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TRANSLATION

SYSTEMATISM OF BINARY INTERMETALLIC PHASES

By

P. I. Kripyakevich and E. E. Cherkashin

FOREIGN TECHNOLOGY DIVISION

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SYSTEMATISM OF BINARY INTERMETALLIC PHASES

By

P. I. Kripyakevich and E. E. Cherkashin

Literature so far is lacking full systematism in very important, from theoretical and practical viewpoint, group of compounds - intermetallic phases (IMF). The need for such a systematism is felt presently very acutely, if we take into consideration the greater number of IMF (about 1800 binary phases only) and the variety of their compositions, types of structure and types of chemical bonds. The purpose of this report is to offer a systematic review of all known binary intermetallic phases.

We include in IMF these intermediate phases (as well as superstructural phases, formed in solid solutions) which possess metallic properties (metallic luster and electron conductivity), expressed even if in a slight degree; in the table in the insert is shown the propagation of IMF in binary systems. IMF can be systematized by various characteristics, for example, by the method of formation in form of a homogeneity area on the structural diagram, or by the physical and chemical properties; a systematism based on the most essential indication is given: On the type of structure and on the type of chemical bond.

In order to systematize phases by the structural type, it is necessary to establish first of all the isotopy signs of the phases, i. e., the belonging of several phases to one type of structure. These signs appear to be (for cubical phases with parameterless arrangement of atoms) identical proper systems of points (1) (lattice complexes (2)) in one spatial group and a uniform method of distribution of these point systems between atoms of various elements. And so, β - and β' phases of the Cu-Zn system* belong to various structural types: The first one, with statistical distribution of Cu and Zn atoms - to α - W type; the second one, with

*

References to literature concerning individual phases, see in Binary IMF Indicators, p. 82.

perfectly ordered distribution of atoms, - to the CsCl type. The gamma phase Mn_{11} , having a structure with atom arrangements, as in alpha-Mn and total order at a $Mg_{17}Al_{12}$ composition, belongs to the alpha-Mn type, but to a separate $Mg_{17}Al_{12}$ type. KBi_2 , $AgBe_{2.7}$ and $FeBe_5$ phases (the latter is homogeneous in a wide range of concentrations) have identical type structure (type Cu_2Mg), in spite of the different quantitative composition, because the points combination in each one of them, points occupied by atoms, break up into two proper points systems (two lattice complexes), one with multiplicity 8, occupied by K, Ag + Be atoms respectively (statistically) or Fe + Be (statistically), and the second ones with multiplicity 16, occupied by atoms Bi (in first case) or Be (in remaining cases). At the same time, $FeBe_5$ and $AuBe_5$ phases with uniform arrangement of atoms in general and uniform quantitative composition, do not appear to be isotonic: $AuBe_5$ belongs to the special structural type, to which are inherent three proper point systems with multiples 4 (Au), 4 (Be) and 16 (Be). In a similar way, nonisotopic (at identical atom arrangements) appear to be gamma-phases of CuZn, Cu-Cd and Cu-Hg systems.

For cubical phases, structures of which are characterized by arrangements of atoms with degrees of freedom (as well as noncubical phases) exists an additional sign of isotony: atoms with identical coordinates in both phases should have an identical coordination number and one type of coordination sphere. That is why MnF_2 and $PdSn$ phases should be counted into one type of structure (MnF), in spite of their heterogeneous (but close) values of axes ration (c/a) and parameters of atomic arrangements. But if in a certain structure, the change in these values leads to changes in the nature of coordination, then this is equivalent to transition to a new structural type: $CaPb_2$ phases (cubical, type $AuCu_2$) $SrPb_2$ (tetragonally deformed $AuCu_2$ structure, $c/a > 1$) and $PdCu_2$ (tetragonally deformed $AuCu_2$, $c/a > 1$) counted to various structural types.

Of greater importance for systematism, is the problem of affiliation of variable composition phases (as well as constant composition phases with orderless

distribution of atoms of various components) to definite structural types. If the phase contains in its area of homogeneity a composition with fully ordered atoms (or with maximum on composition -degree of orderliness curve), then it should be counted to the type of structure corresponding to this composition; for example, gamma-phase of Ni-Sb with complete orderliness at 50 at. % Sb, has a structure of the NiAs type. In the few enumerated instances, the phase may contain two compositions with total orderliness, and then we count it to two structural types simultaneously (NiTe-NiTe₂, types NiAs and CdJ₂). About phases with partial orderliness in the entire range of homogeneity was mentioned above (FeBe₅); to these phases belong also, e. g., phase of Fe-Sb system with defective structure of Ni₂In type. Phases with totally unordered distribution of atoms belong ordinarily to the type of structure, inherent of simple substances (Mg, Cu, alpha-V, beta-V.....provided the corresponding structure of the simple substance is unknown, the phases will be referred to an individual type (e. g. In₂B₁).

Types of structures of intermetallic phases, as well as phases most suitable for systematization by their ratio to denser packings. We distinguish the following groups of structures: 1) denser packings of atoms close in dimensions (types Mg, Cu and their superstructures Ni₃Sn and AuCu₃, type TiNi₃ and a number of deformed denser packings); 2) denser packings of atoms of various dimensions (types Zn₂Mg, Cu₂Mg, Ni₂Mg, AuBe₅, ZnMg, W₆Fe₇, CaZn₅, Zn₁₁Mg₂, NaZn₁₃); 3) dense packings (types MoSi₂, CrSi₂ and TiSi₂) and derivatives of cubical volumetrically centered structure (types alpha-W, CsCl, NaCl, Cu₅Zn₈, Ni₂Al₃ and others); 4) structure of introducing atoms of one component into denser packing of atoms of the second (types NaCl, NiAs and many others) and 5) structures, non-bound with denser and dense packings.

The second important distribution of structural types and phases is based on a different manifestation of atom tendencies to combine into complexes. Types of structures of binary phases can be divided into the following groups: 1) homodesmic

3) where any two adjoining atoms are bound firmly in an identical degree, so that it is impossible to form individual complexes (examples: AuCu_3 , CsCl , NaCl types); 2) heterodesmic (3) of the first order, where the atoms of the first component (ordinarily less metallic) are firmly bound between themselves into complexes (pairs S_2 and FeS_2 modifications, chains - B - B - B in FeB , etc.), and 3) heterodesmic of the second type - with atoms of both components, combined in individual complexes, whereby the bond between complexes is weaker, than the bond within them (lamellar structure MoS_2 , molecular structure NiS - millerite and others). Heterodesmic structures can further, be systematized by the measure of complexes (insular, one- two and three dimensional) and by their form among heterodesmic structures with various types of coordinations (most widely known form of coordination sphere: triangular prism and twisted cube).

The third method of systematizing IMF - is division by the type of dependence of quantitative phase composition upon the valence of the components. Here can be separated the following IMF groups: 1) phase with valent ratios of the components, quantitative composition of which is determined by the valences of both components (certain phases, possessing NaCl , ZnS , CaF_2 , Na_3As , as structural types and others); 2) nickel-Arsenide phases (structural Ni_2In , NiAs , CdJ_2 types and certain rhombical), the arrangement of which on the structural diagram is due first of all to the valence of a less metallic component, whereby the dependence is not such a clear one in phases with valent component ratio; 3) electron phases (electron bonds), the homogeneity range of which is determined by electron concentrations (series of phases of alpha-W, CsCl , gamma-brass, Mg , Ni_2Al_3 types and others) and 4) phases with composition, not dependent on the valence of components.

For the purpose of classification, which could have enveloped a maximum number of IMF, it is necessary to combine all three discussed signs, i. e., ratio to denser packings, presence of complexes and the effect of valences. As result we obtain an IMF division into the following classes (proposed classification differs

from the one introduced by Ye. S. Makarov (4), first of all by the separation of heterodesmic phase classes and expansion of the class of dense packings)*):

1. Phases with more dense atom packings, atoms of close dimensions (r_R/r_X^{**} 1.00 - 1.10) without electron phases. Homodesmic; quantitative composition does not depend upon the valence of the components.

2. Phases with denser packings of atoms of various dimensions (r_R/r_X 1.10 - 1.80). Transient from homodesmic to heterodesmic of the first magnitude (in a majority of phases firm bonds between atoms of the prevalent component); the quantitative composition depends not upon the valence of the components, but upon the ratio r_R/r_X : content of component with atoms of smaller dimensions (X-component) is then greater, when r_R/r_X is greater, (5).

3. Phases with dense packings - w/o electron phases (structural types indicated above). Preferably homodesmic; quantitative composition does not depend upon valence.

