

1. Record Nr.	UNINA990005646300403321
Autore	Curcio, Carlo
Titolo	L'ideale della vita / Carlo Curcio
Pubbl/distr/stampa	Napoli : L'Idea Editrice, 1921
Descrizione fisica	41 p. ; 20 cm
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2. Record Nr.	UNINA9910349500503321
Autore	Saggion Antonio
Titolo	Thermodynamics : Fundamental Principles and Applications // by Antonio Saggion, Rossella Faraldo, Matteo Pierno
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ISBN	3-030-26976-0
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (xxvii, 432 pages) : illustrations
Collana	UNITEXT for Physics, , 2198-7882
Disciplina	536.7
Soggetti	Thermodynamics Chemistry, Physical and theoretical Heat engineering Heat - Transmission Mass transfer Low temperatures Phase transformations (Statistical physics) Computational complexity Physical Chemistry Engineering Thermodynamics, Heat and Mass Transfer Low Temperature Physics Phase Transitions and Multiphase Systems Complexity

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	<p>I. FUNDAMENTAL PRINCIPLES -- 1. The macroscopic observer -- 2. The concept of empirical temperature -- 3. The first Principle of Thermodynamics -- 4. The second Principle of Thermodynamics -- 5. Efficiency of thermal engines -- 6. The Fundamental Relation and the thermodynamic potentials -- 7. Maxwell Relations -- II. APPLICATIONS -- 8. One component Systems -- 9. van der Waals equation -- 10. Phase transitions -- 11. Surface Systems -- 12. Electrostatic Fields -- 13. Magnetic Fields -- 14. Thermodynamics of radiation -- 15. Osmotic phenomena and complex fluids -- 16. Low temperatures -- III. IRREVERSIBLE PROCESSES -- 17. Irreversible processes -- 18. Thermodynamics of continua -- IV. BIBLIOGRAPHY -- Bibliography -- V. ANALYTICAL LIST -- VI. APPENDIXES -- A. Appendix 1. Two useful mathematical relations -- B. Appendix 2. The pressure exerted by a particle gas -- C. Appendix 3. M. Planck and the problem of black-body radiation -- D. Appendix 4. Thermodynamics and Information.</p>
Sommario/riassunto	<p>This book offers a comprehensive overview of thermodynamics. It is divided into four parts, the first of which equips readers with a deeper understanding of the fundamental principles of thermodynamics of equilibrium states and of their evolution. The second part applies these principles to a series of generalized situations, presenting applications that are of interest both in their own right and in terms of demonstrating how thermodynamics, as a theory of principle, relates to different fields. In turn, the third part focuses on non-equilibrium configurations and the dynamics of natural processes. It discusses both discontinuous and continuous systems, highlighting the interference among non-equilibrium processes, and the nature of stationary states and of fluctuations in isolated systems. Lastly, part four introduces the relation between physics and information theory, which constitutes a new frontier in fundamental research. The book includes step-by-step exercises, with solutions, to help readers to gain a fuller understanding of the subjects, and also features a series of appendices providing useful mathematical formulae. Reflecting the content of modern university courses on thermodynamics, it is a valuable resource for students and young scientists in the fields of physics, chemistry, and engineering.</p>