

Volume III/7: Crystal Structure Data of Inorganic Compounds

Editors: K.-H. Hellwege and A.M. Hellwege

Authors: W. Pies, A. Weiss. In cooperation with H.-P. Boehm, H.J. Meyer (c3); G. Will (d1 α); G. Pieper (d1 β); R. Allmann (d2)

Part d2: Key Elements: B, Al, Ga, In, Tl; Be

1980. 23 figs., XXV, 327 pages. ISBN 3-540-10147-0

Contents

Introduction	XI
1 Subject matter	XI
2 Arrangement of the substances	XI
Survey: Distribution of substances within subvolumes III/7a ... III/7h	XII
3 Selection and arrangement of information in the tables	XV
3.1 Selection of information	XV
3.2 Arrangement of information	XVI
3.3 Reference sources	XXI
4 References used in the introduction	XXIII
5 List of space-group symbols for various settings	see volume III/7a, page XXIV
6 List of symbols and abbreviations	XXIV

Tables

XIII Compounds with the key element boron	1
XIII.1 Boranes and borides	1
XIII.1.1 Boranes	1
XIII.1.1.1 Substituted boranes	1
XIII.1.2 Borides with additional anions	5
XIII.1.2.1 Nitride borides	5
XIII.1.2.2 Phosphide borides	6
XIII.2 Oxo-compounds of boron	9
XIII.2.1 Simple oxo-compounds of boron (oxoborates)	9
XIII.2.2 Oxo-compounds of boron with H ₂ O, hydroxide borates, and hydroxide borates with H ₂ O	77
XIII.2.3 Oxo-compounds of boron with additional anions	111
XIII.2.3.1 Oxo-compounds of boron with halide ions as additional anions	111
XIII.2.3.1.1 Oxo-compounds of boron with F ⁻ (fluorooxoborates)	111
XIII.2.3.1.2 Oxo-compounds of boron with Cl ⁻ (chlorooxoborates)	115
XIII.2.3.1.3 Oxo-compounds of boron with Br ⁻ (bromooxoborates)	123
XIII.2.3.1.4 Oxo-compounds of boron with I ⁻ (iodooxoborates)	129
XIII.2.3.2 Oxo-compounds of boron with S ²⁻ , Se ²⁻ , Te ²⁻	133
XIII.2.3.3 Oxo-compounds of boron with NO ₃ ⁻ , PO ₄ ³⁻ , CO ₃ ²⁻	135
XIII.2.4 Oxo-compounds of boron with H ₂ O and additional anions, and hydroxide borates with additional anions	137
XIII.2.4.1 Oxo-compounds of boron with H ₂ O and halide ions, and hydroxide borates with halide ions	137
XIII.2.4.2 Oxo-compounds of boron with H ₂ O and SO ₄ ²⁻ , PO ₄ ³⁻ , AsO ₄ ³⁻ , CO ₃ ²⁻ , and hydroxide borates SO ₄ ²⁻ , PO ₄ ³⁻ , AsO ₄ ³⁻ , CO ₃ ²⁻	143
XIII.2.5 Further oxoborates	146
XIV Compounds with the key elements aluminium, gallium, indium, thallium, and beryllium	147
XIV.1 Oxo-compounds of aluminium	147
XIV.1.1 Simple oxo-compounds of aluminium (oxoaluminates)	147
XIV.1.2 Oxo-compounds of aluminium with H ₂ O, hydroxide aluminates, and hydroxide aluminates with H ₂ O	221
XIV.1.3 Oxo-compounds of aluminium with additional anions	230
XIV.1.3.1 Oxo-compounds of aluminium with halide ions as additional anions	230
XIV.1.3.1.1 Oxo-compounds of aluminium with F ⁻ (fluorooxoaluminates)	230
XIV.1.3.1.2 Oxo-compounds of aluminium with Cl ⁻ (chlorooxoaluminates)	231
XIV.1.3.2 Oxo-compounds of aluminium with SO ₄ ²⁻ , Cr O ₄ ²⁻ , Mo O ₄ ²⁻ , W O ₄ ²⁻	233

XIV.1.4	Oxo-compounds of aluminium with H ₂ O and additional anions, and hydroxide aluminates with additional anions	234
XIV.1.4.1	Oxo-compounds of aluminium with H ₂ O and F ⁻ , and hydroxide aluminates with F ⁻	234
XIV.1.4.2	Oxo-compounds of aluminium with H ₂ O and Cl ⁻ , and hydroxide aluminates with Cl ⁻	235
XIV.1.4.3	Oxo-compounds of aluminium with H ₂ O and Br ⁻ , I ⁻ , and hydroxide aluminates with Br ⁻ , I ⁻	237
XIV.1.4.4	Oxo-compounds of aluminium with H ₂ O and ClO ⁻ ₃ , ClO ⁻ ₄ , BrO ⁻ ₃ , IO ⁻ ₃ , S ²⁻ , SO ²⁻ ₄ and hydroxide aluminates with ClO ⁻ ₃ , ClO ⁻ ₄ , BrO ⁻ ₃ , IO ⁻ ₃ , S ²⁻ , SO ²⁻ ₄	239
XIV.1.4.5	Oxo-compounds of aluminium with H ₂ O and NO ⁻ ₃ , CO ²⁻ ₃ , CN ⁻ , CrO ³⁻ ₄ and hydroxide aluminates with NO ⁻ ₃ , CO ²⁻ ₃ , CN ⁻ , CrO ³⁻ ₄	242
XIV.2	Oxo-compounds of gallium	245
XIV.2.1	Simple oxo-compounds of gallium (oxogallates)	245
XIV.2.2	Oxo-compounds of gallium with H ₂ O, hydroxide gallates, and hydroxide gallates with H ₂ O	301
XIV.2.3	Oxo-compounds of gallium with additional anions (without/with H ₂ O and OH)	302
XIV.3	Oxo-compounds of indium	303
XIV.3.1	Simple oxo-compounds of indium (oxoindates)	303
XIV.3.2	Oxo-compounds of indium with H ₂ O	319
XIV.4	Oxo-compounds of thallium (oxothallates)	320
XIV.5	Oxo-compounds of beryllium	325
XIV.5.1	Simple oxo-compounds of beryllium (oxoberyllates)	325
XIV.5.2	Oxo-compounds of erylum with H ₂ O	327