Siloxanes—Advances in Research and Application: 2013 Edition

Handbook of fiber science and technology. Volume 1, Chemical processing of fibers and fabrics

Solutions to Problems in Textile and Garment Industry

Handbook of Polyester Molding Compounds and Molding Technology

Fibrous Filter Media comprehensively covers the types, manufacture, applications, performance, and modeling of fibrous filter media. Part I introduces the principles of gas and liquid filtration, while Part II presents an overview of the types of fibrous filters, including details of fiber types, fabric construction, and applications. Part III covers a variety of filtration applications in which fibrous assemblies are used, with...
examples ranging from filtration for improving air quality, to medical filters, to industrial waste-water filtration. Finally, Part III covers the properties and performance of fibrous filters, including chapters on filter performance and simulation. With its expert editors and international team of contributors, this important book provides information on fibrous filters relevant to fiber and textile scientists, and is also ideal for academics and industry professionals working in the field of filtration. Dr. Philip Brown is Sweetenbng Professor of polymer and textile engineering at Clemson University, USA. Dr. Christopher Cox is Professor of mathematical sciences at Clemson University, USA. Systematic and comprehensive coverage of the trends and new technologies being developed in the field of fibrous filter media Focused on the needs of the textiles and filtration industries, with a clear emphasis on applied technology Contains contributions from an international team of authors edited by an expert in the field

Physico-chemical Apects of Textile Coloration Plasma Technologies for Textile Apparel details plasma based technologies in textile industries. It disseminates knowledge gained over the years by Indian Institutes and organizations in the arena of plasma based applications for textiles. The book describes basics of low temperature plasma production in vacuum as well as at atmospheric pressure and various applications of plasma in textile particularly in an Indian context.


Textile Handbook of Fiber Science and Technology: Volume 1 Discusses the components of textile finishes, and the chemical and physical properties of, as well as their effects on, various fibres. The book covers fundamentals of fibre finish science, such as theories of friction; laboratory testing of formulations, from preliminary component evaluation to analyses for material characterization; and the influence of wetting, emulsification and finish distribution on coatings.

Woollen Spinning, Weaving, Knitting, Dyeing, Bleaching and Printing Technology Handbook 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.

Handbook of Fiber Science and Technology Volume 2

Fibrous Filter Media Continuing the outstanding coverage from Part A, the authoritative information in Functional Finishes, Part B makes your work with fibers and fabrics cost-effective offers practical guidance in finishing techniques-including flame retardancy, water and oil repellency, soil release, electroconductivity, and radiation and eases your continuing study of this expanding field with numerous, current references-with many original findings not previously cited. As new advances widen the scope of this field, each volume of Handbook of Fiber Science and Technology becomes an indispensable acquisition for researchers. Textile, fiber, polymer, organic, physical, and biological chemists; textile finishers and chemical manufacturers; R & D personnel in the polymer, fiber, chemical, and textile industries; plastics and chemical engineers; materials scientists; and wood and paper technologists will find them essential references. They are also superior sources of supplementary reading for graduate and advanced undergraduate courses in polymer, fiber, and textile chemistry and technology; chemical processing of fibers, chemical technology and engineering, and polymer processing.

Textile Fibers, Dyes, Finishes, and Processes Continuing the outstanding coverage from Part A, the authoritative information in Functional Finishes, Part B makes your work with fibers and fabrics cost-effective offers practical guidance in finishing techniques-including flame retardancy, water and oil repellency, soil release, electroconductivity, and radiation and eases your continuing study of this expanding field with numerous, current references-with many original findings not previously cited. As new advances widen the scope of this field, each volume of Handbook of Fiber Science and Technology becomes an indispensable acquisition for researchers. Textile, fiber, polymer, organic, physical, and biological chemists; textile finishers and chemical manufacturers; R & D personnel in the polymer, fiber, chemical, and textile industries; plastics and chemical engineers; materials scientists; and wood and paper technologists will find them essential references. They are also superior sources of supplementary reading for graduate and advanced undergraduate courses in polymer, fiber, and textile chemistry and technology; chemical processing of fibers, chemical technology and engineering, and polymer processing.
Handbook of Fiber Science and Technology 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, polyacrylonitrile 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.

