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Nota di contenuto	Properties of Semiconductor Alloys: Group-IV, III-V and II-VI Semiconductors; Contents; Series Preface; Preface; Abbreviations and Acronyms; Introductory Remarks; A.1 AN ALLOY AND A COMPOUND; A.2 GRIMM-SOMMERFELD RULE; A.3 AN INTERPOLATION SCHEME; REFERENCES; 1 Structural Properties; 1.1 IONICITY; 1.2 ELEMENTAL ISOTOPIC ABUNDANCE AND MOLECULAR WEIGHT; 1.3 CRYSTAL STRUCTURE; 1.3.1 Random Alloy; 1.3.2 Spontaneous Ordering; (a) Group-IV semiconductor alloy; (b) III-V semiconductor alloy; (c) II-VI semiconductor alloy; 1.4 LATTICE CONSTANT AND RELATED PARAMETERS 1.4.1 CuAu Alloy: Ordered and Disordered States 1.4.2 Non-alloyed Semiconductor; 1.4.3 Semiconductor Alloy; (a) Group-IV semiconductor; (b) III-V semiconductor; (c) II-VI semiconductor; 1.5 COHERENT EPITAXY AND STRAIN PROBLEM; 1.5.1 Bilayer Model; 1.5.2 Elastic Strain and Lattice Deformation; 1.5.3 Critical Thickness; 1.6 STRUCTURAL PHASE TRANSITION; 1.7 CLEAVAGE PLANE; 1.7.1 Cleavage; 1.7.2 Surface Energy; REFERENCES; 2 Thermal Properties; 2.1 MELTING POINT AND RELATED PARAMETERS; 2.1.1 Phase Diagram; (a)

Group-IV semiconductor alloy; (b) III-V semiconductor alloy
(c) II-VI semiconductor alloy
2.1.2 Melting Point; 2.2 SPECIFIC HEAT;
2.2.1 Group-IV Semiconductor Alloy; 2.2.2 III-V Semiconductor Alloy;
2.2.3 II-VI Semiconductor Alloy; 2.3 DEBYE TEMPERATURE; 2.3.1
General Considerations; 2.3.2 Group-IV Semiconductor Alloy; 2.3.3 III-
V Semiconductor Alloy; 2.3.4 II-VI Semiconductor Alloy; 2.4 THERMAL
EXPANSION COEFFICIENT; 2.4.1 Group-IV Semiconductor Alloy; 2.4.2
III-V Semiconductor Alloy; 2.4.3 II-VI Semiconductor Alloy; 2.5
THERMAL CONDUCTIVITY AND DIFFUSIVITY; 2.5.1 Thermal
Conductivity; (a) General considerations; (b) Group-IV semiconductor
alloy
(c) III-V semiconductor alloy
(d) II-VI semiconductor alloy; 2.5.2 Thermal
Diffusivity; (a) General considerations; (b) Alloy value; REFERENCES; 3
Elastic Properties; 3.1 ELASTIC CONSTANT; 3.1.1 General
Considerations; 3.1.2 Room-temperature Value; (a) Group-IV
semiconductor alloy; (b) III-V semiconductor alloy; (c) II-VI
semiconductor alloy; 3.1.3 External Perturbation Effect; (a) Temperature
effect; (b) Pressure effect; 3.2 THIRD-ORDER ELASTIC CONSTANT; 3.3
YOUNG'S MODULUS, POISSON'S RATIO AND SIMILAR PROPERTIES; 3.3.1
Group-IV Semiconductor Alloy; 3.3.2 III-V Semiconductor Alloy
3.3.3 II-VI Semiconductor Alloy
3.4 MICROHARDNESS; 3.4.1 Group-IV
Semiconductor Alloy; 3.4.2 III-V Semiconductor Alloy; 3.4.3 II-VI
Semiconductor Alloy; 3.5 SOUND VELOCITY; REFERENCES; 4 Lattice
Dynamic Properties; 4.1 PHONON DISPERSION RELATIONSHIPS; 4.2
PHONON FREQUENCY; 4.2.1 General Considerations; 4.2.2 Room-
temperature Value; (a) Group-IV semiconductor alloy; (b) III-V
semiconductor alloy; (c) II-VI semiconductor alloy; 4.2.3 External
Perturbation Effect; (a) Group-IV semiconductor alloy; (b) III-V
semiconductor alloy; (c) II-VI semiconductor alloy; 4.3 MODE
GRUNEISEN PARAMETER
4.3.1 Phonon Deformation Potential

Sommario/riassunto

The main purpose of this book is to provide a comprehensive treatment of the materials aspects of group-IV, III-V and II-VI semiconductor alloys used in various electronic and optoelectronic devices. The topics covered in this book include the structural, thermal, mechanical, lattice vibronic, electronic, optical and carrier transport properties of such semiconductor alloys. The book reviews not only commonly known alloys (SiGe, AlGaAs, GaInPAs, and ZnCdTe) but also new alloys, such as dilute-carbon alloys (CSiGe, CSiSn, etc.), III-N alloys, dilute-nitride alloys (GaNAs and GalnNAs) and Mg- or