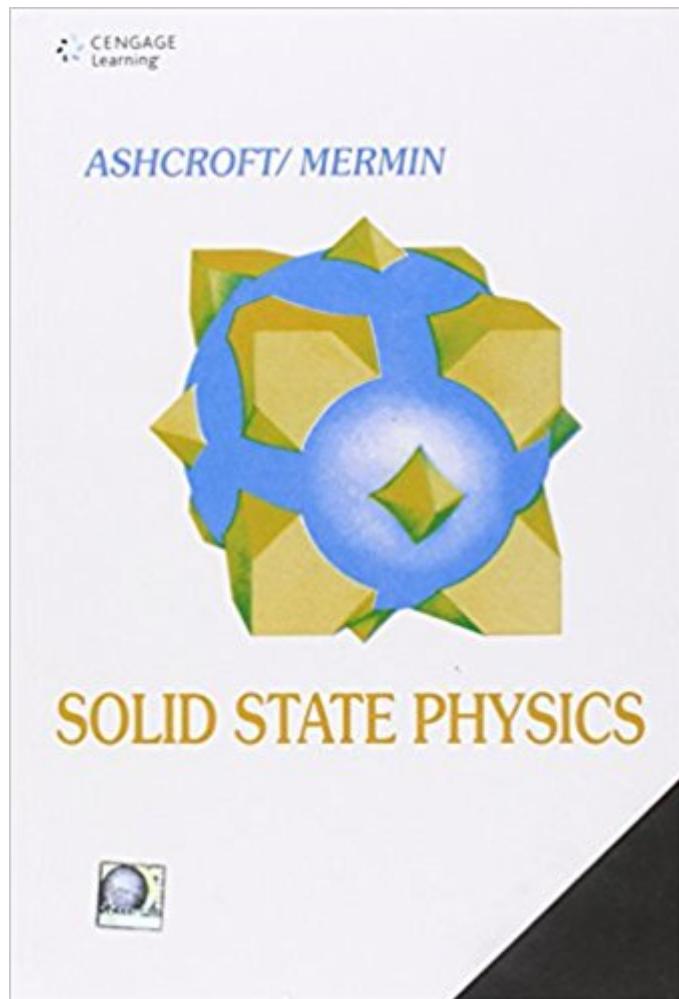


The book was found

Solid State Physics



Synopsis

This book provides a comprehensive introduction to the field of solid state physics for undergraduate students in physics, chemistry, engineering, and materials science. --This text refers to the Hardcover edition.

Book Information

Paperback: 848 pages

Publisher: Thomson Press (India) Ltd; 1st edition (December 1, 2003)

Language: English

ISBN-10: 8131500527

ISBN-13: 978-8131500521

Package Dimensions: 8.7 x 6.1 x 1.3 inches

Shipping Weight: 1.9 pounds

Average Customer Review: 4.1 out of 5 stars 56 customer reviews

Best Sellers Rank: #92,181 in Books (See Top 100 in Books) #17 in Books > Science & Math > Physics > Solid-State Physics #20 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Semiconductors #358 in Books > Textbooks > Science & Mathematics > Physics

Customer Reviews

The Drude Theory of Metals. The Sommerfeld Theory of Metals. Failures of the Free Electron Model. Crystal Lattices. The Reciprocal Lattice. Determination of Crystal Structures by X-Ray Diffraction. Classification of Bravais Lattices and Crystal Structures. Electron levels in a Periodic Potential: General Properties. Electrons in a Weak Periodic Potential. The Tight-Binding Method. Other Methods for Calculating Band Structure. The Semiclassical Model of Electron Dynamics. The Semiclassical Theory of Conduction in Metals. Measuring the Fermi Surface. Band Structure of Selected Metals. Beyond the Relaxation. Time Approximation. Beyond the Independent Electron Approximation. Surface Effects. Classification of Solids. Cohesive Energy. Failures of the Static Lattice Model. Classical Theory of the Harmonic Crystal. Quantum Theory of the Harmonic Crystal. Measuring Phonon Dispersion Relations. Anharmonic Effects in Crystals. Phonons in Metals. Dielectric Properties of Insulators. Homogeneous Semiconductors. Inhomogeneous Semiconductors. Defects in Crystals. Diamagnetism and Paramagnetism. Electron Interactions and Magnetic Structure. Magnetic Ordering. Superconductivity. Appendices. --This text refers to the Hardcover edition.