Handbook of Fiber Science and Technology This book provides an invaluable single source of information on the advances in yarn spinning technologies. Advanced spinning systems are described and comparisons are made of the properties of the yarns produced, and resultant finished products, with those from conventional systems. Part one provides an introduction to yarn fibre spinning and structure. Chapters discuss the principles of ring spinning and open-end spinning of yarns. Yarn structure and properties from different spinning techniques and yarn structural requirements for knitted and woven fabrics are also examined. Part two covers advances in particular yarn spinning technologies. Topics range from siro spinning to compact spinning technology and air-jet spinning. Final chapters explore how to minimise fibre damage which occur during spinning and the use of spin finishes for textiles. With its distinguished editor and array of international contributors, Advances in yarn spinning technology is an important text for spinners, yarn manufacturers and fabric producers, as well as researchers, technicians, engineers and technologists in this sector of the textile industry. Documents advances in spinning technologies and presents comparisons between systems Assesses particular textile spinning technologies with specific chapters focusing on siro, compact, rotor, friction and air-jet spinning Reviews measures to minimise fibre
Where To Download Handbook Of Fiber Finish Technology

damage caused by spinning are investigated with specific relevance to rotor and friction spinning

Textile Processing with Enzymes

Handbook of Fiber Finish Technology This unique handbook provides a vivid multidisciplinary dimension through technological perspectives to present cutting-edge research in the field of natural coloration and finishing. The 20 chapters are divided into four parts: Substrates for coloration and finishing; renewable colorants and their applications; advanced materials and technologies for coloration and finishing; sustainability. Among the topics included in the Handbook of Renewable Materials for Coloration and Finishing are: The systematic discussion on the suitability, physical, chemical and processing aspects of substrates for coloration and finishing Bio-colorant’s application as photosensitizers for dye sensitized solar cells Animal based natural dyes Natural dyes extraction and dyeing methodology Application of natural dyes to cotton and jute textiles Sol-gel flame retardant and/or antimicrobial finishes for cellulosic textiles Rot resistance and antimicrobial finish of cotton khadi fabrics Advanced materials and technologies for antimicrobial finishing of cellulosic textiles

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Handbook of Fiber Science and Technology: pt. A-B. Chemical processing of fibers and fabrics

Advances in Yarn Spinning Technology

Tufted Carpet

Book Review Index

Conference Proceedings Spinning is a major industry; it is part of the textile manufacturing process where three types of fibre are converted into yarn, then fabric, then textiles. The textiles are then fabricated into clothes or other artifacts. The fundamental operations for the stocks of fibers from which a woollen yarn is made are opening, cleaning, mixing, forming a slubbing or roving and finally thinning the roving to the required yarn number and twisting it to produce a yarn possessing the requirements for subsequent processing such as warping, winding, weaving, finishing and dyeing. These demands vary with the different conditions confronted in manufacturing but include the following features: strength, elasticity, uniformity in weight per unit length and even distribution of twist. Woollen spinning involves three principal operations, irrespective of whether the mule or the frame or ring spinner is used, namely: Drafting, final drawing out, Twisting, or insertion of twist, Winding on, or packaging. Weaving constitutes the actual production of cloth or fabric, i.e., to combine the essentially one dimensional textile structure thread or
yarn in such a way as to result in an essentially two dimensional structure of cloth of certain appearance, hand and strength. Knitting is the art and science of constructing a fabric by inter lacing loops, there are two types of knitting: warp and weft knitting. In recent years whole new classes of dyes such as fiber reactive, disperse, cationic basic, neutral dying premetalized have been discovered and produced for the dyeing of the natural and new synthetic, hydrophobic fibers. Bleaching improves whiteness by removing natural coloration and remaining trace impurities from the cotton; the degree of bleaching necessary is determined by the required whiteness and absorbency. Cotton being a vegetable fibre will be bleached using an oxidizing agent, such as dilute sodium hypochlorite or dilute hydrogen peroxide. If the fabric is to be dyed a deep shade, then lower levels of bleaching are acceptable, for example. However, for white bed sheetings and medical applications, the highest levels of whiteness and absorbency are essential. Wool fiber production technology necessitates full understanding of its growth, pristine structure, physical, chemical and functional properties as well as processes involving manufacture of textile fibers. Some of the fundamentals of the book are woollen spinning, atmospheric conditions in wool manufacturing, Bradford system top gilling or top finishing, the principle of weaving, woollen and worsted weaves, knitting, the changing outlook of the knitting industry, influence of fiber fineness on quantity of dye required, altering the affinity of the wool fiber for dyes, dyeing of yarn according to the packing system, special wool finishes, water repellent, stain resistant treatments for worsted and woollen fabrics, the printing of wool piece goods, lustering of wool fabrics, fluorochemicals, mothproofing etc. The present book is of its own kind which covers woollen spinning; knitting, dyeing, bleaching and printing, special wool finishes etc. This is an important reference book for wool technologists, scientists, new entrepreneurs, research scholars and all others related to this field.

