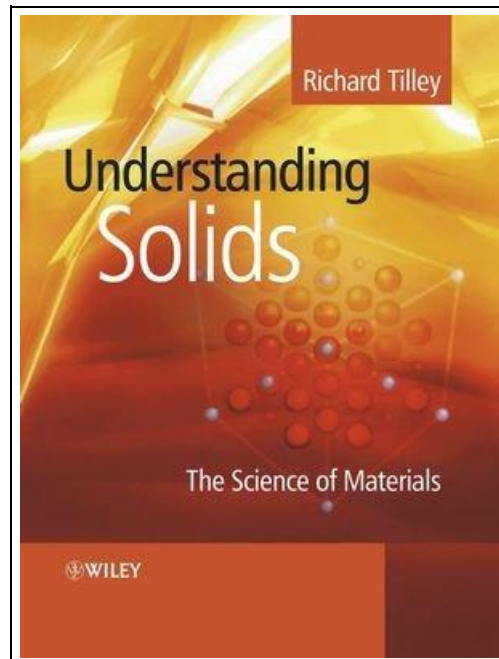


Understanding Solids: The Science of Materials



Filesize: 5.62 MB

Reviews

Unquestionably, this is the greatest job by any author. It really is simplistic but shocks inside the fifty percent in the book. I am just pleased to inform you that here is the greatest book i actually have go through within my own existence and could be he greatest ebook for at any time.

(Elva Kemmer)

UNDERSTANDING SOLIDS: THE SCIENCE OF MATERIALS

[DOWNLOAD PDF](#)

Wiley, 2004. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: PREFACE. PART 1. STRUCTURES AND MICROSTRUCTURES. CHAPTER 1. THE ELECTRON STRUCTURE OF ATOMS. ATOMS. THE HYDROGEN ATOM. The quantum mechanical description of a hydrogen atom. The energy of the electron. The location of the electron. Orbital shapes. MANY ELECTRON ATOMS. The orbital approximation. Electron spin and electron configuration. The Periodic Table. ATOMIC ENERGY LEVELS. Electron energy levels. The vector model. Terms and term schemes. Answers to introductory questions. Further reading. Problems and exercises. Quick Quiz. Calculations and Questions. Appendix 1.1. Chemical equations and units. Appendix 1.2. The electron configuration of the lighter atoms. Appendix 1.3. The 3d transition metals. Appendix 1.4. The lanthanides. Appendix 1.5. Energy levels and term schemes of many electron atoms. Appendix 1.6. The ground state term of an atom. CHAPTER 2. CHEMICAL BONDING. IONIC BONDING. Ions. Ionic bonding. Madelung energy. Repulsive energy. Lattice energy. The formulae and structures of ionic compounds. Ionic size and shape. Ionic structures. COVALENT BONDING. Molecular orbitals. The energies of molecular orbitals in diatomic molecules. Bonding between unlike atoms. Electronegativity. Bond strength and direction. Orbital hybridisation. Multiple bonds. Resonance. METALLIC BONDING. Bonding in metals. Chemical bonding. Atomic orbitals and energy bands. Divalent and other metals. The classical free electron gas. The quantum free electron gas. The Fermi energy and Fermi surface. Energy bands. Brillouin zones. Alloys and non-crystalline metals. Bands in ionic and covalent solids. Answers to introductory questions. Further reading. Problems and exercises. Quick Quiz. Calculations and Questions. Appendix 2.1. Madelung constants. CHAPTER 3. STATES OF AGGREGATION. FORMULAE AND NAMES. Weak chemical bonds. Chemical names and formulae. Polymorphism and other transformations. MACROSTRUCTURES, MICROSTRUCTURES AND NANOSTRUCTURES. Structures and microstructures. Crystalline solids. Non-crystalline solids. Partly crystalline solids. Nanostructures. THE DEVELOPMENT OF MICROSTRUCTURES. Solidification. Processing. DEFECTS. Point...



[Read Understanding Solids: The Science of Materials Online](#)
[Download PDF Understanding Solids: The Science of Materials](#)

See Also



Comic Illustration Book For Kids With Dog Farts FART BOOK Blaster Boomer Slammer Popper, Banger Volume 1 Part 1

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 234 pages. Dimensions: 9.0in. x 6.0in. x 0.5in. BONUS - Includes FREE Dog Farts Audio Book for Kids Inside! For a...

[Save PDF >](#)



Minecraft Diary: Minecraft Zombie World Book 1. Better of Dead (an Unofficial Minecraft Book): (Minecraft Books, Minecraft Diaries, Zombie Minecraft, Minecraft Comics, Minecraft Adventures)

Createspace, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.Minecraft Diary Minecraft Zombie World Book 1. Better of Dead The dead came...

[Save PDF >](#)



The Adventures of Sheriff Williker: /Book 1: The Case of the Missing Horseshoe

Createspace, United States, 2014. Paperback. Book Condition: New. Kim Hansen (illustrator). large type edition. 216 x 216 mm. Language: English . Brand New Book ***** Print on Demand *****.A missing horseshoe for a prize winning...

[Save PDF >](#)



Childrens Book: A Story Book of Friendship (Childrens Books, Kids Books, Books for Kids, Kids Stories, Stories for Kids, Short Stories for Kids, Children Stories, Childrens Stories, Kids Chapter Books, Kids Kindle)

Createspace, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.Childrens Book is an incredible story of three friends; Nikky, Sam and Shiela...

[Save PDF >](#)



The Tale of Jemima Puddle-Duck - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, The Tale of Jemima Puddle-Duck - Read it Yourself with Ladybird: Level 2, This is a gentle adaptation of the classic tale by Beatrix Potter. Jemima...

[Save PDF >](#)