Título: Advanced Heat And Mass Transfer

Autor: Faghri, Amir; Zhang, Yuwen; Howell, John

Precio: $1305.00

Editorial:

Año: 2010

Tema:

Edición: 1ª

Sinopsis

ISBN: 9780984276004

All relevant advanced heat and mass transfer topics in heat conduction, convection, radiation, and multi-phase transport phenomena, are covered in a single textbook, and are explained from a fundamental point of view.

The book presents the generalized integral, differential, and average formulations for the governing equations of transport phenomena.

The book employs a top-down approach. For example, it emphasizes the basic physics of the problem by beginning with a general governing equation and reducing it for the particular problem.

Rather than being contained in an individual chapter, mass transfer is integrated throughout the book.

Modern applications of heat and mass transfer, e.g. nanotechnology, biotechnology, energy, material processing etc., are emphasized via examples and homework problems.

The foundations of the numerical approach are discussed, so as to ensure that students understand the basis and limitations of these methods.

Topics which are lacking in most other books are integrated into colloquial; e.g. porous media, micro-scale heat transfer, and multi-phase, multi-component systems.

The book presents all forms of phase changes, including boiling, condensation, melting, solidification, sublimation, and vapor deposition from one perspective in the context of the fundamental treatment.

The molecular approach to describe the transport phenomena is also discussed, along with the connection between the macroscopic and molecular approaches.