contents

	Preface to the French edition	vii
	Preface to the English edition	ix
1	Review of concepts of structure of matter. Spectroscopy	1
2	Elementary phenomena and concepts	13
3	Elastic collisions	23
4	Inelastic collisions (I): excitation, ionization	40
5	Inelastic collisions (II): recombination, charge transfer, dissociation	51
6	Surface phenomena	62
7	Transport phenomena	74
8	Diffusion	86
9	Mobility	92
10	Nonselfsustaining electric discharges in gases	100
11	The Townsend discharge	113

12	The glow discharge	123
13	The electric arc	141
14	Dielectric strength of gases—steady field	151
15	Dielectric strength of gases—high-frequency breakdown	168
16	Diagnostics	178
	Appendix I—Electrostatic or Langmuir probes	187
	Appendix II—Plasma diagnostics by microwave methods	192
	Index	195