

Table of contents

- Chapter 1 - the Structure of Metals
- Chapter 2 - Analytical Methods
- Chapter 3 - Crystal Binding
- Chapter 4 - Introduction to Dislocations
- Chapter 5 - Dislocations and Plastic Deformation
- Chapter 6 - Elements of Grain Boundaries
- Chapter 7 - Vacancies
- Chapter 8 - Annealing
- Chapter 9 - Solid Solutions
- Chapter 10 - Phases
- Chapter 11 - Binary Phase Diagrams
- Chapter 12 - Diffusion in Substitutional Solid Solutions
- Chapter 13 - Interstitial Diffusion
- Chapter 14 - Solidification of Metals
- Chapter 15 - Nucleation and Growth Kinetics
- Chapter 16 - Precipitation Hardening
- Chapter 17 - Deformation Twinning and Martensite Reactions
- Chapter 18 - the Iron-Carbon Alloy System
- Chapter 19 - the Hardening of Steel
- Chapter 20 - Selected Nonferrous Alloy Systems
- Chapter 21 - Fracture
- Chapter 22 - Fracture Mechanics
- Chapter 23 - Thermally Activated Plastic Deformation Appendices List of Important Symbols List of Greek Letter Symbols Index