1. Record Nr. UNINA9910818465403321

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Titolo	Materials thermodynamics / / Y. Austin Chang, W. Alan Oates
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2010
ISBN	9786612491368 9781282491366 1282491369 9780470549940 0470549947 9780470549957 0470549955
Edizione	[1st ed.]
Descrizione fisica	1 online resource (317 p.)
Collana	Wiley series on processing engineering materials
Altri autori (Persone)	OatesW. Alan <1931->
Disciplina	620.1/1296 620.1696
Soggetti	Materials - Thermal properties Thermodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	MATERIALS THERMODYNAMICS; Contents; Preface; Quantities, Units, and Nomenclature; 1 Review of Fundamentals; 1.1 Systems, Surroundings, and Work; 1.2 Thermodynamic Properties; 1.3 The Laws of Thermodynamics; 1.4 The Fundamental Equation; 1.5 Other Thermodynamic Functions; 1.5.1 Maxwell's Equations; 1.5.2 Defining Other Forms of Work; 1.6 Equilibrium State; Exercises; 2 Thermodynamics of Unary Systems; 2.1 Standard State Properties; 2.2 The Effect of Pressure; 2.2.1 Gases; 2.2.2 Condensed Phases; 2.3 The Gibbs-Duhem Equation; 2.4 Experimental Methods; Exercises 3 Calculation of Thermodynamic Properties of Unary Systems3.1 Constant-Pressure/Constant-Volume Conversions; 3.2 Excitations in Gases; 3.2.1 Perfect Monatomic Gas; 3.2.2 Molecular Gases; 3.3 Excitations in Pure Solids; 3.4 The Thermodynamic Properties of a Pure Solid; 3.4.1 Inadequacies of the Model; Exercises; 4 Phase Equilibria in Unary Systems; 4.1 The Thermodynamic Condition for Phase

Equilibrium; 4.2 Phase Changes; 4.2.1 The Slopes of Boundaries in Phase Diagrams; 4.2.2 Gibbs Energy Changes for Phase Transformations; 4.3 Stability and Critical Phenomena; 4.4 Gibbs's Phase Rule; Exercises
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8.2.2 Equilibrium between a Solution Phase and a Stoichiometric Compound Phase8.3 Gibbs's Phase Rule; Exercises; 9 Two-Phase Equilibrium II: Example Calculations; Exercises; 10 Binary Phase Diagrams: Temperature-Composition Diagrams; 10.1 True Phase Diagrams; 10.2 T -x(i) Phase Diagrams for Strictly Regular Solutions; 10.2.1 Some General Observations; 10.2.2 More on Miscibility Gaps; 10.2.3 The Chemical Spinodal; 10.3 Polymorphism; Exercises; 11 Binary Phase Diagrams: Temperature-Chemical Potential Diagrams; 11.1 Some General Points; Exercises; 12 Phase Diagram Topology
12.1 Gibbs's Phase Rule

Sommario/riassunto

A timely, applications-driven text in thermodynamics Materials Thermodynamics provides both students and professionals with the in-depth explanation they need to prepare for the real-world application of thermodynamic tools. Based upon an actual graduate course taught by the authors, this class-tested text covers the subject with a broader, more industry-oriented lens than can be found in any other resource available. This modern approach: Reflects changes rapidly occurring in society at large-from the impact of computers on the teaching of thermodynamics in materials