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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Biological structure and function -- Modeling concepts for biological mass transport -- Basics of equilibrium thermodynamics -- Interfacial and membrane equilibria -- Chemical reaction equilibrium -- Non-equilibrium thermodynamics and transport rates -- Mechanisms and models of diffusion -- Chemical reaction rates -- Unidirectional transport in homogeneous media -- Membrane transport I : convection and diffusion processes -- Membrane transport II : carrier mediated processes -- Mass transfer coefficients and chemical separation devices -- Fluid mechanics I : basic concepts -- Fluid mechanics II : complex flows -- Mass transport I : basic concepts and non-reacting systems -- Mass transport II : chemical reacting systems -- Cell population dynamics -- Compartment models I : basic concepts and tracer analysis -- Compartment models II : analysis of physiological systems -- Therapies for tissue and organ dysfunction -- Drug release, delivery and distribution -- Diagnostics and sensing.