Neil W. Ashcroft is a British solid-state physicist. Ashcroft completed his undergraduate studies at the University of New Zealand in 1958 and received his PhD in 1964 from the University of Cambridge for research investigating the Fermi surfaces of metals. Following his PhD, Ashcroft completed postdoctoral research at the University of Chicago and at Cornell University, where he became a Professor in 1975. In 1990 he was named the Horace White Professor of Physics, and was elected to emeritus status in 2006. He served as the director for the Laboratory of Atomic and Solid State Physics at Cornell University (1979-1984), the director for the Cornell Center for Materials Research (1997-2000), and as the deputy director for the High Energy Synchrotron Source (1990-1997). Between 1986 and 1987, he served as the head of the Condensed Matter division of the American Physical Society. His textbook on solid-state physics, written with N. David Mermin, is a standard text in the field. Since 1997, he has been a member of the National Academy of Sciences. N. David Mermin is Horace White Professor of Physics Emeritus at Cornell University. He has received the Lilienfeld Prize of the American Physical Society and the Klopsteg Award of the American Association of Physics Teachers. He is a member of the U. S. National Academy of Sciences and the American Academy of Arts and Sciences. Professor Mermin has written on quantum foundational issues for several decades, and is known for the clarity and wit of his scientific writings. Among his other books are Solid State Physics (with N. W. Ashcroft, Thomson Learning 1976), Boojums all the Way Through (Cambridge University Press 1990), and It's about Time: Understanding Einstein's Relativity (Princeton University Press 2005). --This text refers to the Hardcover edition.

Good book. My school used Kittel instead so I have read both and I think this one is better if you really want to understand solid state physics.

This is a great book and I like it. I used it as my primary text book in my condensed matter class this year. If you have never taken condensed matter or at least thermal dynamics/ statistical physics you might want to supplement this book with another more qualitative book.

There is the Landau series, the Cohen QM book, Feynman, Sakurai, and then there's the Mermin classic. People will tell you they like Kittel, but really they should read, use, and refer to Mermin. By far an amazing book. This is like the Oxford Classic, Dynamic Theory of Crystal Lattices by Born, likewise essential to anyone studying solid state. The exercise problems are so much fun too!

Very Good book!

good book to start reading solid state physics. Specially for undergraduates and also for the graduate students to refresh their memory

excellent text if you're just getting into solid state, but have a background in other fields (e.g. mathematics or p. chem). would be a challenging text for undergraduates.

Canonical book for students of condensed matter.

Nice book for Condensed Matter Physics, the only downside is that it's an old book (so no chapters on TIs or HTC). Still, a highly recommended book.

[Download to continue reading...](#)

The Floridas: The Sunshine State * The Alligator State * The Everglade State * The Orange State * The Flower State * The Peninsula State * The Gulf State The Solid State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series) Solid-State Physics: An Introduction to Principles of Materials Science (Advanced Texts in Physics (Paperback)) Conductors, Semiconductors, Superconductors: An Introduction to Solid State Physics (Undergraduate Lecture Notes in Physics) Solid State Physics Solid State Physics for Engineering and Materials Science Solid State Engineering Physics Theory of Electron Transport in Semiconductors: A Pathway from Elementary Physics to Nonequilibrium Green Functions (Springer Series in Solid-State Sciences) Head First Physics: A learner's companion to mechanics and practical physics (AP Physics B - Advanced Placement) Physics for Scientists and Engineers with Modern Physics: Volume II (3rd Edition) (Physics for Scientists & Engineers) Physics for Kids : Electricity and Magnetism - Physics 7th Grade | Children's Physics Books Six Ideas that Shaped Physics: Unit N - Laws of Physics are Universal (WCB Physics) Quantum Electrodynamics: Gribov Lectures on Theoretical Physics (Cambridge Monographs on Particle Physics, Nuclear Physics and Cosmology) Six Ideas That Shaped Physics: Unit R - Laws of Physics are Frame-Independent (WCB Physics) Problem-Solving Exercises in Physics: The High School Physics Program (Prentice Hall Conceptual Physics Workbook) Statistical Physics: Theory of the Condensed State (Course of Theoretical Physics Vol. 9) The interaction of gases with solid surfaces, (The International encyclopedia of physical chemistry and chemical physics. Topic 14: Properties of interfaces) G is for

Garden State: A New Jersey Alphabet (Discover America State by State) North Dakota State Parks: Indian Hills State Recreation Area (North Dakota State Parks Series) Washington State Bed & Breakfast Cookbook: From the Warmth & Hospitality of 72 Washington State B&b's and Country Inns (Washington State Bed and Breakfast Cookbook)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)