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filters -- ; 6.3. Filtration mechanism of nonwoven fabrics and their filter efficiency -- ; 6.4. Applications of nonwoven fabric filters -- ; 6.5. Future trends -- ; 6.6. Sources of further information -- References -- ; 7. Simulation of filtration in shaped fiber media / John Larzelere -- ; 7.1. Introduction -- ; 7.2. Solution methodology -- ; 7.3. Results and discussion -- ; 7.4. Conclusions and continuing work -- Acknowledgment -- References -- ; 8. Plasma textiles as fibrous filter media / Srinivasan C. Rasipuram -- ; 8.1. Introduction -- ; 8.2. Single fiber theory -- ; 8.3. Single fiber efficiency -- ; 8.4. Two infinitely long parallel cylinders -- ; 8.5. Filtration testing of a plasma textile -- ; 8.6. Filtration efficiency results -- ; 8.7. Conclusions -- References -- ; pt. III Applications of Fibrous Filters -- ; 9. Nanofibers for coalescing filter media for water -- diesel separation / George Chase -- ; 9.1. Brief review of coalescing filter media -- ; 9.2. Brief review of electrospinning -- ; 9.3. Experimental description -- ; 9.4. Conclusions -- References -- ; 10. Air filtration in aero engines / Antonio Filippone -- ; 10.1. Introduction -- ; 10.2. History of the Engine Inlet Barrier Filter -- ; 10.3. EIBF design -- ; 10.4. EIBF applications -- ; 10.5. EIBF performance -- ; 10.6. EIBF performance modeling -- ; 10.7. EIBF case study -- References -- ; 11. Filtration of drinking water / Darren Radcliffe-Oatley -- ; 11.1. Introduction -- ; 11.2. Types of water filter -- ; 11.3. Materials -- ; 11.4. Applications -- ; 11.5. Future trends -- ; 11.6. Conclusion -- References -- ; 12. Application of nanofibrous membranes and their suitability for membrane bioreactor processes in wastewater treatment / Jiri Cuhorka -- ; 12.1. Introduction -- ; 12.2. Membrane bioreactors -- ; 12.3. Nanofibrous membrane -- ; 12.4. Future directions -- ; 12.5. Conclusions -- References.

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## Sommario/riassunto

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 Sweetenburg Professor of polymer and textile engineering at Clemson University, USA. Dr. Christopher Cox is Professor of mathematical sciences at Clemson University, USA.

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