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Titolo	Capitularia regum Francorum 1 / denuo edidit Alfredus Boretius
Pubbl/distr/stampa	Hannoverae, : impensis Bibliopolii Hahniani, 1960
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Lingua di pubblicazione	Latino
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Riproduzione dell'edizione: Hannoverae : Impensis Bibliopolii Hahniani, 1883

2. Record Nr. UNINA9910983320903321

Autore	Li Dongqing
Titolo	Analytical Thermodynamics
Pubbl/distr/stampa	Cham : , : Springer, , 2025 ©2025
ISBN	9783031714009 9783031713996
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (302 pages)
Disciplina	621.4021
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface for the Second Edition -- Preface for the First Edition -- References -- Contents -- About the Author -- 1 Basics of Analytical Thermodynamics -- 1.1 Definitions -- 1.2 Postulates -- 1.3 Fundamental Equations -- 1.4 Euler Equation and Gibbs-Duhem Equation -- 1.5 Simple Equilibrium Conditions -- 1.6 Extreme Principles of Equilibrium States -- 1.7 Legendre Transformations -- 1.8 Thermodynamic Potentials -- 1.9 Minimum Principles

of Thermodynamic Potentials/Free Energies -- 1.10 Applications of Minimum Principle of Thermodynamic Potentials -- 1.11 Maxwell Relations -- 1.12 Thermodynamic Characteristics of Dielectric Media-Application of Maxwell Relations -- 1.13 Introduction to Thermodynamic Stability -- 1.14 Phase Change and Clapeyron Equation -- 1.15 Chemical Potentials -- 1.16 Boiling Temperature and Freezing Temperature of Dilute Solutions -- 1.17 Gibbs Phase Rule -- 1.18 Introduction to High-Order Phase Change -- 2 Modelling Homogeneous and Heterogeneous Systems -- 2.1 Simple Elastic Solid -- 2.2 Simple Electrolyte Solution Systems -- 2.3 Systems in Gravitational Field and in Centrifugal Field -- How to Model a System in a Gravitational Field and in a Centrifugal Field -- How to Determine the Equilibrium Conditions -- 2.4 Electrolyte Solution in Electric Field as a Non-uniform System -- 3 Thermodynamics of Interfaces and Three-Phase Contact Lines -- 3.1 Liquid-Fluid Interfaces and Three-Phase Contact Lines -- Liquid-Fluid Interfaces or Surfaces -- 3.2 Thermodynamics of Surfaces -- 3.3 Thermodynamics of Three-Phase Contact Lines -- 3.4 Equilibrium Conditions of Droplets and Bubbles -- 3.5 Equilibrium Conditions of Sessile Drops -- Introduction to Wetting Phenomena -- Surface Tension and Surface Stress -- Sessile Drop on a Flat Horizontal Surface -- A Sessile Drop in a Crevice/Cavity.
3.6 Contact Angles of a Sessile Drop on Heterogeneous Surfaces and on Rough Surfaces -- Contact Angle of a Sessile Drop on a Smooth but Heterogeneous Surface -- Contact Angle of a Sessile Drop on a Homogeneous but Rough Surface -- 3.7 From Laplace Equation to Capillary Rise and Meniscus Shape -- Capillary Rise in a Vertical Capillary -- Capillary Rise at a Vertical Wall -- Capillary Rise and the Meniscus Shape with an Inclined Plate -- A Liquid Bridge Between Two Parallel Plates -- 3.8 Curvature Effects on Equilibrium Pressure and Temperature -- Curvature Effect on Equilibrium Vapor Pressure Around a Drop -- Curvature Effect on Equilibrium Pressure in a Bubble -- Curvature Effect on Equilibrium Temperature -- Curvature Effect on Surface Tension -- 3.9 Equilibrium of Capillary Systems with an Elastic Liquid-Vapor Interface -- Thermodynamic Model -- Mechanical Equilibrium Conditions -- Case 1: Spherical Surface -- Case 2: Capillary Rise on a Vertical Plate -- 3.10 Heterogeneous Nucleation of Droplets -- 3.11 Solute Effect on Equilibrium Vapor Pressure -- 3.12 Solute Effect on Equilibrium Radius of Droplets -- 3.13 Heterogeneous Bubble Nucleation in a Dilute Solution -- 3.14 Equilibrium Condition of a Bubble in a Uniform Electric Field -- 3.15 Effects of Applied Electrical Field on Contact Angles (Electro-wetting Phenomenon) -- 3.16 Effects of Electric Double Layer on Contact Angle -- 3.17 Modelling Surface Processes by Using Surface Free Energy -- Surface Free Energy -- Cohesion -- Adhesion -- Merge of Two Oil Droplets in Water -- Film Breakage and Droplet Formation on a Solid Surface -- 4 Second Law of Engineering Thermodynamics -- 4.1 Irreversible Processes -- 4.2 Limitation of First Law of Thermodynamics -- 4.3 Second Law and Equations -- 4.4 The Second Law Requirement on Thermal Cycles -- 4.5 Applying Second Law Equation to a Human Body.
5 Solutions of Selected Home-Work Questions -- 5.1 Solutions of Home Work of Chap. 1 -- 5.2 Solutions of Home Work of Chap. 2 -- 5.3 Solutions of Home Work of Chap. 3.

