Transport Phenomena in Biomedical Engineering: Principles and Practices

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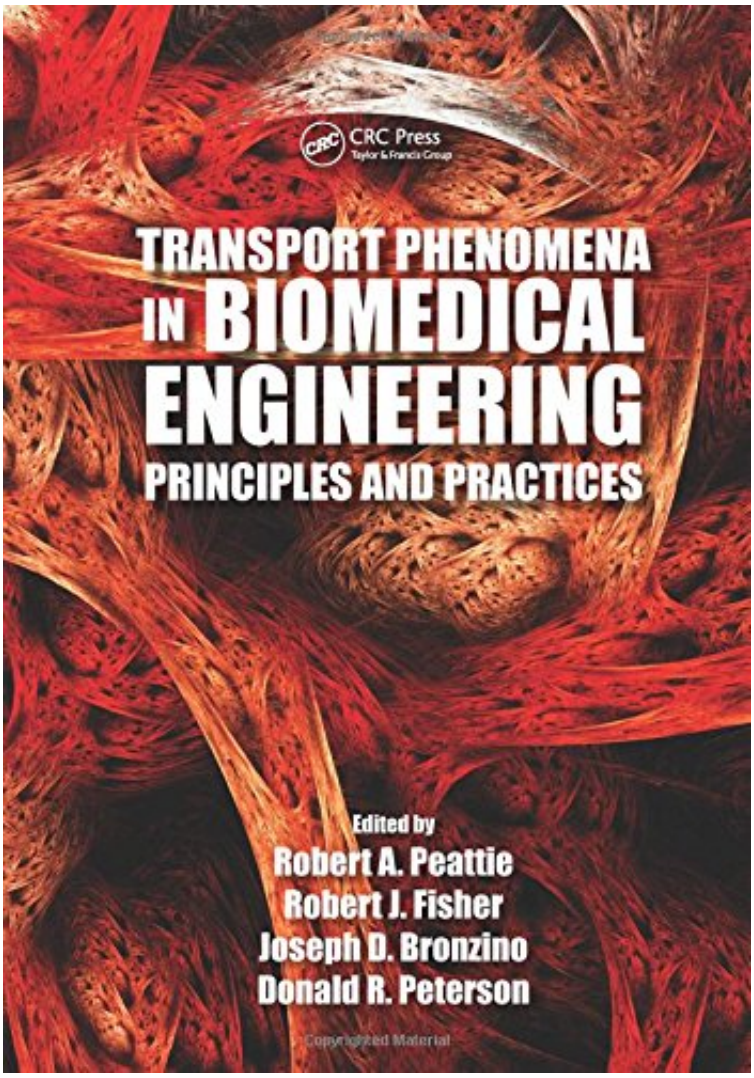

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From Brand: CRC Press : Transport Phenomena in Biomedical Engineering: Principles and Practices before purchasing it in order to gage whether or not it would be worth my time, and all praised Transport Phenomena in Biomedical Engineering: Principles and Practices:

Design, analysis and simulation of tissue constructs is an integral part of the ever-evolving field of biomedical engineering. The study of reaction kinetics, particularly when coupled with complex physical phenomena such as the

transport of heat, mass and momentum, is required to determine or predict performance of biologically-based systems whether for research or clinical implementation. Transport Phenomena in Biomedical Engineering: Principles and Practices explores the concepts of transport phenomena alongside chemical reaction kinetics and thermodynamics to introduce the field of reaction engineering as it applies to physiologic systems in health and disease. It emphasizes the role played by these fundamental physical processes. The book first examines elementary concepts such as control volume selection and flow systems. It provides a comprehensive treatment with an overview of major research topics related to transport phenomena pertaining to biomedical engineering. Although each chapter is self-contained, they all bring forth and reinforce similar concepts through applications and discussions. With contributions from world-class experts, the book unmasks the fundamental phenomenological events in engineering devices and explores how to use them to meet the objectives of specific applications. It includes coverage of applications to drug delivery and cell- and tissue-based therapies.