Functional Textiles for Improved Performance, Protection and Health

Recycling in Textiles

Textile Processing and Properties Maintaining a balance between depth and breadth, the Sixth Edition of Principles of Polymer Systems continues to present an integrated approach to polymer science and engineering. A classic text in the field, the new edition offers a comprehensive exploration of polymers at a level geared toward upper-level undergraduates and beginning graduate stu

Sci-tech News

Handbook of Renewable Materials for Coloration and Finishing 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

Textile Chemist and Colorist

Chemical processing of fibers and fabrics

Handbook of Fiber Science and Technology

Modified Fibers with Medical and Specialty Applications

Modified Fibers with Medical and Specialty Applications

Handbook of Fiber Science and Technology Volume 2 Covers cutting edge areas of fiber design and function in an introductory format Addresses a wide range of applications and modifications of natural and synthetic fibers for various applications Focuses on medical applications, but not exclusively Military and homeland security related applications Wound dressing design and future improvements are also covered Contains several different subjects such as magnetic fibers and electrospun fibers

Textile Technology Digest
Handbook of Fiber Science and Technology: - Cop. 1989. - XX, 332 S. - (International fiber science and technology series ; 9) Continuing the outstanding coverage from Part A, the authoritative information in Fundamentals and Preparation, Part B rounds out the first comprehensive treatise on chemical processing of textiles. A systematic, single-source treatment of key topics in the field, this state-of-the-art work introduces major savings in time and cost to your work with fibers and fabrics... provides a foundation for projecting future developments... and guides you to useful further study with helpful, current references. A's new advances expand the scope of this field, each volume of Handbook of Fiber Science and Technology becomes an indispensable acquisition for researchers. Textile, fiber, polymer, organic, physical, and biological chemists; textile finishers and chemical manufacturers; research and development personnel in the polymer, fiber, chemical, and textile industries; plastics and chemical engineers; materials scientists; and wood and paper technologists will find them essential references. They are eminent sources for supplementary reading in graduate and advanced undergraduate courses including polymer, fiber, and textile chemistry and technology; chemical processing of fibers; chemical engineering; and polymer processing.

Handbook of fiber science and technology. Volume 1, Chemical processing of fibers and fabrics With the increasing need to reduce pollution in textile production, the use of enzymes in the chemical processing of fibers and textiles is rapidly gaining recognition for its eco-friendly and non-toxic characteristics. Enzymes are a safe alternative in a wide range of textile processes that otherwise require harsh chemicals, the disposal of which poses environmental problems. This book covers all of the relevant issues from basic biochemistry and enzymology to the industrial application of these biocatalysts. It begins with the fundamental aspects of enzymes determining catalytic properties, followed by a summary of fibrous and non-fibrous materials as substrates for enzymes. Chapters discuss catalysis and processing, with an overview of the function and application of enzymes used in textile processing, and addresses process engineering and industrial enzyme applications. The final part
presents the practical aspects of handling enzymes, provide a detailed look at operational and storage stabilities, and consider the use of enzymes in effluent treatment.

Handbook of Fiber Science and Technology

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An increasing amount of waste is generated each year from textiles and their production. For economic and environmental reasons it is necessary that as much of this waste as possible is recycled instead of being disposed of in landfill sites. In reality the rate of textile recycling is still relatively low. On average, approximately ten million tonnes of textile waste is currently dumped in Europe and America each year. Considering the diversity of fibrous waste and structures, many technologies must work in concert in an integrated industry in order to increase the rate of recycling. Recycling in textiles shows how this can be achieved. The first part of the book introduces the subject by looking at the general issues involved and the technologies concerned. Part Two explores the chemical aspects of textile recycling. Part Three focuses on recycled textile products, including nonwovens and alternative fibres. Finally, the last part of the book discusses possible applications of recycled textiles, including using recycled products in the operating theatre, for soil stabilisation and in concrete reinforcement. Recycling in textiles presents several promising technologies and ideas for recycling systems. This is the first book of its kind to bring together textile recycling issues, technology, products, processes and applications. It will prove an invaluable guide to all those in the industry who are now looking for ways to recycle their textile waste. Provides extensive coverage of this hot topic. An invaluable guide for all in the textile industry. Learn how to increase the rate of recycling.

Makromoleküle

This book should be of interest to students and practitioners of materials science, production engineering, and engineering and design.

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