



METADATA

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Abstract

The book is split into 12 chapters. As an introduction the 1st chapter discusses the macroscopic properties of materials, namely electric, magnetic, mechanical, optic and thermal properties, followed by the properties of atoms, discussed in the 2nd chapter. Then, the conducting electron behavior and properties are discussed in chapters 3 and 4, employing the classic and the quantum approach. Then, the valence

electrons with the periodic energy distribution of atoms is discussed in chapters 5 and 6. The electronic properties of metals and semiconductors are discussed in chapters 6 and 7, while electric and thermal properties are discussed in chapter 8. Optical and magnetic properties are discussed in chapters 9 and 10. Finally superconductors and optoelectronic materials are discussed in chapters 11 and 12.

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