
Solids

Modern Theory of Solids by Frederick Seitz is the title of a new volume in the International Series in Physics. The work is an attempt by the author to present the subject matter so that students in physical sciences may obtain a certain knowledge of this branch of physics and for experimental men in the pure and applied fields of physics and chemistry, but at the same time also for men engaged in theoretical physics. For the benefit of the former groups certain tracts are marked with an asterisk to indicate that these are essentially mathematical in character and may be read only for their qualitative content. The theoretical man will often want to refer to and study these sections with some care.

The first four chapters are essentially introductory in character and present the subject matter in a classical manner. In Chapter Five the quantum theory is first introduced, part A being devoted to the postulates of the theory and part B to the interaction between matter and radiation. The next two chapters are in reality extensions of the theory to the many-bodied problem and application to problems in molecular binding. Succeeding chapters take up such topics as cohesive energy, work functions, electronic structure of metals, ionic crystals, valence crystals, semi-conductors and molecular crystals; the theory of conduction in solids and the magnetic and optical properties of solids.

In the opinion of the reviewer the volume is a valuable asset to anyone engaged in research in physical science. It is readable but at the same time a rigorous treatment of the subject is available to the reader who desires to look beneath the surface. It is well-illustrated throughout with clear and helpful diagrams. Modern Theory of Solids by Seitz is a valuable addition to the Internation Series in Physics.

—*H. H. Neilsen.*

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