4. Electron phases. In a majority of instances, homodesmic. Type of structure and quantitative composition due to electron concentration; content of less metallic component in a series of phases of specific structural type, decreases with the rise in valence of this component. A majority of electron phases is made up by phases with cubical volumetrically centered structure and its defective derivatives; the degree of structural defectiveness rises with electron concentration, which corresponds approximately to a constant number of valent electrons (about three) in a small cell (with dimensions as in phases of CsCl type).

5. Introduction phases. 1) Nickel-arsenide phases - atom introduction phases (or ion introduction phases) of transient metal in a hexagonal more dense packing

* Boundaries between IMF classes are not sharp; some phases can belong simultaneously to two classes.

** R - components with atoms of larger dimensions.

of atoms (ions) of nonmetallic or semi-metallic elements. In a series of nickel-arsenide phases, where the number of the group is less the metallic component rises, there is also an increase in the content of this component (homological series of phases with $Ni_{1/2}In$, $NiAs$ and CdJ_2 structural types (6) and Co_2Si and MnP types (7)). Nickel-arsenide phases are preferably heterodesmic.

2) Other phases of introduction into denser packings. Of special importance here are the phases of introduction of small atoms into hexagonal or cubic denser packing of atoms of transient metals (e. g., phase CrN , Co_3N) and phases with valent ratio of components (e. g., Mg_2Sn , Mg_2Sb_2).

6. Heterodesmic phases of first magnitude*, have different structural types, in a majority of instances not bound with denser packings. Phase composition does not depend on the valence of the components.

7. Heterodesmic phases of second magnitude*. Structural types, not bound with denser packings; ratio of components in a majority of phases valent.

In the non-enumerated classes remains only a slight number of phases with known types of structure, as well as phases with type of structure, determined partially or unknown.

The table given below contains binary IMF, data about which have been published prior to July 1952**: Tables 1-7 contain mainly phases with known type of structure and correspond to phase division into classes; in Table VIII are given classes (phases) with known type of structure, which so far cannot be included in specific classes. Almost for all types of structures Tables I - VIII carry: formula, synonymy, number of atoms in elementary cell (N) and spatial group. In Table IX are listed phases with structure, not completely determined, in Table X - with unknown structure.

* Determination and examples see above.

** Phases, characterized by structural types IMF, but having no metallic properties (e. g., SnS_2 , ZnS , CaC_2) not included in the systematism.

In the tables the following phase designations are used (designation methods are based in a symbolism, introduced by Ye. S. Makarov (8)):

$A_m B_n$ - constant composition phases;

$\partial - A_m B_n$ - variable composition phases with complete orderliness at $A_m B_n$ composition (Dalton phases (9));

$\partial - A_m B_{n_1} - A_m B_{n_2}$ variable composition phases with total orderliness at $A_m B_{n_1}$ and $A_m B_{n_2}$ compositions;

$AB_{n_1 - n_2}$ - variable composition phases w/o total orderliness (Bertollite phases (9)), as well as phases with known zone of homogeneity and unknown type of structure (indices n_1 and n_2 pertain to boundary phase compositions);

$A_m B_n \pm x$ - phases with unknown homogeneity zone (structure known or unknown);

$AB_x, AB_y, AB_{n+x}, AB_{n-x}$ (not $AB_n \pm x$) phase of unknown composition.

In phase formulas in the first place, there is always the symbol of the component (A), situated in the periodic system of elements of D. I. Mendeleev (of the 18 vertical series)*, to the left of the second component (B), and if both components belong to one vertical series, then the component, having greater ordinal number. In addition to designations by formulas, letter designations of phases are given - in cases where they are needed. Phase formulas, the affiliation of which to the given type of structure is proved, are included in square parentheses. Phase formulas of one type of structure are arranged in tables in the order of the ascending (rising) number of series, in which the B component is situated.

The authors express thanks to Ye. I. Gladyshevskiy for evaluating the problems touched upon in this report.

*

In table of the 18 vertical series Be is included in the 12th row, Mg in a majority of phases in the 12th, and in some (mg-Hg system) to second, H to 17th row.

The authors plead to report to them any errors and inaccuracies in the tables and in phase indicator.

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Table 1.

Phases with Denser Packings of Atoms of Close Dimensions

1. Derivatives of Hexagonal Double Layer Denser Packing

1) Mg, *retr.*, $N = 2$, D_{6h}^1 : $MnFe_{3.4 \rightarrow 6.7}(\epsilon)$, $LiZn_{9 \rightarrow 10}(\beta')$, $PdZn_{13 \rightarrow 14}(\eta)$, $HgZn_{1.5 \rightarrow 1.6}(\beta)$, $HgZn_{2.3 \rightarrow 3.0}(\gamma)$, $LiCd_{2.0 \rightarrow 5.7}(\beta')$, $Au_{2.7 \rightarrow 1.9}Cd(\alpha_1)$, UHg_{3+x} , $Au_{3+x}Hg(\delta)$, $Cu_{2.5 \pm x}Al(\gamma)^{(1)}$, $LaTi_3$, $Cu_{8 \rightarrow 6}Si(x)$, $Ni_3Sn(\beta')$; $Cu_{3+x}As^{(2)}$; $Ag_{8.6}As(\beta)$, $Pb_{3 \rightarrow 2}Bi(\delta)$, $AuCd$, *ромбич.*, $N = 4$, D_{2h}^5 ; $\partial-CdMg^{(5)}$, $\partial-AuCd(\beta')^{(4)}$.
 2) Ni_3Sn , *retr.*, $N = 2$, D_{6h}^1 , $MoCo_{3+x}$, WCo_3 ; $[MoNi_3]$; $\partial-Cd_3Mg^{(5)}$, $\partial-CdMg_3^{(6)}$, $LiHg_3$; $Ni_3In(\gamma)$, $\partial-Au_3In(\gamma)(t < 487^\circ)$; $Mn_{3.25}Ge^{(7)}$, $Ti_{3 \pm x}Sn$, $Mn_{3.4 \rightarrow 3.1}Sn(\beta')^{(7)}$, $Fe_3Sn(\beta'')$, $Ni_3Sn(\beta)$, $Ti_4Pt^{(7)}$; $Ti_4Sb^{(7)}$.
 3) Ag_3Sb , *ромбич.*, $N = 4$, C_{2v}^1 ; $[NbNi_3]$, $\partial-TaNi_3$; $\partial-TiCu_3(\beta)^{(8)}$, $[TiAu_{3 \pm x}]^{(9)}$, $\partial-Ag_3Sb(\epsilon')^{(10)}$.

1) hexagonal; 2) rhombical; 3) hexagonal; 4) rhombical

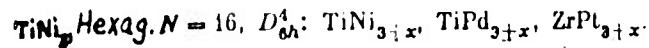
Structures with irregular distribution of atoms were not fully investigated, rhombic: $TiCu_{3.0 \rightarrow 3.8}(\beta')^{(11)}$;

hexagonal, $N = 18$: $FeBe_{10.1 \rightarrow 11.5}(\zeta)$.

