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Nota di contenuto	Introduction -- Literature Review -- Experimental Methods -- Flow Behaviour in Porous Media -- Thermal Performance of Porous Copper -- Conclusions and Future Work.
Sommario/riassunto	This book focuses on the effects of the material, porosity, pore size and pore shape on flow behaviour and heat transfer in microscale

porous media manufactured using a space holder method. It also describes a novel approach to studying flow behaviour in non-transparent materials such as porous metals via flow visualization in transparent media that mimic the porous structure. The book employs a combination of microparticle image velocimetry – a modern, advanced technique – and pressure drop measurement – a more traditional method – that makes the mechanistic study of several phenomena possible. It covers the identification of various flow regimes and their boundaries, velocity profiles on the microscale, the heat transfer coefficient under forced convection, and the correlation between flow behaviour on the pore scale and the convective heat transfer performance of the porous media. Understanding the fundamentals of porous flow, especially on the microscale, is critical for applications of porous media in heat exchangers, catalytic convertors, chemical reactors, filtration and oil extraction. Accordingly, this book offers a valuable resource for all researchers, graduate students and engineers working in the areas of porous flow and porous materials.