical yarns etc. The book also discussed the production of bottle flake yarns. Manufacturing technology including modern and conventional is also described in short here, but the most important and necessary material are incorporated. Mathematical Calculation, important technical parameters, etc. are also mentioned. We do hope that the book will satisfy the students, researchers and also those who are in the industries.

**Textile Manufacturing Processes**- Faheem Uddin 2019-08-28

Textile manufacturing is an important subject in textile programs and processing industries. The introduction of manmade and synthetic fibers, such as polyester, nylon, acrylic, cellulose, and Kevlar, among others, has greatly expanded the variety of textile products available today. In addition, new fiber development has brought about new machines for producing yarns, fabrics, and garments. Textile Manufacturing Processes is a collection of academic and research work in the field of textile manufacturing. Written by experts, chapters cover topics such as yarn manufacturing, fabric manufacturing, and garment and technical textiles. This book is useful for students, industry workers, and anyone interested in learning the fundamentals of textile manufacturing.

**Cotton Science and Processing Technology**-Hua Wang 2020-11-08

This book summarizes all different fields of cotton fiber, including genetics, fiber chemistry, soft materials, textile, and fashion engineering. It also contains some new applications such as biomaterials, nanocoated smart fabrics, and functional textiles. Moreover, the significant improvement recently in gene
modification and gene technology is introduced. This book discusses all these aspects in a more straightforward way, and new illustrations will help readers to understand the contents. It is intended for undergraduate and graduate students who are interested in cotton science and processing technologies, researchers investigating the updated applications of cotton in various fields as well as industrialists who want to have a quick review of the cotton and its different stages.

Textiles in Sport-Roshan Shishoo 2005-08-29 The technical developments in the sports clothing industry has resulted in the use of functional textiles for highly-specialised performances in different sports. Developments include thermal and functional properties and coated and laminated clothes. With bio- and smart materials providing such a strong focus in the textile industry generally, companies are going for ‘value-added’ textiles, such as in-built sensors which monitor performance. In-built wear comfort is a growing market trend and includes clothing which improves the skin’s performance. Written by a distinguished editor and a team of authors from the cutting edge of textile research, Textiles in sport discusses high-performance, high-function and intelligent textiles for sportswear. Invaluable for a broad range of readers Discusses high-performance, high-function and intelligent textiles for sportswear

Fibrous and Textile Materials for Composite Applications-Sohel Rana 2016-01-22 This book focuses on the fibers and textiles used in composite materials. It presents both existing technologies currently used in commercial applications and the latest advanced research and developments. It also discusses the different fiber forms and architectures, such as short fibers, unidirectional tows, directionally oriented structures or advanced 2D- and 3D-textile structures that are used in composite materials. In addition, it examines various synthetic, natural and metallic fibers that are used to reinforce polymeric, cementitious and metallic matrices, as well as fiber properties, special functionalities, manufacturing processes, and composite processing and properties. Two entire chapters are dedicated to advanced nanofiber and nanotube reinforced composite materials. The book goes on to highlight different surface treatments and finishes that are applied to improve fiber/matrix interfaces and other essential composite properties. Although a great deal of information about fibers and textile structures used for composite applications is already available, this is the only book currently available that discusses all types of fibers and structures used to reinforce polymers, cement, metal or soil to improve their general performance and multi-functional behaviors. As such, it fills an important gap in the available literature and provides a valuable resource for a wide range of students and researchers from academia and industry.


Nanomaterials in Daily Life-Zhypargul Abdullaeva 2017-06-13 This book describes nanomaterials used and existing in the environment, food industry and packaging, health care products and cosmetics, housekeeping, nanomaterials for cleaning purposes, architectural building products, medicine, clothing and textile, smart electronics and sensors. Each chapter provides basic knowledge on synthesis of nanomaterials by biological approaches. Fundamental terms are defined, followed by explanations, examples, visual photographs, schemes and illustrations.

