

1. Record Nr.	UNISOBE600200030413
Autore	Provero, Luigi
Titolo	Aristocrazia d'ufficio e sviluppo di poteri signorili nel Piemonte sud-occidentale (secoli 6.-7.) / Luigi Provero
Pubbl/distr/stampa	Spoletto, : Centro Italiano di Studi sull' alto Medioevo, s.d.
Descrizione fisica	P. 577-627 ; 24 cm.
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Estr. da : "Studi medievali", terza serie 35., fasc. 2., dic. 1994
2. Record Nr.	UNINA9910146054503321
Autore	Linder Bruno
Titolo	Thermodynamics and introductory statistical mechanics [[electronic resource] /] / Bruno Linder
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2004
ISBN	1-280-26505-1 9786610265053 0-470-35315-5 0-471-68174-1 0-471-68175-X
Descrizione fisica	1 online resource (227 p.)
Disciplina	541 541.369 541/369
Soggetti	Thermodynamics Statistical mechanics
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

THERMODYNAMICS AND INTRODUCTORY STATISTICAL MECHANICS;
CONTENTS; PREFACE; 1 INTRODUCTORY REMARKS; 1.1 Scope and
Objectives; 1.2 Level of Course; 1.3 Course Outline; 1.4 Books; PART I
THERMODYNAMICS; 2 BASIC CONCEPTS AND DEFINITIONS; 2.1 Systems
and Surroundings; 2.2 State Variables and Thermodynamic Properties;
2.3 Intensive and Extensive Variables; 2.4 Homogeneous and
Heterogeneous Systems, Phases; 2.5 Work; 2.6 Reversible and Quasi-
Static Processes; 2.6.1 Quasi-Static Process; 2.6.2 Reversible Process;
2.7 Adiabatic and Diathermal Walls; 2.8 Thermal Contact and Thermal
Equilibrium
3 THE LAWS OF THERMODYNAMICS I3.1 The Zeroth Law-Temperature;
3.2 The First Law-Traditional Approach; 3.3 Mathematical Interlude I:
Exact and Inexact Differentials; 3.4 The First Law-Axiomatic Approach;
3.5 Some Applications of the First Law; 3.5.1 Heat Capacity; 3.5.2 Heat
and Internal Energy; 3.5.3 Heat and Enthalpy; 3.6 Mathematical
Interlude II: Partial Derivatives; 3.6.1 Relations Between Partials of
Dependent Variables; 3.6.2 Relations Between Partials with Different
Subscripts; 3.7 Other Applications of the First Law; 3.7.1 C(P) - C(V);
3.7.2 Isothermal Change, Ideal Gas
3.7.3 Adiabatic Change, Ideal Gas3.7.4 The Joule and the Joule-
Thomson Coefficients; 4 THE LAWS OF THERMODYNAMICS II; 4.1 The
Second Law-Traditional Approach; 4.2 Engine Efficiency: Absolute
Temperature; 4.2.1 Ideal Gas; 4.2.2 Coupled Cycles; 4.3 Generalization:
Arbitrary Cycle; 4.4 The Clausius Inequality; 4.5 The Second Law-
Axiomatic Approach (Caratheodory); 4.6 Mathematical Interlude III:
Pfaffian Differential Forms; 4.7 Pfaffian Expressions in Two Variables;
4.8 Pfaffian Expressions in More Than Two Dimensions; 4.9
Caratheodory's Theorem; 4.10 Entropy-Axiomatic Approach
4.11 Entropy Changes for Nonisolated Systems4.12 Summary; 4.13
Some Applications of the Second Law; 4.13.1 Reversible Processes (PV
Work Only); 4.13.2 Irreversible Processes; 5 USEFUL FUNCTIONS: THE
FREE ENERGY FUNCTIONS; 5.1 Mathematical Interlude IV: Legendre
Transformations; 5.1.1 Application of the Legendre Transformation; 5.2
Maxwell Relations; 5.3 The Gibbs-Helmholtz Equations; 5.4 Relation of
DA and DG to Work: Criteria for Spontaneity; 5.4.1 Expansion and
Other Types of Work; 5.4.2 Comments; 5.5 Generalization to Open
Systems and Systems of Variable Composition
5.5.1 Single Component System5.5.2 Multicomponent Systems; 5.6 The
Chemical Potential; 5.7 Mathematical Interlude V: Euler's Theorem; 5.8
Thermodynamic Potentials; 6 THE THIRD LAW OF THERMODYNAMICS;
6.1 Statements of the Third Law; 6.2 Additional Comments and
Conclusions; 7 GENERAL CONDITIONS FOR EQUILIBRIUM AND
STABILITY; 7.1 Virtual Variations; 7.2 Thermodynamic Potentials-
Inequalities; 7.3 Equilibrium Condition From Energy; 7.3.1 Boundary
Fully Heat Conducting, Deformable, Permeable (Normal System); 7.3.2
Special Cases: Boundary Semi-Heat Conducting, Semi-Deformable, or
Semi-Permeable
7.4 Equilibrium Conditions From Other Potentials

Sommario/riassunto

In this clear and concise introduction to thermodynamics and statistical mechanics the reader, who will have some previous exposure to thermodynamics, will be guided through each of the two disciplines separately initially to provide an in-depth understanding of the area and thereafter the connection between the two is presented and discussed. In addition, mathematical techniques are introduced at appropriate times, highlighting such use as: exact and inexact differentials, partial derivatives, Caratheodory's theorem, Legendre transformation, and combinatory analysis.* Emphasis is placed