2. Derivations of Cubical Triple Layer Denser Packing

Cu , *Cub*, $N = 4$, O_h^h : $MnZn_{2.1 \rightarrow 3.0}(\alpha)$, $Li_{3.8 \rightarrow 2.7}Cd(\gamma')$.
 $AuCu_x$, *Cub*, $N = 4$, O_h^h : $MnNi_{3 \pm x}$, $\partial-FeNi_3$, $PdNi_{3 \pm x}$, $\partial-FePd_3$, $TiPt_{3 \pm x}$, $CoPt_{3 \pm x}$; $[RhCu_{3 \pm x}]$, $Rh_{3 \pm x}Cu$, $\partial-PtCu_3$, $\partial-AuCu_3$, $PtAg_{3 \pm x}$, $\partial-Pt_3Ag(\gamma)$; $TiZn_{3 \pm x}$, $Pt_{3 \pm x}Zn$; $[Pt_{3 \pm x}Cd]$, $\partial-Au_3Cd(\alpha'') (400-550^\circ)$; UAl_3 , $\partial-Ni_3Al(\alpha')$, $MgIn_{3-x}^{(7,12)}$, $CaTi_3$; $Ni_3Si(\beta_1)$, Ni_3Ge , USn_{3-x} , $CaSn_3$, $CoSn_3$, $LaSn_3$, $PrSn_3$, Pt_3Sn , $CaPb_3$, $LaPb_3$, $CoPb_3$, $PrPb_3$, $NaPb_{1.55 \rightarrow 2.61}(\beta)^{(7)}$, $Pd_{3 \pm x}Pb$, $Pt_{3 \pm x}Pb$.
tetra $N = 4$, D_{4h}^{17} , $c/a > 1$: $AN_{4.7 \rightarrow 8.7}Zn(\alpha_1)$.
 γ -*Mn*, *tetra* $N = 4$, D_{4h}^{17} , $c/a < 1$: $HgCd_{0.4 \rightarrow 1.7}$; $Ni_{1.79}Ga(\delta)$, $Pd_{3 \pm x}In(\beta)$.
 $SrPb_3$, *tetra* $N = 4$, $c/a > 1$: $\partial-Au_3Cd(\alpha') (t < 400^\circ)$; $SrPb_{3 \pm x}$.
 $PdCu_x$, *tetra* $N = 4$, $c/a < 1$: $PdCu_{3 \pm x}^{(12)}$.
 $TiAl_3^{(14)}$, *tetra* $N = 16$, D_{4h}^{17} : $\partial-Au_3Zn(\alpha_2)$; $TiAl_{3 \pm x}$, $VAL_{3 \pm x}$, $NbAl_{3 \pm x}$, $TaAl_{3 \pm x}$, $TiGa_{3 \pm x}$, $ZrGa_{3-x}$.
 $ZrAl_3^{(14)}$, *tetra* $N = 16$, D_{4h}^{17} : $ZrAl_{3 \pm x}$.
 U_3Si , *tetra* $N = 16$, D_{4h}^{18} : $U_{3 \pm x}Si$.
 $AuCu$, *tetra* $N = 4$, D_{4h}^1 : $\partial-MnNi(\delta') (t < 650^\circ)$, $FePd_{1 \pm x}$, $\partial-CoPt$; $\partial-TiCu(\delta)$, $\partial-AuCu (t < 370^\circ)$, $RhCu_{1 \pm x}$ (псевдокубическая), $ZrAg$, $\partial-MnAu(\beta)^{(15)}$; $\partial-NiZn(\beta_1)$, $\partial-PdZn(\delta)$, $PtZn_{1 \pm x}$, $Pd_{2.0 \rightarrow 1.1}Cd(\delta)$, $PtCd_{1 \pm x}$, $PdHg_{1 \pm x}^{(16)}$; $\partial-TiAl$, $\partial-MgIn^{(12)}$; $LiBi(\alpha)$; $NaBi$.
 $AuCu$, *rhombical* $N = 40$: $AuCu_{1 \pm x} (370-400^\circ)^{(12)}$.
 $PtCu$, *rhombical* $N = 16$, D_{3d}^5 : $\partial-PtCu$.
 $MoNi_3$, *tetra* $N = 10$, C_{4h}^5 : $\partial-MoNi_3(\beta)$, $WNi_{4 \pm x}$.

3. Derivative of hexagonal four layer denser packing.



Other phases with denser packing of atoms of close dimensions - see Table 4 (types Mgm β -Min).

1. Metastable phase.
2. Algodonite.
3. In accordance with other data, in the zone of CdMg composition exists a phase with irregular structure at high temperature (γ) and orderly - at low temperature (γ').
4. The phase can be considered as an electron (deformed hexagonal denser packing $C_{el} = 1.5$).
5. By other data, in the zone of Cd_2Mg composition exists two phases: β at high temperature and β' at low temperature.
6. According to other data, in the field of CdMg_2 composition two phases exist: δ at high temperature and δ' at low temperature.
7. Phases with partially unordered distribution of atom.
8. Low temperature modification.
9. According to other data, the phase has the composition of TiAu_2 and Mg structure.
10. At this composition, there exists a second phase modification, probably with disordered distribution of atoms.
11. High temperature modification.
12. MgIn and MgIn_2 phases are formed from primary solid Mg solution in In; furthermore, in this solid solution exists a tendency toward orderliness at 25-35 at. % in (cubical structure, inherent of AuCd_3) and 37-44 at. % In (rhombical structure, inherent of rhombical AuCu).
13. According to other data, $\text{PdCu}_{5 \pm x}$.
14. TiAl_3 and ZrAl_2 types of phases-heterodesmic of the first order (flat grids of Al and Au atoms).
15. The phase forms a continuous series of solid solutions in Au.
16. By other data, cubical structure ($N = 8, T^4$).

Table II

Phases with Denser Packing of Atoms of Various Dimensions

ZnMg, *hexag.*, $N = 96$, D_{6h}^4 : δ -ZnMg (ζ).
 W_6Fe_7 , *rhomb.*, $N = 13$, D_{3d}^5 : δ - Mo_8Fe_7 (ϵ), W_6Fe_{7+x} (ζ); δ - Mo_8Co_7 (ξ), δ - W_6Co_7 .

Zn₂Mg, *hexag.*, $N = 12$, D_{6h}^4 : KNa_2 ; $Li_{2+x}Ca$; ZrV_{2+x} ; $ZrCr_{2+x}$, $NbCr_{2+x}$ ⁽¹⁾; $ThMn_2$, $TiMn_{2+x}$, $ZrMn_{2+x}$, $NbMn_{2+x}$, $TaMn_{2+x}$, $ZrRe_{2+x}$; $TiFe_{2+x}$, $NbFe_{2+x}$, $TaFe_{2+x}$, WFe_{2+x} (ϵ), $ZrRu_{2+x}$, $ZrOs_{2+x}$, $MoFe_{2+x}$; $ZrIr_{2+x}$; UNi_{2+x} ; VBe_{2+x} , $CrBe_{2+x}$, $MoBe_{2+x}$, WBe_{2+x} , $MnBe_{2+x}$, $ReBe_{2+x}$, δ - $FeBe_2$, δ -Zn₂Mg (η), δ -CaMg₂, SrMg₂, BaMg₂, LaMg₂, CeMg₂, Cu₂Cd (β), CaCd_{2+x}.

Cu₂Mg, *cub.*, $N = 24$, O_h^7 : $TiCr_{2+x}$, $ZrCr_{2+x}$, $NbCr_{2+x}$ ⁽²⁾, $TaCr_{2+x}$, $ZrMo_{2+x}$, ZrW_{2+x} , $GdMn_{2+x}$, UMn_2 ; $CeFe_2$, $GdFe_{2+x}$, UFe_3 , $ZrFe_{2+x}$; $CeCo_2$, δ - UCo_2 , $TiCo_{2+x}$, $ZrCo_{2+x}$, $NbCo_{2+x}$, $TaCo_{2+x}$; $LaNi_2$, δ - $CeNi_2$, $PrNi_2$, $CePt_{2+x}$; δ - $NaAu_2$ (β); δ - $TiBe_2$, $FeBe_{4,9 \rightarrow 15,7}$ (ϵ) ⁽³⁾, $CuBe_{3,3 \rightarrow 3,7}$ (δ) ⁽⁴⁾, $AgBe_{2,7}$ ⁽³⁾, δ - Cu_2Mg (β); $CaAl_3$, $LaAl_3$, δ - $CeAl_3$, UAl_3 ; Au_2Pb ; Au_2Bi , KBi_3 .

Ni₂Mg, *hexag.*, $N = 24$, D_{6h}^4 : $ZrFe_{2,85}$ ⁽³⁾, $TiCo_{2+x}$, $NbCo_{2,85}$ ⁽³⁾, $TaCo_{2,85}$ ⁽³⁾; Ni_2Mg .

AuBe₆, *cub.*, $N = 24$, T_d^2 : UNi_{5+x} ; δ - UCu_6 ; $PdBe_{6+x}$, $AuBe_{6+x}$.

CaZn₆, *hexag.*, $N = 6$, D_{6h}^1 : $[ThFe_6]$; $CeCo_6$, $ThCo_{6+x}$; $CaNi_{5+x}$, $CeNi_6$, $LaNi_6$, $PrNi_6$, $GdNi_{5+x}$, $ThNi_6$; $CaCu_{6+x}$, $CeCu_6$ ⁽³⁾, $LaCu_6$ ⁽³⁾; $CaZn_{5+x}$, $LaZn_{6+x}$, $ThZn_9$ ⁽³⁾.

Zn₁₁Mg₂, *cub.*, $N = 39$, T_h^1 : δ -Zn₁₁Mg₂ (θ) ⁽⁵⁾.

NaZn₁₃, *cub.*, $N = 112$, O_h^6 : $CeBe_{13+x}$, $ThBe_{13+x}$, UBe_{13+x} , δ - $ZrBe_{13}$ (η), $NaZn_{13+x}$, KZn_{13} , $[CaZn_{13+x}]$, $[SrZn_{13+x}]$, $[BaZn_{13+x}]$, KCd_{13} , $RbCd_{13+x}$, $CsCd_{13+x}$.