Active Coatings for Smart Textiles-Jinlian Hu 2016-04-06 Active Coatings for Smart Textiles presents the latest information on active materials and their application to textiles in the form of coatings and finishes for the purpose of improving performance and creating active functional effects. This important book provides detailed coverage of smart coating types, processes, and applications. After an introduction to the topic, Part One introduces various types of smart and active coatings, including memory polymer coatings, durable and self-cleaning coatings, and breathable coatings. Technologies and related processes for the application of coatings to textiles is the focus of Part Two, with chapters devoted to microencapsulation technology, plasma surface treatments, and nanotechnology-based treatments. The book ends with a section on applications of smart textiles with responsive coatings, which are increasingly finding commercial niches in sportswear,
protective clothing, medical textiles, and architecture. Introduces various types of smart and active coatings for textiles Covers technologies and application processes for the coating and finishing of textiles Reviews commercial applications of such coatings, including in sportswear, protective clothing, medical textiles and architecture

Textile Processing and Properties - T.L. Vigo
2013-10-22 The type and amount of textile products have greatly proliferated over the last decade. Concomitant textile processing to improve the properties and ultimate performance has also undergone dramatic changes. Ready availability of instrumentation, computers, lasers and integration of these advances with similar progress in polymer/material science have led to the need for a unified discussion on these topics. The current book concisely discusses all aspects of textile processing, modification and performance for four major topics: preparation (by fiber type), dyeing and printing (dye type, theory and synthesis; dye classification by structure and application), improving functional and aesthetic textile properties (physical, chemical and physicochemical processes and concepts), and performance (chemical analysis, instrumental methods; physical, chemical, biological, multiple influences and standard tests). A detailed and logical progression from the initial purification of textiles to their performance and care is described. The book will be useful as a text for textile/polymer courses at undergraduate and graduate levels and as a comprehensive source of information for textile scientists, engineers, manufacturers, retailers and others with an interest in textile products.

Textile-Based Advanced Materials - Thomas Bechtold
2021-03-17 Developments in the science and technology of textiles are not only limited to apparel and fashion. Certainly, there are research efforts aimed at improving the construction and processing of textiles for clothing—such as studies on cleaner production to reduce environmental impact, increasing the utilization of fibers and process chemicals from renewable resources, and on the recycling of materials from post-consumer waste apparel back into the manufacturing of new clothing articles. In addition, technological concepts developed for the creation of clothing over the centuries are now being investigated for use in a diverse array of fields—such as in the manufacture of engineering composites, personal protective equipment, and medicine. Further, developments in other fields—such as electronics, nanotechnology, and information and communication technologies—are being investigated for their incorporation into apparel and clothing to create “smart textiles”. The aim of this Special Issue is to put together a collection of scientific reports on such efforts to highlight the range of scientific and technological issues that are being targeted and the ingenuity of the methodologies employed to find answers. It is hoped that readers of this issue will come away with an appreciation of the research being conducted in this area, and perhaps gain inspiration for their own scientific endeavors.

Textiles for Residential and Commercial Interiors 3rd Edition - Amy Wilbanks
2009-10-29 If you are serious about textiles and the built environment, this Third Edition is the one source to survey every aspect of textiles for residential and commercial interiors, from fiber to manufacturer, from its application to upholstered furniture, windows, walls, and floor coverings.

Developments in Heat Transfer - Marco Aurelio Dos Santos Bernardes
2011-09-15 This book comprises heat transfer fundamental concepts and modes (specifically conduction, convection and radiation), bioheat, entransy theory development, micro heat transfer, high temperature applications, turbulent shear flows, mass transfer, heat pipes, design optimization, medical therapies, fiber-optics, heat transfer in surfactant solutions, landmine detection, heat exchangers, radiant floor, packed bed thermal storage systems, inverse space marching method, heat transfer in short slot ducts, freezing an drying mechanisms, variable property effects in heat transfer, heat transfer in electronics and process industries, fission-track thermochronology, combustion, heat transfer in liquid metal flows, human comfort in underground mining, heat transfer on electrical discharge machining and mixing convection. The experimental and theoretical investigations, assessment and enhancement techniques illustrated here aspire to be useful for many researchers, scientists, engineers and graduate students.
Sulfur Compounds—Advances in Research and Application: 2012 Edition 2012-12-26
Sulfur Compounds—Advances in Research and Application: 2012 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Sulfur Compounds. The editors have built Sulfur Compounds—Advances in Research and Application: 2012 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Sulfur Compounds in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Sulfur Compounds—Advances in Research and Application: 2012 Edition has been produced by the world’s leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Antimicrobial Textiles Gang Sun 2016-04-08
Antimicrobial textiles have attracted a great deal of interest in recent years due to their potential for reducing the transmission of infection in medical and healthcare environments. Antimicrobial properties can also improve the performance and lifespan of consumer products, and so these fabrics are increasingly finding applications in the wider textile and apparel industry. This book provides systematic coverage of the technologies and materials required for developing these important textiles. In Part One, chapters address key issues and technologies in the creation of antimicrobial textile products. Topics covered include testing and regulation, microencapsulation, sol-gel coating and plasma technologies, nanotechnology and life cycle assessment. Part Two then reviews key antimicrobial agents, such as N-halamines, plant based compounds and photo-active chemicals. Finally, the chapters of Part Three offer detailed reviews of antimicrobial textiles for particular important applications, including medical devices, protective clothing and products with improved durability and longevity.

