

PRESSURE AND ELECTRONIC STRUCTURE

by

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Abstract

Pressure is a variable which permits the change of interatomic distance at constant temperature. It is therefore of prime importance in obtaining an understanding of the electronic structure of solids. Three examples of its use are discussed in this paper: (1) The elucidation of the mechanism of light absorption in alkali halide phosphors, (2) The approach to the metallic state in insulators and semiconductors, and (3) Electronic transitions in metals involving the promotion of electrons between bands and the modification of the chemical valence of elements.