1. High temperature modification.
2. Low temperature modification.
3. Phases with partially disordered distribution of atoms.
4. Daltonide phase with singular point at $CuBe_3$ composition; structure at this composition was not investigated.
5. To phase δ -Zn₁₁Mg₂ (θ) was first attributed an incorrect structure $MgZn_2$ (hexagonal, $N = 96$, D_{6h}^4).

Table III

Phases with Dense Packings of Atoms

1. Phases, structures of which consist of layers of the type of the densest packing

$MoSi_2$, *tetra*, $N = 6$, D_{4h}^{17} : $MgHg_2$ (η); $MoSi_2$, WSi_2 , $ReSi_{2+x}$.
 $CrSi_2$, *hexag.*, $N = 9$, D_6^4 : $CrSi_2$ (γ), VSi_{2+x} , $NbSi_{2+x}$, $TaSi_{2+x}$, $NbGe_{2+x}$, $TaGe_{2+x}$.
 $TiSi_2$, *rhomba*, $N = 24$, D_{2h}^{21} : $TiSi_{2+x}$, $TiGe_{2+x}$.
 $Mn_3As^{(1)}$, *rhomba*, $N = 16$, D_{2h}^{13} : Mn_3+xAs .

2. Derivative of Cubical Face-centered Structure.

α -W, cub., $N = 2$, O_h^9 : $\text{Cu}_{1.85 \rightarrow 1.17}\text{Be}(\beta)^{(2)}$, $\text{Mn}_{1.88 \rightarrow 1.95}\text{Zn}(\beta)$, $\text{PdCd}_{1.15 \rightarrow 1.70}(\beta)$,
 $\text{Au}_{4.9 \rightarrow 3.8}\text{Al}(\beta)^{(3)}$; $\text{Mn}_{3 \pm x}\text{Si}$.

CsCl, cub., $N = 2$, O_h^1 : $\text{TiFe}_{1 \pm x}$, $\text{TiRu}_{1 \pm x}$, $\text{TiOs}_{1 \pm x}$; $\text{TiCo}_{1 \pm x}$, $\text{FeCo}_{1 \pm x}$; $\text{TiNi}_{1 \pm x}$,
 δ -MnNi ($\beta = \delta$) ($t > 650^\circ$)⁽⁴⁾, δ -FePt; $\text{PdCu}_{1 \pm x}$ ⁽⁶⁾, δ -LiAg, CeAg, LaAg, NiAu_{1 ± x};
 $\text{CoBe}_{1 \pm x}$, δ -NiBe (β), PdBe, SrMg, LaMg, CoMg, PrMg, $\text{TiZn}_{1 \pm x}$, δ -CoZn (β).

δ -NiZn (β), $\text{Pd}_{2.8 \rightarrow 1.0}\text{Zn}(\beta)^{(6)}$, $\text{PdZn}_{1.4 \rightarrow 1.0}(\beta_1)^{(6)}$, $\text{LaZn}_{1 \pm x}$, $\text{CeZn}_{1 \pm x}$, $\text{PrZn}_{1 \pm x}$,
 δ -LiHg, MgHg (ζ), $\text{LaCd}_{1 \pm x}$, $\text{CeCd}_{1 \pm x}$, $\text{PrCd}_{1 \pm x}$, $\text{LaHg}_{1 \pm x}$, $\text{CeHg}_{1 \pm x}$, $\text{PrHg}_{1 \pm x}$,
 $\text{NdHg}_{1 \pm x}$; $\text{NdAl}_{1 \pm x}$, LiTl, [KTl], MgTl, δ -CaTl (γ), SrTl_{1 ± x}; $\text{RuSi}_{1 \pm x}$, LiPb (β').

$\text{UCo}^{(7)}$, cub., $N = 16$, T^8 : UCo.

$\text{NaTi}^{(8)}$, cub., $N = 16$, O_h^7 : δ -LiZn (δ''), δ -LiCd (γ); δ -LiAl (β), $\text{LiGa}_{1 \pm x}$, δ -LiIn⁽⁹⁾,
 $\text{NaIn}_{1 \pm x}$, δ -NaTl.

Ti_7Sb_2 , cub., $N = 54$, O_h^9 : $\text{Ti}_7\text{Sb}_2(\gamma)$.

Cr_2Al , tetra., $N = 6$, D_{4h}^{17} : δ - $\text{Cr}_2\text{Al}(\beta)$.

$\text{V}_3\text{Si}^{(10)}$, cub., $N = 8$, O_h^3 : $\text{V}_{3 \pm x}\text{Co}$; $\text{Ti}_{3 \pm x}\text{Pt}$; $\text{Ti}_{3 \pm x}\text{Au}^{(11)}$, $\text{V}_{3 \pm x}\text{Si}$, $\text{Cr}_3\text{Si}(\beta)$, Mo_3Si ,
 $\text{V}_{3 \pm x}\text{Ge}$, $\text{Cr}_{3 \pm x}\text{Ge}$.

Other phases with structures, derivatives of body centered cubic - see Tables IV, V_B (type BiF_3) and VI (type $\text{Mg}_{17}\text{Al}_{12}$).

1. Cubical denser packing with passing of one fifth of the layers along the quaternary axis; structure, inherent to the Cu_2Sb type.
2. At $t > 880^\circ$ the β -phase forms one area with β' -phase (Table IV).
3. High temperature modification.
4. According to other data, the cubical body centered structure (probably of the AuCu type, pseudocubical, as in $\text{RhCu}_{1 \pm x}$ phase).
5. By other data, $\text{Pd-Cu}_{5 \pm x}$.
6. Phases with partially disordered atom distribution.
7. Type of heterodesmic structure of second order (molecules).
8. Type of heterodesmic structure of first type (frame of B-atoms).
9. Phase forms a continuous series of solid solutions with Li.
10. Superstructure β -W; type of structure, intermediate between α -W and Cu.
11. By other data, phase possesses a structure of the AuCu_2 type.

Table IV.

Electron Phases

1. $C_{el} = 1.50$.

ϵ -W⁽¹⁾, *kyb.*, $N=2$, O_h^f : CuZn_{0.67→1.38} (β), AgZn_{0.67→1.38} (β), AgCd_{0.73→1.26} (β);
 Cu_{4.0→2.8}Al (β), Ag_{3.1→2.8}Al (β), Cu_{3.9→3.0}Ga (β), Cu_{4.3→3.2}In (β), Ag_{3.2→3.0}In (β);
 Cu_{6.7→5.3}Sn (β).
 Ca⁽¹⁾, *kyb.*, $N=2$, O_h^f : Cu_{1.08→1.04}Be (γ)⁽²⁾, ∂ -AgMg (β), ∂ -AuMg (β), ∂ -CuZn (β);
 ∂ -AuZn (β), ∂ -AuCd (β); ∂ -MnAl, ∂ -FeAl (β₂), ∂ -CoAl (γ), ∂ -NiAl (β)⁽³⁾, PdAl_{1±x}.
 NiCa_{1±x} (β), ∂ -NiIn (δ)⁽⁴⁾, PdIn_{1+x}.
 BiF₃⁽¹⁾, *cub.*, $N=16$, O_h^6 : Cu_{3±x}Al (β₁)⁽⁵⁾.
 β-Mn, *tetra*, $N=20$, O^7 : Ag_{3.8→3.0}Al (β'), [Cu_{4.0→4.6}Si (γ)].
 Mg, *hex.*, $N=2$, D_{6h}^4 : AgCd_{1.0→1.1} (ζ), Ag_{1.21}Hg (β); Cu_{4.0→3.2}Ga (μ), Ag_{2.7→2.0}Ga (β);
 Ag_{2.6→2.0}Ga (γ), Ag_{3.4→2.0}In (γ) ($t > 187^\circ$), Au_{5.7→4.0}In (β); Cu_{6.7→5.3}Si (β);
 Cu_{6.2→4.7}Ge (β)⁽⁶⁾, Ag_{7.1→3.8}Sn (β), Au_{7.4→5.7}Sn (β); Ag_{9→6}Sb -

2. $C_{el} = 1.62$.

