Download Principles Of The Theory Of Solids

Applied Mechanics of Solids Allan F. Bower This electronic text summarizes the physical laws, mathematical methods, and computer algorithms that are used to predict the response of materials and structures to mechanical or thermal loading.Solid is one of the four fundamental states of matter (the others being liquid, gas, and plasma). In solids particles are closely packed. It is characterized by structural rigidity and resistance to changes of shape or volume.The particle theory is used to explain the properties of solids, liquids and gases. The strength of bonds between particles is different in all three states.In solid-state physics, the electronic band structure (or simply band structure) of a solid describes the range of energies an electron within the solid may have (called energy bands, allowed bands, or simply bands) and ranges of energy that it may not have (called band gaps or forbidden bands). - Principles Of The Theory Of Solids