

Contents

Introduction	1
1	
Gases and Liquids	5
2	
The Solid State	67
3	
The First Law of Thermodynamics	100
4	
Thermochemistry	133
5	
The Second and Third Laws of Thermodynamics	162
6	
Free Energy and Equilibrium	189

7	
Chemical Equilibrium	228
8	
Solutions	261
9	
Colligative Properties of Solutions	312
10	
The Phase Rule	344
11	
Conductance and Ionic Equilibria	398
12	
Electrochemical Cells	471
13	
Kinetics of Homogeneous Reactions	548
14	
Atomic Structure	598
15	
Nature of Chemical Bonding	652
16	
Investigation of Molecular Structure	691
17	
Nuclear Chemistry	734
18	
Statistical Mechanics	751
19	
Photochemistry	775

20	
Surface Phenomena and Catalysis	801
21	
Colloids	835
Index	869
Atomic Weights	<i>Front left endpaper</i>
Physico-chemical Constants	<i>Front right endpaper</i>
Four-Place Logarithms	<i>Rear endpapers</i>