(Cu₅Zn₈)^(1,7), *cub.*, $N=52$, T_d^3 : ∂ -Cu₅Zn₈ (γ), ∂ -Ag₅Zn₈ (γ), AuZn_{1.8→2.8} (γ₁)⁽⁸⁾.
 ∂ -Ag₅Cd₈ (γ), ∂ -Ag₅Hg₈ (γ).
 Cu₅Cd₈^(1,7), *kyb.*, $N=52$, T_d^3 : CuCd_{1.4→1.8} (δ)⁽⁸⁾.
 Cu₉Al₄^(1,7), *kyb.*, $N=52$, T_d^3 : ∂ -Cu₉Al₄ (γ), ∂ -Cu₉Ga₄ (δ), ∂ -Cu₉In₄ (γ), Ag_{2.1→2.0}In (ε)⁽⁹⁾,
 ∂ -Au₉In₄ (δ).
 Ca₃₁Sn₈^(1,7,9), *kyb.*: Cu₃₁Sn₈ (δ).
 Co₅Zn₂₁^(1,7,9), *kyb.*: MnZn_{4.4→5.9} (Γ), FeZn_{2.1→3.4} (Γ), CoZn_{2.3→5.7} (Γ), Rh₅Zn_{21±x}
 NiZn_{2.3→5.7} (Γ), PdZn_{4.0→6.7} (γ), Pt₅Zn_{21±x}, Co₅Cd_{21±x}, Rh₅Cd_{21±x}, Ni₅Cd_{21±x}
 PdCd_{4.3→4.7} (γ) Pt₅Cd_{21±x} (γ).

3. $C_{el} = 1.75$.

Mg, *hex.*, $N=2$, D_{6h}^4 : MnZn_{0.7→7.3} (ε), CuZn_{3.6→6.7} (ε), AgZn_{2.1→7.3} (δ), AuZn₈ (ε);
 AgCd_{1.8→6.3} (δ); Ag_{3.2→1.4}Al (ζ), Au₅Al_{3±x}; Cu_{4.4→3.8}Sb (ε)⁽¹⁰⁾.

Rhombically deformed structure Mg: Cu_{3.2→2.9}Ge (ε), Cu₃Sn (ε)⁽¹¹⁾, Ag_{3.0→2.8}Sn (ε').

4. $C_{el} = 1.80$.

Ni₂Al₃⁽¹⁾, *hex.*, $N=5$, D_{3d}^3 : ∂ -Ni₂Al₃ (δ), Pd₂Al_{3±x}, Ni₂Ga₃ (β'), Pt₂Ga_{3±x}, Ni₂In₃ (β);
 Pd₂In_{3±x}, Pt₂In_{3±x}.

1. Derivatives of cubical body-centered structure; they also include structural CaF₂ types (cubical body-centered structure with partially unoccupied positions of atoms; see Table V, b and Ru₃Sn₇ (Table VI).

2. See remark⁽²⁾ to table III.

3. At low aluminum content the lattice is deformed tetragonally.
4. High temperature modification.
5. Metastable phase.
6. Probably, monoclinic deformed structure.
7. Atomic positions in structures of Cu_5Cd_8 , Cu_9Al_4 , $\text{Cu}_{31}\text{Sn}_4$ and $\text{Co}_5\text{Zn}_{21}$

type (structural types of γ -brass) are generally identical, but differently distributed between the atoms of components A and B. Other structural types with very same atomic positions, see in table VIII. Defective structures, derived from the type of γ -brass, have phases of the Ru_3Sn_7 type (table VI), other defective and deformed structure are listed in tables IX and X.

8. Partially disordered distribution of atoms over the entire phase homogeneity zone.

9. Structures incompletely investigated.

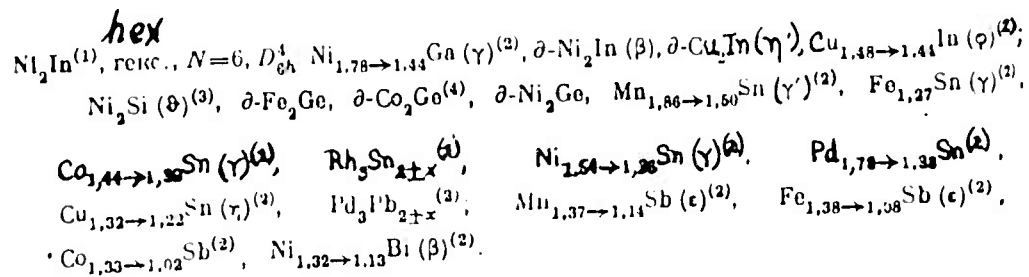
10. In addition to phase ϵ' , in this phase exists phase ϵ'' with ordered atom distribution. According to other data, instead of phases ϵ and ϵ' , there exist three superstructural phases: $\text{Cu}_{4.5} \rightarrow 4.1 \text{Sb}$ (δ) hex., $N = 12$), $\text{Cu}_{11}\text{Sb}_4$ (θ) (hex., $N = 15$) and $\text{Cu}_{11}\text{Sb}_2$ (η) (rhombic, $N = 49$).

11. By other data, superstructure to type Mg with $N = 16$.

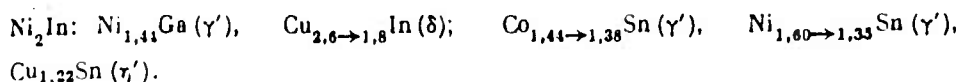
Table V.

Introduction Phases

a. Nickel-arsenide phases.



Superstructures with unknown distribution of atoms, derivatives of the Ni_2In type:



Structures, inherent to Ni₂In type, not thoroughly investigated: Mn₅Ge₂ (two modifications), Mn_{1.85} → 1.66 Ge.

NiAs⁽¹⁾, ~~hex~~, *tric.*, $N = 4$, D_{2h}^4 : IrSn_{1+x}, PtSn_{1+x}, AuSn, IrPb_{1+x}, PtPb_{1+x}; MnAs, NiAs, CrSb_{1+x} (β), δ -NiSb (γ), PdSb, PtSb, MnBi_{1+x}, RhBi, PtBi_{1+x}; δ -VS, δ -CrS (α), δ -FeS, δ -CoS, NiS_{1+x} (β), δ -CrSe (α), δ -FeSe (β)⁽⁶⁾, δ -CoSe, NiSe_{1+x} (β), VTe_{1+x}, δ -CrTe (α), MnTe_{1+x}, δ -FeTe, PdTe_{1+x}, PtTe_{1+x}.

Defective structure, not thoroughly investigated. derivative of type NiAs: CrSe_{1.44} → 1.50 (γ).

Monoclinically deformed defective structure, not thoroughly investigated, derivatives of the type NiAs: Ni₃Sn₄ (δ) ($N = 14$); CrS_{1.22} → 1.44 (β), CrSe_{1.18} → 1.38 (β), CrTe_{1.17} → 1.50 (β).

CdJ₂⁽⁶⁾, ~~hex~~, *tric.*, $N = 3$, D_{3d}^3 : δ -TiS₂, δ -ZrS₂, δ -TaS₂, ReS_{2+x}, PtS_{2+x}, ZrSe_{2+x}, PtSe_{2+x}, PdTe_{2+x}, PtTe_{2+x}.
 NiAs - CdJ₂: δ -TiSe - TiSe₂, δ -VSe - VSe₂⁽⁷⁾, δ -TiTe - TiTe₂, δ -CoTe - CoTe₂, δ -NiTe - NiTe₂.
 Co₂Si⁽⁸⁾ *Anom.*, $N = 12$, D_{2h}^{18} : Co₂Si (θ), Ni₂Si (δ)⁽⁹⁾.
 MnP⁽¹⁰⁾, *Rhom.*, $N = 8$, D_{2h}^{16} : AuGa; NiSi (η), PdSi⁽¹¹⁾, PtSi, IrGe, NiGe, PdGe, PtGe, PdSn; CrP_{1+x}, WP_{1+x}, MnP, FeP_{1+x}, CoP_{1+x}, CrAs_{1+x}, FeAs (η), CoAs, RhSb.
 AuTe₂⁽¹²⁾, *MONO.*, $N = 6$, C_{2h}^3 : AuTe_{2+x}⁽¹³⁾.

Nickel-arsenide phase are joined by phases of the Mn₅Si₃ types (table V b and Cr₃C₂ (table VI). Phases with antiisomorphous structure to CdJ₂, see Table V b.

1. To the type Ni₂IN are figured in phases, containing no AB composition, to the type NiAs - containing this composition.
2. Defective Ni₂Om structure (part of Ni positions vacant).
3. High temperature modification.
4. At low temperature superstructure (probably at Co₃Go₂ composition).
5. High temperature modification in the zone 53-57 at. %, the Se structure is monoclinically deformed.
6. Heterodesmic structural type of second order (lamellar structure).
7. In the region of 55.5 - 60.5 at. %, the Se structure is monoclinically deformed.

