



APPLIED PHYSICS

SECOND EDITION

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KEY SELLING POINTS

- ◆ Cross disciplinary – relevant information for all engineering students
- ◆ Explains the industrial and professional applications after the academic theory
- ◆ Growing industrial need for such knowledge

BOOK INFORMATION

ISBN: 1 904798 101
Pub Date: November 2004
Format: Hardback
Extent: 434pages

An introductory book on electronic materials intended for students of Electronics, Computer Science, Electrical Engineering and Material Science.

The importance of semiconductors, ferro & ferri magnetic, dielectric & ferroelectric materials in modern electronic engineering is reflected by the large number of rapidly growing research and development establishments in these fields. All electrical and electronic devices employ the above materials in one form or other. Therefore, the basic understanding of the natural behaviour of the material is a prerequisite for students in Engineering and Technology. With the developments in electronic and electrical industry, there is a greater responsibility on the shoulders of the engineers and physicists to work on basics more elaborately and intuitively. The fabrication of devices requires a thorough understanding of physical concepts involved in the fundamental properties of the materials.

Contents: Free electron theory; Band theory of solids; Dielectrics; non-linear dielectrics; Magnetic materials; Semiconductors; Drift and diffusion current in semiconductors; Special applications of semiconductors; Light emitting diodes and semiconductors lasers; Photo conductivity and photodetectors; Solar cells; Super conductivity; Integrated circuit fabrication.