1. Record Nr. UNINA9910139521803321 Autore Chang Y. Austin Titolo Materials thermodynamics [[electronic resource] /] / Y. Austin Chang, W. Alan Oates Hoboken, NJ,: Wiley, c2010 Pubbl/distr/stampa **ISBN** 1-282-49136-9 9786612491368 0-470-54994-7 0-470-54995-5 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. MATERIALS THERMODYNAMICS; Contents; Preface; Quantities, Units, Nota di contenuto 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

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Sommario/riassunto

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