8. Deformed Ni_2In structure, heterodesmic of first magnitude (chains of B-atoms).
9. Low temperature modification.
10. Deformed $NiAs$ structure, heterodesmic of first magnitude (chains of B-atoms).
11. By other data, phase homogeneous in zone $Pd_2Si-PdSi$ and has hexagonal structure, like Pd_3B_2 .
12. Deformed structure of CdJ_2 type, heterodesmic (chains of B atoms and AB_2 molecules). Atoms occupy positions² of deformed cubical simple packing.
13. Kalevarite.
 - b. Other introduction phases into the hexagonal double layer denser packing (PU) and other noncubical PU.

(see page 16a for formula)

Structure with ordered introduction of boron atoms into the dense packing of Tu atoms; hexag.: $Ti_{10,0} \rightarrow 1.3^{B(6)}$.

Fe_4N , cub., $N = 5$, O_h^1 : $\delta-Nb_4C^{(1)}$; $\delta-Mn_4N(\epsilon)$, $\delta-Fe_4N(\gamma)$ (PU OF METAL Atoms),
 U_4S_3 , cub., $N = 7$: U_4S_{3+x} .
 La_2O_3 , hex., $N = 5$, D_{3d}^5 : Th_2N_3 , $Mg_2Sb_3(\alpha)$, $Mg_2Bi_3(\alpha)$ PU OF H, Mg Atoms),
 $NaCl$, cub., $N = 6$, O_h^1 : ScC_{1+x} , ThC_{1+x} , UC , PuC_{1+x} , $\delta-TiC$, $\delta-ZrC$, HfC_{1+x} , $\delta-Vc(\alpha)$,
 $Nb_{1,38} \rightarrow C^{(1,2)}$, $\delta-TaC$; ScN_{1+x} , $[LaN_{1+x}]$, $[CeN_{1+x}]$, $[PrN_{1+x}]$, NdN_{1+x} , GdN_{1+x} .

a) (PU atoms, occupying As positions) b) metal atoms PU.

1. Metstable phase.
2. In the zone of ϵ -phase homogeneity total orderliness was found also at compositions Fe_4N , $Fe_{12}N_5$ and Fe_2N .
3. Positions of hydrogen atoms in the structure are unknown.

Na_3As , гекс., $N = 8$, D_{6h}^4 : AuMg_3 , Mg_3Hg (β); Na_3P , Li_3As , Na_3As , K_3As , Li_3Sb (a),
 Na_3Sb , K_3Sb , Na_3Bi , K_3Bi (ПУ атомов, занимающих положения As). *PU Atoms* **a**
 Ni_3N , гекс., $N = 8$, D_6^6 : Fe_{2+x}C (ϵ)⁽¹⁾; $\delta\text{-Fe}_3\text{N}$ (ϵ)⁽²⁾, Co_3N (γ), Ni_3N (ПУ атомов металла). *PU Atoms* **b**
 CdJ_2 , гекс., $N = 3$, D_{3d}^3 : V_{2+x}C (β), Ta_{2+x}C , $\delta\text{-Mo}_2\text{C}$, $\delta\text{-W}_2\text{C}$, $[\text{Fe}_{2+x}\text{C}]$; $[\text{Cr}_{2+x}\text{N}(\beta)]$,
 $[\text{V}_{0.7-1.3}\text{N}(\beta)]$, $[\text{Nb}_{2+x}\text{N}]$, $[\delta\text{-Mn}_2\text{N}(\zeta)]$ (ПУ атомов металла). *PU Atoms* **c**
 Fe_3N , гекс., $N = 12$: Fe_3N (ζ) (ПУ атомов металла). *PU Atoms* **d**
 Co_2N , ромбич., $N = 6$, D_{2h}^{14} : Co_{2+x}C ; Co_2N (δ) (ПУ атомов металла). *PU Atoms* **e**
 Mn_6Si_3 , гекс., $N = 16$, $[D_{6h}^3]$: Mg_6Hg_3 (ϵ); $\text{Ti}_6\text{Si}_{3+x}$, $\text{Mn}_6\text{Si}_{3+x}$, Fe_6Si_3 (η), $\text{Ti}_6\text{Ce}_{3+x}$,
 $\text{Ti}_6\text{Sn}_{3+x}$ (ПУ атомов Hg, Si, Ga, Sn). *PU Atoms* **f**
 Tl_2S , ромбич., $N = 8$, C_3^4 : Tl_2S (ПУ атомов Tl). *PU Atoms* **g**
 $\text{Zr}_2\text{H}^{(3)}$, гекс.: Zr_{2+x}H (γ), Ta_{2+x}H (β), Ni_{2+x}H (ПУ атомов металла). *PU Atoms* **h**
 $\text{Cu}_3\text{S}^{(4)}$, гекс., $N = 6$, D_{6h}^4 : Cu_3S ($t > 52^\circ$) (ПУ атомов S). *PU Atoms* **i**
 Fe_2P , гекс., $N = 9$, D_3^2 : Mn_2P , Fe_{2+x}P , Ni_{2+x}P (ПУ атомов металла). *PU Atoms* **j**
 PbCl_2 , ромбич., $N = 12$, D_{2h}^{10} : $\delta\text{-Co}_2\text{P}$, $\delta\text{-ThS}_2$ (ПУ атомов P, Th). *PU Atoms* **k**
 $\text{ZnS}^{(6)}$, гекс., $N = 4$, C_{6v}^4 : $[\text{TaN}_{1+x}]$, GaN_{1+x} , InN_{1+x} , CdSe_{1+x} ; $[\text{CrH}_{1+x}]$.
 Структура с упорядоченным внедрением атомов бора в плотнейшую упаковку
 атомов Ti; гекс.: $\text{Ti}_{10,0 \rightarrow 1,3}\text{B}^{(6)}$.
 $\text{Pt}_2\text{Sn}_3^{(7)}$, гекс., $N = 10$, D_{6h}^4 : Pt_2Sn_3 (ПУ атомов Sn). *PU Atoms* **l**
 $\text{Bi}_2\text{Te}_3^{(8)}$, ромбич., $N = 5$, D_{3d}^5 : $[\text{As}_2\text{Se}_{3+x}]$, $[\text{Bi}_2\text{Se}_3]$, $[\delta\text{-Sb}_2\text{Te}_3]$, $\delta\text{-Bi}_2\text{Te}_3$ (ПУ атомов Se, Te). *PU Atoms*

4. High temperature modification of chalcosine.
5. Wuestite.
6. Structure not thoroughly investigated.
7. Introduction structure into hexagonal six-ply denser packing.
8. Introduction structure into rhombical 9-ply denser packing, heterodesmic of second magnitude (lamellar).

c. Introduction phases into a cubical denser packing

Filling of Octahedral Voids

$\text{ThN}_{1\pm x}$, UN , $\text{NpN}_{1\pm x}$, $\text{PuN}_{1\pm x}$, $\text{TiN}_{1\pm x}$, $\text{ZrN}_{1\pm x}$, $\delta\text{-VN}(\gamma)$, $\text{NbN}_{1\pm x}$, $\text{CrN}(\gamma)$, $\text{WN}_{1\pm x}$,
 $[\text{ReN}_{0.43-x}]$, $[\text{LaP}_{1\pm x}]$, $[\text{CeP}_{1\pm x}]$, $[\text{PrP}_{1\pm x}]$, NdP_{1-x} , $\text{Th}_{1.41}\text{P}^{(2)}$, $\text{UP}_{1\pm x}$, $\text{LaAs}_{1\pm x}$,
 $\text{CeAs}_{1\pm x}$, $\text{PrAs}_{1\pm x}$, $\text{NdAs}_{1\pm x}$, SnAs , $\text{LaSb}_{1\pm x}$, $\text{CeSb}_{1\pm x}$, $\text{PrSb}_{1\pm x}$, $\text{NdSb}_{1\pm x}$,
 $\text{LaBi}_{1\pm x}$, CeBi , $\text{PrBi}_{1\pm x}$, $\text{UBi}_{1\pm x}$; $\delta\text{-CeS}$, $\text{EuS}_{1\pm x}$, $\text{Th}_{2.0\rightarrow 1.3}\text{S}^{(2)}$, $\text{PuS}_{1\pm x}$, $\text{PbS}_{1\pm x}$,
 $\text{CeSe}_{1\pm x}$, $\text{EuSe}_{1\pm x}$, $\text{YbSe}_{1\pm x}$, $\text{PbSe}_{1\pm x}$, $\text{EuTe}_{1\pm x}$, $\text{YbTe}_{1\pm x}$, $\delta\text{-GeTe}^{(3)}$, SnTe ,
 $\delta\text{-PbTe}(\beta)$
 $\text{SnSb}^{(4)}$, **Rhom.**, $N = 8$; $\delta\text{-SnSb}(\beta)$.
 $\text{SnS}^{(4,5)}$, **Rhom.**, $N = 8$, D_{2h}^{16} ; $\text{SnS}_{1\pm x}$.
 $\text{GeS}^{(1,5)}$, **Rhom.**, $N = 8$, D_{2h}^{16} ; $\text{GeS}_{1\pm x}$.
 $\text{FeSi}^{(4,5)}$, **Cub.**, $N = 8$, T^4 ; $\text{AuBe}(\beta)^{(6)}$; $\text{PdGa}_{1\pm x}$, $\text{PtGa}_{1\pm x}$; $\text{CrSi}(\epsilon)$, $\text{MnSi}(\epsilon)$, $\text{FeSi}(\epsilon)$,
 $\text{CoSi}(\epsilon)$, $\text{CrGe}_{1\pm x}$, $\text{RhSn}_{1\pm x}$.

