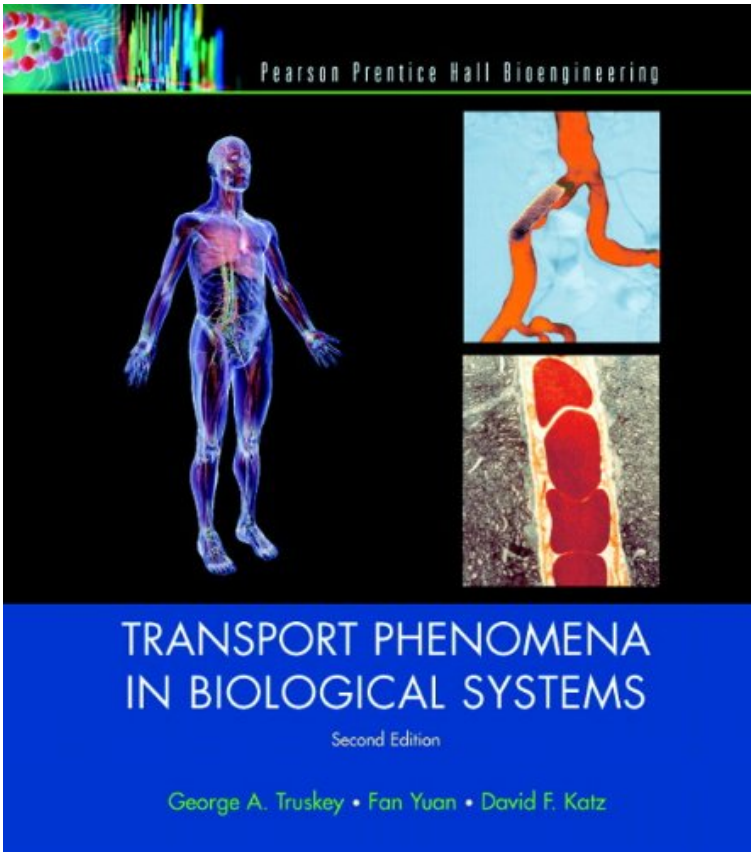
Transport Phenomena in Biological Systems (2nd Edition)

George A. Truskey, Fan Yuan, David F. Katz
**Download PDF | ePub | DOC | audiobook | ebooks*



#353476 in Books 2009-01-02Original language:EnglishPDF # 1 9.40 x 2.00 x 8.40l, 3.50 #File Name: 0131569880888 pages | File size: 38.Mb

George A. Truskey, Fan Yuan, David F. Katz : Transport Phenomena in Biological Systems (2nd Edition) before purchasing it in order to gage whether or not it would be worth my time, and all praised Transport Phenomena in Biological Systems (2nd Edition):

1 of 1 people found the following review helpful. Not the best biotransport book out thereBy Waddah I MoghramNot as many examples and notations is not consistent throughout the book0 of 0 people found the following review helpful. Five StarsBy CustomerExcellent condition.0 of 0 people found the following review helpful. Five StarsBy Cococatrequired book

Presenting engineering fundamentals and biological applications in a unified way, this book provides learners with the skills necessary to develop and critically analyze models of biological transport and reaction processes. It covers topics in fluid mechanics, mass transport, and biochemical interactions, with engineering concepts motivated by specific biological problems. For researchers in biomedical engineering.

From the Back CoverThe efficient transport of molecules is essential for the normal function of cells and organs and

the design of devices for medical applications and biotechnology. Transport Phenomena in Biological Systems provides an introduction to the integrated study of transport processes and their biological applications. The book consists of four sections, which cover physiological fluid mechanics, mass transport, biochemical interactions and reactions and the effect of mass transfer, and transport in organs and whole organisms. In order to provide students with a firm understanding of biological transport processes, engineering concepts are provided within the context of specific biological problems. Examples and problems elaborate on the concepts in the text or develop new concepts. The introductory chapter presents a brief overview of transport processes at the cell and tissue level and relevant concepts in cell biology and physiology are presented throughout the text. An appendix provides an overview of relevant mathematical concepts used in the text. The problems at the end of each chapter require either analytical solution or numerical solution using MATLAB. This book can be used for both introductory and advanced courses. Advanced topics covered include transport in the kidney, oxygen transport, receptor-mediated processes, cell adhesion, transport of drugs in tumors, and whole body pharmacokinetic models. References are provided for further study. About the AuthorThe authors are faculty members in the Department of Biomedical Engineering at Duke University. The authors are leaders in their respective fields of research and their research has involved various aspects of momentum and mass transport related to biological phenomena and technologies.