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Autore	Wallace Duane C
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Sommario/riassunto	This important book presents a unified formulation from first principles of the Hamiltonian and statistical mechanics of metallic and insulating crystals, amorphous solids, and liquids. Extensive comparison of theory and experiment provides an accurate understanding of the statistical properties of phonons, electrons, and phonon - phonon and electron - phonon interactions in elemental crystals and liquids. Questions are posed along the following lines: What is the "best" theory for a given property? How accurate is a good theory? What information is gained by a comparison of theory and experiment? How accurate is a good experiment?