Structures with unknown distribution of N atoms in the voids:

$\text{Fe}_{11\rightarrow 10.5}\text{N}(\alpha'')^{(7,8)}$ (терр.)^(7,8), $\text{Mn}_{3+x}\text{N}(\delta)$ (терр., $N=5$), $\text{Mo}_{2.12\rightarrow 1.95}\text{N}(\gamma)$ (терр.,
 $N=6$), $\text{Mo}_{2.70\rightarrow 2.33}\text{N}(\beta)$, $\text{Mn}_3\text{N}_{2+x}(\iota)$.

Filling of tetrahedral voids

$ZnS^{(9)}$, куб., $N = 8$, T_d^2 : [δ -TiB]; AlP_{1+x} , GdP_{1+x} , InP_{1+x} , $AlAs_{1+x}$, $GaAs_{1+x}$,
 $InAs_{1+x}$, $AlSb$, $GaSb_{1+x}$, $InSb$; $ZnSe_{1+x}$, $CdSe_{1+x}$, $CdTe_{1+x}$, $HgSe_{1+x}$,
 $ZnTe_{1+x}$, $HgTe_{1+x}$, $Ga_2Se_3^{(10)}$, $Ga_2Te_3^{(10)}$, $In_2Te_3^{(10)}$; δ -TiH (β), ZrH_{1+x} (δ).
 $PbO^{(11)}$, тетра., $N = 4$, D_{3h}^7 : $InBi$ (γ); $FeSe_{1+x}$ (α)⁽⁶⁾ (ПУ атомов Bi, Se).
 PtS , тетра., $N = 4$, D_{3h}^7 : PtS_{1+x} (ПУ атомов Pt).
 Zn_3P_2 , тетра., $N = 40$, D_{3h}^{15} : $Zn_3P_2^{(12)}$, $Cd_3P_2^{(12)}$, Zn_3As_2 , $Cd_3As_2^{(12)}$ (ПУ атомов P, As).
 Mn_2O_3 , куб., $N = 80$, T_h^7 : Mg_3As_2 (ПУ атомов As).
 CaF_2 , куб., $N = 12$, O_h^5 : $PtAl_{2+x}$ (¹³), δ - $AuAl_2$, $PtGa_{2+x}$ (¹³), $AuGa_2$, $PtIn_{2+x}$ (¹³), $AuIn_2$;
 $CoSi_2$, $NiSi_2$ (ζ), $PtSn_2$, $IrSn_2$, Mg_2Si , Mg_2Ge , Mg_2Sn (¹⁴), Mg_2Pb (¹⁴), $Rh_{2+x}P$.
 $Ir_{2+x}P$; [CrH_{2+x}] (ПУ атомов, занимающих положения Ca). ПУ атомов, occupying Ca positions
 $Mn_2O_3 - CaF_2$; δ - $U_2N_3 - UN_2$.
 $ZrH_2^{(15)}$, тетра., $N = 6$: $CuAl_{2+x}$ (θ)⁽⁸⁾; ThH_{2+x} , ZrH_{2+x} (ϵ).

Structure with unknown distribution of H atoms over the voids: $Zr_2H(\beta)$

Filling octahedral and tetrahedral voids

Co_3S_4 , куб., $N = 56$, O_h^7 : Co_3S_4 , Ni_3S_4 } ПУ атомов S).
 Co_9S_8 , куб., $N = 68$, O_h^5 : Co_9S_8
 Cu_2Sb , тетра., $N = 6$, D_{3h}^7 : $Cr_{2+x}As$, δ - Mn_2As (β), Fe_2As , δ - Mn_2Sb (δ), δ - Cu_2Sb (γ);
 $Cu_4Te^{(10)}$, тетра., ПУ атомов As, Sb, Te).
 $BiF_3^{(6)}$, куб., $N = 16$, O_h^5 : δ - $LaMg_3$, δ - $CeMg_3$, $PrMg_3$, Li_3Hg ; δ - Fe_3Al (β_1); Fe_3Si (θ);
 δ - Cu_3Sb (β'), Li_3Sb (β), Li_3Bi (ПУ атомов, занимающих положения Bi).

ПУ of atoms occupying Bi positions

Structures with finally not established distribution of metal atoms over the voids: cub.: $Cu_{1.9} \rightarrow 1.6$ S⁽¹⁷⁾, $Cu_{2.00} \rightarrow 1.74$ Se (α), Ag_2Te (α).

1. Phase homogeneity zones δ - Nb_3C and $Nb_{1.38} \rightarrow 1.8$ C at a rise in temperature expand and above 1600° fuse together.
2. Phase with defective structures (part of nonmetal atom position vacant).
3. At low temperature and low, Te content - As type superstructure, at high Te content - deformed structure of NaCl type.
4. Deformed NaCl type structure.
5. Structural type intermediate from homodesmic to heterodesmic of second order (molecular).
6. Low temperature modification.

7. Partially disordered distribution of N atoms; to total orderliness corresponds formula Fe_2N and $N = 18$.

8. Metastable phase.

9. Zinc Blende.

10. Phase with defective structures (part of metal atom positions vacant).

11. Structural type heterodesmic of second order (lamellar structure).

12. To phases Zn_3P_2 , Cd_3P_2 and Cd_3As_2 was previously erroneously attributed a structure of the type Mg_3P_2 (cub. $N = 10$; O_h).

13. Phases $PtAl_{2 \pm x}$, $PtGa_{2 \pm x}$ and $PtIn_{2 \pm x}$ can be considered as electron phases with $C_{el} = 2$.

14. According to new data, Mg_2Sn and Mg_2Pb represent intercalation phases of additional Mg and Sn atoms (Pb) (in ratio 2:1 into the structure of CaF_2 type).

15. Deformed CaF_2 type structure.

16. Superstructure to type α -W.

17. Digenite.

Table VI.

Heterodesmic Phases of First Magnitude

1. Phases with three-dimensional complexes (bodies) of E-component atoms

$ThSi_2$ **tetr.**, $N = 12$, D_{4h}^{10} : $LaSi_{2 \pm x}$, $CeSi_{2 \pm x}$, $PrSi_{2 \pm x}$, $NdSi_{2 \pm x}$, $SmSi_{2 \pm x}$, $ThSi_{2 \pm x}$, $USi_{2 \pm x}(\alpha)$, $NpSi_{2 \pm x}$, $PuSi_{2 \pm x}$.
 $Ru_3Sn_7^{(1)}$, **cub**, $N = 40$, O_h^9 : $[NiGa_4 \pm x(\epsilon)]$, $Pd_3Ga_{7 \pm x}$, $Pt_3Ga_{7 \pm x}$, $[Ni_{10}In_{27 \pm x}(\eta)]$, $[PtIn_3 \pm x]$, $Pt_3In_{7 \pm x}$, $Ir_3Ge_{7 \pm x}$, Ir_3Sn_7 , Ru_3Sn_7 .
 UB_4 , **tetr.**, $N = 20$, D_{3h}^5 : $CeB_{4 \pm x}$, $ThB_{4 \pm x}$, $UB_{4 \pm x}$.
 CaB_6 , **cub**, $N = 7$, O_h^1 : $CaB_{6 \pm x}$, $SrB_{6 \pm x}$, $BaB_{6 \pm x}$, $LaB_{6 \pm x}$, $CeB_{6 \pm x}$, $PrB_{6 \pm x}$, $NdB_{6 \pm x}$, $GdB_{6 \pm x}$, $ErB_{6 \pm x}$, $YbB_{6 \pm x}$, $YB_{6 \pm x}$, $ThB_{6 \pm x}$.
 UB_{12} , **hex.**, $N = 52$, O_h^5 : $UB_{12 \pm x}$.
 $NiMg_2$, **hex.**, $N = 18$, D_6^4 : $NiMg_2$.
 $NiAl_3$, **rhomb.**, $N = 16$, D_{2h}^{16} : $NiAl_3(\epsilon)$.
 Co_2Al_6 , **hex.**, $N = 28$, D_{6h}^4 : $\delta-Co_2Al_6$.
 Co_2Al_9 , **mono.**, $N = 22$, C_{2h}^5 : Co_2Al_9 .

