

1. Record Nr.	UNINA9910254321603321
Autore	Chen Lin
Titolo	Microchannel Flow Dynamics and Heat Transfer of Near-Critical Fluid [[electronic resource] /] / by Lin Chen
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2017
ISBN	9789811027840
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXIII, 155 p. 61 illus., 56 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	620.1064
Soggetti	Thermodynamics Heat engineering Heat transfer Mass transfer Biotechnology Energy systems Fluids Engineering Thermodynamics, Heat and Mass Transfer Microengineering Energy Systems Fluid- and Aerodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Design and Realization of Near-Critical Transient Visulization Experiment -- Discussion of Near-Critical Heat Transfer Flow Experiments -- Numerical Formulation of Near-Critical CO2 Flow in Microchannels -- Heat Transfer Charicteristics of Near-Critical Microchannel Flows -- Theoretical Analysis of Near Critical Stability Behaviors -- Summary and Outlook.
Sommario/riassunto	This book discusses basic thermodynamic behaviors and 'abnormal' properties from a thermo-physical perspective, and explores basic heat transfer and flow properties, the latest findings on their physical aspects and indications, chemical engineering properties, microscale phenomena, as well as transient behaviors in fast and critical

environments. It also presents the most and challenging problems and the outlook for applications and innovations of supercritical fluids. .
