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Sommario/riassunto

The electronic properties of solids have become of increasing importance in the age of information technology. The study of solids and materials, while having originated from the disciplines of physics and chemistry, has evolved independently over the past few decades. The classical treatment of solid-state physics, which emphasized classifications, theories and fundamental physical principles, is no longer able to bridge the gap between materials advances and applications. In particular, the more recent developments in device physics and technology have not necessarily been driven by new conc