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Autore	Guthke Karl S.
Titolo	Exploring the interior : essays on literary and cultural history // Karl S. Guthke
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Descrizione fisica	1 online resource (368 pages)
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Lingua di pubblicazione	Inglese
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Sommario/riassunto	In this fascinating collection of essays Harvard Emeritus Professor Karl S. Guthke examines the ways in which, for European scholars and writers of the eighteenth and early nineteenth century, world-wide geographical exploration led to an exploration of the self. Guthke explains how in the age of Enlightenment and beyond intellectual developments were fuelled by excitement about what Ulrich Im Hof called "the grand opening-up of the wide world", especially of the interior of the non-European continents. This outward turn was complemented by a fascination with "the world within" as anthropology and ethnology focused on the humanity of the indigenous populations of far-away lands - an interest in human nature that suggested a way for Europeans to understand themselves, encapsulated in Gauguin's Tahitian rumination "What are we?" The essays in the first half of the book discuss first- or second-hand, physical or mental encounters with the exotic lands and populations beyond the supposed cradle of civilisation. The works of literature and documents of cultural life featured in these essays bear testimony to the crossing not only of

geographical, ethnological, and cultural borders but also of borders of a variety of intellectual activities and interests. The second section examines the growing interest in astronomy and the engagement with imagined worlds in the universe, again with a view to understanding homo sapiens, as compared now to the extra-terrestrials that were confidently assumed to exist. The final group of essays focuses on the exploration of the landscape of what was called "the universe within"; featuring, among a variety of other texts, Schiller's plays The Maid of Orleans and William Tell, these essays observe and analyse what Erich Heller termed "The Artist's Journey into the Interior." This collection, which travels from the interior of continents to the interior of the mind, is itself a set of explorations that revel in the discovery of what was...

2. Record Nr.	UNINA9910810806803321
Autore	Weinhold Frank <1941->
Titolo	Classical and geometrical theory of chemical and phase thermodynamics / / Frank Weinhold
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CLASSICAL AND GEOMETRICAL THEORY OF CHEMICAL AND PHASE THERMODYNAMICS; CONTENTS; PREFACE; PART I INDUCTIVE FOUNDATIONS OF CLASSICAL THERMODYNAMICS; 1. Mathematical Preliminaries: Functions and Differentials; 1.1 Physical Conception of Mathematical Functions and Differentials; 1.2 Four Useful Identities; 1.3 Exact and Inexact Differentials; 1.4 Taylor Series; 2. Thermodynamic Description of Simple Fluids; 2.1 The Logic of Thermodynamics; 2.2 Mechanical and Thermal Properties of Gases: Equations of State; 2.3 Thermometry and the Temperature Concept; 2.4 Real and Ideal Gases 2.4.1 Compressibility Factor and Ideal Gas Deviations 2.4.2 Van der Waals and Other Model Equations of State; 2.4.3 The Virial Equation of State; 2.5 Condensation and the Gas-Liquid Critical Point; 2.6 Van der Waals Model of Condensation and Critical Behavior; 2.7 The Principle of Corresponding States; 2.8 Newtonian Dynamics in the Absence of Frictional Forces; 2.9 Mechanical Energy and the Conservation Principle; 2.10 Fundamental Definitions: System, Property, Macroscopic, State; 2.10.1 System; 2.10.2 Property; 2.10.3 Macroscopic; 2.10.4 State; 2.11 The Nature of the Equilibrium Limit

3. General Energy Concept and the First Law 3.1 Historical Background of the First Law; 3.2 Reversible and Irreversible Work; 3.3 General Forms of Work; 3.3.1 Pressure-Volume Work; 3.3.2 Surface Tension Work; 3.3.3 Elastic Work; 3.3.4 Electrical (emf) Work; 3.3.5 Electric Polarization Work; 3.3.6 Magnetic Polarization Work; 3.3.7 Overview of General Work Forms; 3.4 Characterization and Measurement of Heat; 3.5 General Statements of the First Law; 3.6 Thermochemical Consequences of the First Law; 3.6.1 Heat Capacity and the Enthalpy Function; 3.6.2 Joule's Experiment 3.6.3 Joule-Thomson Porous Plug Experiment 3.6.4 Ideal Gas Thermodynamics; 3.6.5 Thermochemistry: Enthalpies of Chemical Reactions; 3.6.6 Temperature Dependence of Reaction Enthalpies; 3.6.7 Heats of Solution; 3.6.8 Other Aspects of Enthalpy Decompositions; 4. Engine Efficiency, Entropy, and the Second Law; 4.1 Introduction: Heat Flow, Spontaneity, and Irreversibility; 4.2 Heat Engines: Conversion of Heat to Work; 4.3 Carnot's Analysis of Optimal Heat-Engine Efficiency; 4.4 Theoretical Limits on Perpetual Motion: Kelvin's and Clausius' Principles; 4.5 Kelvin's Temperature Scale 4.6 Carnot's Theorem and the Entropy of Clausius 4.7 Clausius' Formulation of the Second Law; 4.8 Summary of the Inductive Basis of Thermodynamics; PART II GIBBSIAN THERMODYNAMICS OF CHEMICAL AND PHASE EQUILIBRIA; 5. Analytical Criteria for Thermodynamic Equilibrium; 5.1 The Gibbs Perspective; 5.2 Analytical Formulation of the Gibbs Criterion for a System in Equilibrium; 5.3 Alternative Expressions of the Gibbs Criterion; 5.4 Duality of Fundamental Equations: Entropy Maximization versus Energy Minimization; 5.5 Other Thermodynamic Potentials: Gibbs and Helmholtz Free Energy 5.6 Maxwell Relations

Sommario/riassunto

Because it is grounded in math, chemical thermodynamics is often perceived as a difficult subject and many students are never fully comfortable with it. The first authoritative textbook presentation of equilibrium chemical and phase thermodynamics in a reformulated geometrical framework, Chemical and Phase Thermodynamics shows how this famously difficult subject can be accurately expressed with only elementary high-school geometry concepts. Featuring numerous suggestions for research-level extensions, this simplified alternative to standard calculus-based thermodynamics expositions is perfect