Ions by V.G. Pal'chikov and V.P. Shevelko (Springer, Berlin, Heidelberg 1995) and *Atoms and Their Spectroscopic Properties* by V.P. Shevelko (Springer, Berlin, Heidelberg 1997). It is intended for research students and specialists dealing with chemical physics, astrophysics, controlled plasma fusion, spectroscopy and related fields of atomic and molecular physics.

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Contents

1 Molecular Structure 1
1.1 Classification of Chemical Bonds and Molecular Terms 1
1.1.1 Electronic Energy Levels 3
1.1.2 Vibrational Energy Levels 4
1.1.3 Rotational Energy Levels 6
1.2 Coupling Schemes 8
1.3 Quantum Chemistry Methods 9
1.4 Equilibrium Form of Molecules 15
1.5 Potential-Energy Curves 16
1.6 Corrections to the Electronic Structure 17
1.6.1 Hyperfine Interaction and Isotope Effect 17
1.6.2 Relativistic Effects 18

2 Spectroscopic and Geometrical Constants of Molecules 20
2.1 Constants of Diatomic Molecules 20
2.2 Fundamental Vibrational Frequencies of Polyatomic Molecules . 27
2.3 Rotational Constants and Geometrical Parameters of Polyatomic Molecules 32

3 Energy Constants of Molecules 39
3.1 Bond Dissociation Energies 39
3.2 Ionization Potentials 51
3.3 Electron Affinities 51
3.4 Proton Affinities 64

4 Electrical Properties of Molecules 71
4.1 Dipole Moments 71
4.2 Multipole Moments 78
4.3 Molecular Polarizabilities 82

5 Molecular Spectra 87
5.1 Types of Transitions and Selection Rules 87
5.2 Oscillator Strengths and Transition Probabilities 89
5.2.1 Rotational Spectra 89
5.2.2 Vibrational and Vibrational–Rotational Spectra 90
5.2.3 Rovibronic Spectra 91

5.2.4 Franck-Condon Factors 97
5.3 Photoionization 112

6 Collisions of Molecules with Electrons 122
6.1 Basic Approaches 122
6.2 Types of Collision Processes 126
6.3 Elastic Scattering 127
6.4 Excitation of Molecules by Electron Impact 138
6.4.1 Rotational Excitation 138
6.4.2 Vibrational Excitation 144
6.4.3 Electronic Excitation 149
6.4.4 Resonance Processes 153
6.5 Dissociation and Dissociative Attachment 154
6.5.1 Dissociative Processes 155
6.6 Ionization by Electron Impact 161
6.7 Electron–Ion Recombination and Electron Attachment 167

7 Interatomic Potentials 175
7.1 Interaction Constants 175
7.1.1 Van-der-Waals Interaction 176
7.1.2 The van-der-Waals Equation of State 182
7.1.3 The Lennard-Jones Potential 182
7.2 Energy Potentials of Molecular Hydrogen and Its Ions 187

References 201

Subject Index 211

Glossary of Terms

The fundamental constants used in atomic and molecular physics are listed in the table on the hardcover. Other fundamental physical constants are given in the report of the CODATA Task Group on Fundamental Constants, CODATA Bulletin No. 63, E.R. Cohen, B.N. Taylor: Rev. Mod. Phys. **59**, 1121 (1987). A list of symbols used in the book is also given in a Table.

List of Symbols

a, b, c	Inertial axes of molecule
A,B,C	Rotational constants
C_σ, C_{12}	Lennard-Jones interaction constants
C_n,	n = 6, 8 and 10 van-der-Waals interaction constants
d_k	Degeneracy of the k-th vibration
D_e	Dissociative energy
f	Oscillator strength
I_a, I_b, I_c	Inertia molecular moments
J	Rotational quantum number
$K = \Lambda + 1$	Projection of the vibronic angular momentum onto the axis of symmetry
L	Electron orbital momentum
M_L	Projection of L onto the axis of symmetry
m	Electron mass
q	Franck-Condon factor
Q	Nuclear quadrupole moment
r_e	Equilibrium internuclear distance
R	Rotational momentum
S	Electron spin
v	Vibrational quantum number
α_e	Rotational-vibrational quantum number
σ	Bonding orbital; effective cross section
θ	Valence angle of molecule
Λ	Sum of M_L projections
ω	Frequency (wavenumber)