Functional Metal Oxide Nanostructures Junqiao Wu 2011-09-22
Metal oxides and particularly their nanostructures have emerged as an important class of materials with a rich spectrum of properties and potential for device applications. In this book, contributions from leading experts emphasize basic physical properties, synthesis and processing, and the latest applications in such areas as energy, catalysis and data storage. Functional Metal Oxide Nanostructures is an essential reference for any materials scientist or engineer with an interest in metal oxides, and particularly in recent progress in defect physics, strain effects, solution-based synthesis, ionic conduction, and their applications.

Handbook of Fibrous Materials, 2 Volumes Jinlian Hu 2020-04-27
Edited by a leading expert in the field with contributions from experienced researchers in fibers and textiles, this handbook reviews the current state of fibrous materials and provides a broad overview of their use in research and development. Volume One focuses on the classes of fibers, their production and characterization, while the second volume concentrates on their applications, including emerging ones in the areas of energy, environmental science and healthcare. Unparalleled knowledge of high relevance to academia and industry.

Textile Horizons 2006

Frontiers of Textile Materials Mohd Shabbir 2020-05-12
The book “Frontiers and Textile Materials” will deal with the important materials that can be utilized for value-addition and functionalization of textile materials. The topics covered in this book includes the materials like enzymes, polymers, etc. that are utilized for conventional textile processing and the advanced materials like nanoparticles which are expected to change the horizons of textiles. The futuristic techniques for textile processing like plasma are also discussed.

Textiles for Protection Richard A. Scott 2005-10-30
In today’s climate there is an increasing requirement for protective textiles, whether for personal protection, protection against the elements, chemical, nuclear or ballistic attack. This comprehensive book brings
Green and Sustainable Advanced Materials
Shakeel Ahmed 2018-10-30 Sustainable development is a very prevalent concept of modern society. This concept has appeared as a critical force in combining a special focus on development and growth by maintaining a balance of using human resources and the ecosystem in which we are living. The development of new and advanced materials is one of the powerful examples in establishing this concept. Green and sustainable advanced materials are the newly synthesized material or existing modified material having superior and special properties. These fulfil today’s growing demand for equipment, machines and devices with better quality for an extensive range of applications in various sectors such as paper, biomedical, textile, and much more. Volume 2, provides chapters on the valorization of green and sustainable advanced materials from a biomedical perspective as well as the applications in textile technology, optoelectronics, energy materials systems, and the food and agriculture industry.

AATCC Review- 2005

Textile Materials for Lightweight Constructions-Chokri Cherif 2015-08-11 In this book, experts on textile technologies convey both general and specific information on various aspects of textile engineering, ready-made technologies, and textile chemistry. They describe the entire process chain from fiber materials to various yarn constructions, 2D and 3D textile constructions, preforms, and interface layer design. In addition, the authors introduce testing methods, shaping and simulation techniques for the characterization of and structural mechanics calculations on anisotropic, pliable high-performance textiles, including specific examples from the fields of fiber plastic composites, textile concrete and textile membranes. Readers will also be familiarized with the potential offered by increasingly employed textile structures, for instance in the fields of composite technology, construction technology, security technology and membrane technology.

Indian Silk- 1995

Textile Asia- 2005