

Contents

- 1 Electrons and Bonding 1
- 2 Atomic Packing 29
- 3 Crystal Structure 45
- 4 Imperfections in Crystals 76
- 5 Noncrystalline Solids 100
- 6 The Shapes and Distributions of Phases in Solids 122
- 7 Equilibrium Diagrams 148
- 8 Nonequilibrium Phase Transformations 175

APPENDIXES

- 1A Periodic Table of the Elements 201
- 1B Electronic Configuration of the Elements 202
- 2 Selected Properties of the Elements 205
- 3 Crystallographic Indices 208
- 4 The Diffraction of X-Rays by Cubic Crystals 215
- 5 Structural Formulae of Selected Polymers 222
- 6 Selected Equilibrium Diagrams 228
- Index 233