Sommario/riassunto

This second edition presents an enriched and expanded exploration of the fundamental principles of thermodynamics tailored for graduate-level studies. Drawing on over three decades of academic teaching experience, the author has refined the content, making it more

accessible and comprehensive. Chapter 1 has been restructured for clarity, delineating "Legendre Transformation" and "Thermodynamic Potentials" into separate sections, while the treatment of "Chemical Potentials" has been significantly augmented, encompassing two-component ideal gas mixtures and a re-derivation of chemical potentials for dilute solutions. Additionally, the section on thermodynamic stability now boasts enhanced explanations and illustrative figures. Chapter 2 introduces a groundbreaking section, "Electrolyte Solution in Electric Field as a Non-Uniform System," providing fresh insights into unexplored realms. Chapter 3, now enriched with several new sections, delves into topics such as "Contact Angles on Heterogeneous Surfaces and Rough Surfaces," "Elastic Liquid-Fluid Interface," "Curvature Effect on Surface Tension," "Solute Effect on Equilibrium Pressure," and "Heterogeneous Bubble Nucleation in a Dilute Solution." Chapter 4 features new elucidations and discussions aimed at bolstering comprehension, while the entirely new Chapter 5 offers solutions to selected homework and exam questions, adding a practical dimension to the theoretical framework. This edition, encompassing approximately 50% new content, expands the book by 131 pages, rendering it an even more invaluable resource for professors instructing advanced thermodynamics and graduate students delving into this intricate subject matter.

3. Record Nr. UNINA9910971867703321

Titolo	Science and skiing / / edited by E. Muller ... [et al.]
Pubbl/distr/stampa	London ; ; New York, : E & FN Spon, 1997
ISBN	1-135-81811-8 0-203-23723-4 1-280-04977-4 0-203-47617-4 1-135-81810-X 9786610049776
Edizione	[1st ed.]
Descrizione fisica	1 online resource (641 p.)
Altri autori (Persone)	MullerErich <1953->
Disciplina	796.93015
Soggetti	Skis and skiing Skis and skiing - Psychological aspects Skis and skiing - Physiological aspects Sports sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"The first International Congress on Skiing and Science was held at St. Christoph a. Arlberg, Austria, from 7-13 January 1996"--P. [xiii].
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Science and Skiing; Copyright; Contents; Introduction; Part One: Biomechanics of Skiing; 1 Ski-jumping take-off performance: Determining factors and methodological advances; 2 Load on the locomotor system during skiing. A biomechanical perspective; 3 Biomechanics of ski-jumping-scientific jumping hill design; 4 Joint power production in take-off action during ski-jumping; 5 Inter- and intra-individual variability of the ski-jumper's take-off; 6 Inverse dynamic analysis of take-off in ski-jumping; 7 Effects of 50 km racing on ski skating kinematics in the falun world championship 1993 8 Management of the sport training process with cross-country ski runners through modern apparatus methods and means9 A mathematical method for the analysis of trajectories in giant slalom; 10 Simulation techniques applied to skiing mechanics; 11 Turning the skis without 'mechanisms of turning'; 12 Muscle activity of the inside and outside leg in slalom and giant-slalom skiing; 13 The effect of different

uses of the upper limb on body coordination during rhythmic parallel turning
14 Pressure distribution measurements for the alpine skier-from the biomechanical high tech measurement to its application as SWINGBEEP-feedback system15 Skiing technique in swing turns: Distribution of stress on the hip-joint articular surface; 16 Sensor plates designed for measuring forces between ski and binding-a developmental summary; 17 Different possibilities of measuring force transmission between ski and binding; 18 Ground-reaction forces in alpine skiing, cross-country skiing and ski jumping
19 Constraint forces may influence the measurement of vertical ground reaction forces during slalom skiing20 Structural dynamic analysis of alpine skis during turns; Part Two: Fitness Testing and Training in Skiing; 21 Evaluation and planning of conditioning training for alpine skiers; 22 Kinematic and kinetic analysis of slalom turns as a basis for the development of specific training methods to improve strength and endurance; 23 Types of muscle action of leg and hip extensor muscles in slalom; 24 Predicting skiing performance in 14-18 year old competitive alpine skiers
25 Validity of sport-specific field tests for elite and developing alpine ski racers26 Relationship of anaerobic performance tests to competitive alpine skiing events; 27 Aspects of technique-specific strength training in ski-jumping; 28 Programme for the objectivization of sportspecific performance preconditions, in the long-term development of performance of cross-country skiers; Part Three: Movement Control and Psychology in Skiing; 29 Movement regulation in alpine skiing; 30 The technique of gliding in alpine ski racing-safety and performance
31 A profile of sensorimotor balance of alpine skiers

Sommario/riassunto

The first International Congress on Science and Skiing was held in Austria in January 1996. The main aim of the conference was to bring together original key research in this area and provid an essential update for those in the field. The lnk between theory and practice was also addressed, making the research more applicable for both researchers and coaches.This book is divided into five parts, each containing a group of papers that are related by theme or disciplineary approach. They are as follows: Biomechanics of Skiing; Fitness testing and Training in Skiing; Movement Control and P