

1. Record Nr.	UNINA9910826002303321
Titolo	Applied thermodynamics of fluids // edited by A.R.H. Goodwin, J.V. Sengers, C.J. Peters
Pubbl/distr/stampa	Cambridge, : RSC Pub., c2010
ISBN	1-62198-164-9 1-84973-098-9
Edizione	[1st ed.]
Descrizione fisica	1 online resource (535 p.)
Altri autori (Persone)	GoodwinA. R. H SengersJ. V PetersCor J
Disciplina	530.42 541.369
Soggetti	Fluids - Thermal properties
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	; 13.6. Concluding Remarks -- References -- ; ch. 14 Applied Non-Equilibrium Thermodynamics / Dick Bedeaux -- ; 14.1. Introduction -- ; 14.1.1. A Systematic Thermodynamic Theory for Transport -- ; 14.1.2. On the Validity of the Assumption of Local Equilibrium -- ; 14.1.3. Concluding remarks -- ; 14.2. Fluxes and Forces from the Second Law of Thermodynamics -- ; 14.2.1. Continuous phases -- ; 14.2.2. Maxwell-Stefan Equations -- ; 14.2.3. Discontinuous Systems -- ; 14.2.4. Concluding Remarks -- ; 14.3. Chemical Reactions -- ; 14.3.1. Thermal Diffusion in a Reacting System -- ; 14.3.2. Mesoscopic Description Along the Reaction Coordinate -- ; 14.3.3. Heterogeneous Catalysis -- ; 14.3.4. Concluding Remarks -- ; 14.4. The Path of Energy-Efficient Operation -- ; 14.4.1. An Optimisation Procedure -- ; 14.4.2. Optimal Heat Exchange -- ; 14.4.3. The Highway Hypothesis for a Chemical Reactor -- ; 14.4.4. Energy-Efficient Production of Hydrogen Gas -- ; 14.4. Conclusions -- References.
Sommario/riassunto	Published under the auspices of both IUPAC and its affiliated body, the International Association of Chemical Thermodynamics (IACT), this book will serve as a guide to scientists or technicians who use equations of state for fluids. Concentrating on the application of

theory, the practical use of each type of equation is discussed and the strengths and weaknesses of each are addressed. It includes material on the equations of state for chemically reacting and non-equilibrium fluids which have undergone significant developments and brings up to date the equations of state for fluids and fluid m

---