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# Handbook of POROUS MEDIA

edited by

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*The Ohio State University, Columbus*

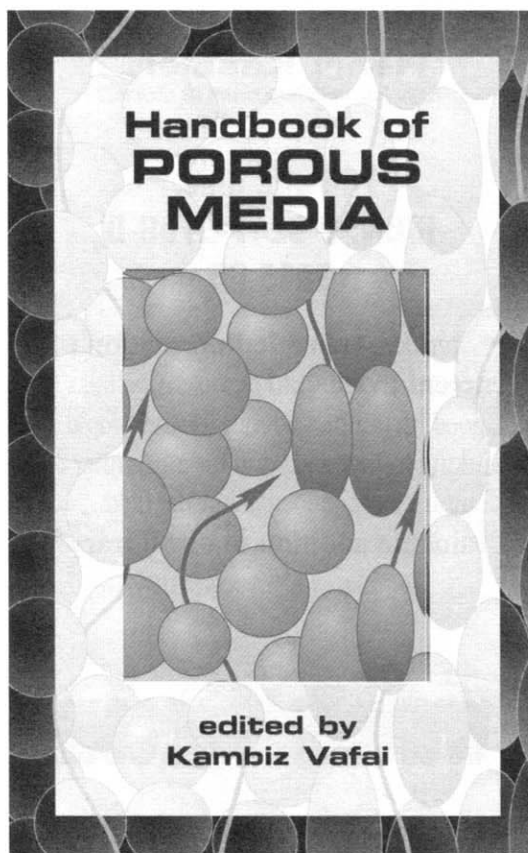
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The *Handbook of Porous Media* presents the **most important and up-to-date research** related to heat and mass transfer in porous media, **focusing on fundamental aspects and practical applications of the latest studies to engineering products and procedures**—including theoretical models of fluid flow, capillary effects, application of fractal and percolation concepts, characterization of porous materials, multiphase flow and heat transfer, turbulent flow and heat transfer, improved measurement techniques, and enhanced design correlations.

Offering an introductory overview on fundamental topics of transport in, and basic aspects of, porous media, the *Handbook*

- examines **recently applied models** for momentum and energy transport
- reveals **new solutions** that facilitate the possibilities of heat transfer enhancement in composite channels
- discusses **modern developments** in convective boundary layers in porous media for external flows, including numerical and analytical techniques
- describes the use of porous media in forced convection heat transfer
- demonstrates microscopic numerical solutions at pore scale that **determine macroscopic flow and heat transfer characteristics**
- covers buoyancy-driven flows in saturated porous media filled (or partially filled) enclosures
- explores the Darcy–Bénard problems
- details the Darcy flow regime in external and internal flows
- supplies guidance on determining the **importance of dependent scattering**
- and much more!

Containing **over 3000** key literature citations, equations, drawings, photographs, and tables, the *Handbook of Porous Media* is a rigorous and thorough **working reference** for mechanical, civil, chemical, aerospace, and material engineers, and upper-level undergraduate and graduate students in these disciplines.



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