

Contents

Preface	vii
--------------------------	------------

PART I: INTRODUCTION

Section 1	Description of Methods for Obtaining the Character Tables of Space Groups	3
Section 2	Contents of the Tables, Instructions and Notations	8
	2-1 Bravais Lattices, Symmetry of \mathbf{k} Vectors and Brillouin Zones	8
	2-2 Notations of Space Groups and Their Elements	9
	2-3 Coordinate Systems and Symmetry Axes	10
	2-4 Notation of Point Group Elements	10
	2-5 Double Groups and Multiplication Rules	12
	2-6 Character Tables for Symmorphic Space Groups and for Nonsymmorphic Space Groups for Symmetry Points Inside the Brillouin Zone	13
	2-7 Description of the Character Tables and Notations	14
	2-8 Different Origins for Space Groups	15
Section 3	Some Comments on Existing Notations	16
	3-1 Symmetry Elements and Points of Symmetry	16
	3-2 Some Comments on Notations of Representations	16
	3-3 Multiplication Rules for Double Point Groups	18
Section 4	Time Reversal	19
References		21

PART II: TABLES

Section 5	Character Tables for Point Groups	25
Section 6	Multiplication tables for Double Point Groups	35
	6-1 Multiplication Table for the Double Point Group D_6	35
	6-2 Multiplication Table for the Double Point Group O	36

Section 7	List of Space Groups	39
7-1	The Monoclinic System	44
	I. Bravais Lattices	44
	II. Points of High Symmetry in the Brillouin Zone	45
	III. Brillouin Zones	47
	IV. Character Tables for Nonsymmorphic Space Groups of the Monoclinic System	50
7-2	The Orthorhombic System	54
	I. Bravais Lattices	54
	II. Points of High Symmetry in the Brillouin Zone	55
	III. Brillouin Zones	59
	IV. Character Tables for Nonsymmorphic Space Groups of the Orthorhombic System	62
7-3	The Tetragonal System	115
	I. Bravais Lattices	115
	II. Points of High Symmetry in the Brillouin Zone	116
	III. Brillouin Zones	119
	IV. Character Tables for Nonsymmorphic Space Groups of the Tetragonal System	121
7-4	The Trigonal System	196
	I. Bravais Lattice	196
	II. Points of High Symmetry in the Brillouin Zone	196
	III. Brillouin Zones	198
	IV. Character Tables for Nonsymmorphic Space Groups of the Trigonal System	200
7-5	The Hexagonal System	213
	I. Bravais Lattice	213
	II. Points of High Symmetry in the Brillouin Zone	214
	III. Brillouin Zones	215
	IV. Character Tables for Nonsymmorphic Space Groups of the Hexagonal System	216
7-6	The Cubic System	242
	I. Bravais Lattices	242
	II. Points of High Symmetry in the Brillouin Zone	242
	III. Brillouin Zones	245
	IV. Character Tables for Nonsymmorphic Space Groups of the Cubic System	247