

1. Record Nr.	UNINA9910299959503321
Autore	Ruocco Gianpaolo
Titolo	Introduction to Transport Phenomena Modeling : A Multiphysics, General Equation-Based Approach // by Gianpaolo Ruocco
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-66822-6
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XVIII, 284 p. 134 illus., 35 illus. in color.)
Disciplina	530.138
Soggetti	Thermodynamics Heat engineering Heat - Transmission Mass transfer Chemistry, Physical and theoretical Engineering Thermodynamics, Heat and Mass Transfer Physical Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Definition of the discipline -- The modes of heat transfer -- The Transmission of Heat Transfer for Conduction -- The transport of mass quantities.
Sommario/riassunto	This text offers an introduction to multiple transport phenomena as they occur in various fields of physics and technology like transport of momentum, heat, and matter. These phenomena are found in a number of physical processes in the fields of chemical, food, biomedical, and environmental biotechnology. The book puts a special emphasis on modeling both purely diffusive mechanisms and macroscopic transport such as heat and mass convection and Navier-Stokes equations. To allow the best applicability of the various concepts, they are presented with a synthesis of simplicity of exposure with respect to completeness. The book includes more than 80 graphs and figures, to facilitate the understanding of the various topics. It also presents many examples will be made throughout the text. To control that the learned materials is properly understood various exercises are included.