2. Phases with two-dimensional complexes (lattices) of B-component atoms

AlB_2 , рект., $N = 3$, D_{6h}^1 : $ThNi_2$ (или Th_2Ni_4); $ThCu_2$ (или Th_3Cu_6); $[PtZn_{2+x}]$,
 $[PtCd_{2+x}]$, UHf_{2+x} ; $\partial-TiB_2$, ZrB_{2+x} , VB_{2+x} , $\partial-NbB_2$ (ϵ), $\partial-TaB_2$ (ϵ), CrB_2 (ϕ),
 MoB_{2+x} , AlB_{2+x} , $CaGa_{2+x}$, $LaGa_{2+x}$, $CeGa_{2+x}$, $[PrGa_2]$; USi_{2+x} (β).
 $CaSi_2$, ромбич., $N = 6$, D_{3d}^5 : $CaSi_2$, $CaGe_{2+x}$.
 Mo_3B_7 , рект., $N = 20$, D_{3d}^5 : Mo_3B_7 (ϵ)⁽²⁾.
 Ti_2B_5 , рект., $N = 14$, D_{6h}^4 : Ti_2B_{5+x} , $WB_{2,0 \rightarrow 2,1}$ (ϵ)⁽³⁾.

3. Phases with monodimensional complexes (chains, bands) of B-component atoms

FeB , ромбич., $N = 8$, D_{2h}^{16} : FeB , CoB , MnB (ζ); USi_{1+x} .
 WB , тетра., $N = 16$, D_{4h}^{10} : $\partial-MoB$ (δ), $\partial-WB$ (δ).
 CrB , ромбич., $N = 8$, D_{2h}^{17} : CrB (ζ), MoB_{1+x} (β), WB_{1+x} , NbB (γ), TaB (γ); $CaSi$.
 Ta_3B_4 , ромбич., $N = 14$, D_{2h}^{25} : Nb_3B_4 (δ), Ta_3B_4 (δ), Cr_3B_4 (η), Mn_3B_4 (η).
 Cr_3C_2 , ромбич., $N = 20$, D_{2h}^{14} : $\partial-Cr_3C_2$.
 $CuMg_2$, ромбич., $N = 48$, D_{2h}^{21} : $CuMg_2$.

4. Phases with insular complexes (pairs, etc.) of atoms of one component (preferably of B-component)

$FeS_2^{(4,5)}$, куб., $N = 12$, T_h^4 : PtP_{2+x} , $PdAs_{2+x}$, $PtAs_{2+x}$, $PdSb_2$, $PtSb_2$, $AuSb_2$,
 $PtBi_{2+x}$; MnS_{2+x} , FeS_2 , RuS_{2+x} , OsS_{2+x} , CoS_{2+x} , RhS_{2+x} , NiS_{2+x} , $MnSe_{2+x}$,
 $RuSe_{2+x}$, $OsSe_{2+x}$, $CoSe_{2+x}$, $NiSe_{2+x}$, $MnTe_{2+x}$, $RuTe_{2+x}$, $OsTe_{2+x}$.
 $FeS_2^{(6)}$, ромбич., $N = 6$, D_{2h}^{12} : FeP_{2+x} , $FeAs_2$, $[CoAs_{2+x}]$, $NiAs_{2+x}^{(7)}$, $FeSb_2$ (ζ),
 $CoSb_2$, $NiSb_2$ (ϵ), $CrNb_2$; FeS_2 , $FeSe_{2+x}$, $FeTe_{2+x}$, $CoTe_{2+x}$.
 CuS , рект., $N = 12$, D_{6h}^4 : CuS_{1+x} , $CuSe_{1+x}$.
 $TlSe$, тетра., $N = 16$, D_{4h}^{18} : $\partial-TlS$, $TlSe$.
 $CoAs_3$, куб., $N = 32$, T_h^8 : $CoAs_{3+x}$.
 R_4C , ромбич., $N = 15$, D_{3d}^6 : $\partial-B_4C$.
 $NaPb$, тетра., $N = 64$, D_{4h}^{20} : $\partial-NaPb$ (γ).
 $CaC_2^{(5)}$, тетра., $N = 12$, D_{4h}^{17} : LaC_{2+x} , CeC_{2+x} , PrC_{2+x} , NdC_{2+x} , SmC_{2+x} , $\partial-UC_2$,
 VC_{2+x} .
 $ZrC_2^{(5)}$, тетра., $N = 12$, D_{4h}^{18} : ZrC_{2+x} .
 ThC_2 , ромбич., $N = 12$, C_{2h}^3 или C_2^1 : ThC_{2+x} .
 U_3Si_2 , тетра., $N = 10$, D_{3h}^5 : U_3Si_{2+x} .
 $PtPb_3$, тетра., $N = 10$, D_{3h}^3 : $PtPb_3$.
 $PdSn_4$, ромбич., $N = 20$, C_{2v}^{17} : $PdSn_{4+x}$, $PtSn_4$, $AuSn_4$.
 $CoGe_2$, ромбич., $N = 24$, C_{2v}^{17} : $\partial-CoGe_2$, $RhSn_{2+x}$ (δ), $PdSn_{2+x}$.
 $CuAl_2$, тетра., $N = 12$, D_{4h}^{18} : Th_2Cu , $\partial-Na_2Au$ (γ); $Ti_{2+x}B$, Ta_2B (β), Mo_2B (γ), W_2B (γ),
 Mn_2B (ϵ), Fe_2B , Co_2B , Ni_2B (δ), $CuAl_2$ (ϕ)⁽⁹⁾, $AgIn_2$ (φ); $FeGe_{2+x}$, $MnSn_2$ (δ),
 $FeSn_2$, $CoSn_2$, $RhSn_{2+x}$ (δ), $RhPb_{2+x}$, $PdPb_{2+x}$, $AuPb_2$; $TiSb_{2+x}$, VSb_{2+x} .

$Mn_4B^{(11)}$, ромбич., $N = 40$, D_{2h}^{21} : $Mn_{4+x}B$ (δ).
 U_6Mn , тетра., $N = 28$, D_{3h}^{18} : U_6Mn , U_6Fe , U_6Co , $U_{6+x}Ni$.
 $BaAl_4$, тетра., $N = 10$, D_{4h}^{17} : $CaAl_4$, $\partial-SrAl_4$ (β), $BaAl_{4+x}$, $LaAl_4$, $CeAl_4$.
 $Mg_{17}Al_{12}^{(12)}$, куб., $N = 58$, T_d^3 : $\partial-Mg_{17}Al_{12}$ (γ).

Other heterodesmic phases of first order, see in Table I (types $TiAl_3$ and $ZrAl_3$), III (type $NaTi$) and V,a (types Co_2Si and MaP).

Taking into consideration the coordination properties of structures, in the interior of the heterodesmic phase class of first order, can be separated into two groups of structural types:

a) with coordination sphere about the A-atoms (in case of Fe_2B and analogous phases - B-atoms), having the form of a twisted cube: $NiMg_2$, $NiAl_3$, Co_2Al_9 , $CuMg_2$, $PtPb_4$, $PdSn_4$, $CoGe_2$, $CuAl_2$;

b) with coordination sphere around B-atoms (in case of NeS_2 type phases - A-atoms), having the form of a triangular prism: UB_4 , AlB_2 , Mo_3B_7 , TiB_5 , FeB , WB , CrB , Ta_3B_4 , Cr_3C_2 ; here also belong structural types Ni_2In , $NiAs$, Co_2Si (table V,a), MoS_2 (table VII), Fe_3C , Cr_7C_3 , MoC (table VIII).

1. Defective derivative from \mathcal{J}' -brass type.
2. Phase with defective structure, fully taken up by atomic positions, would correspond to formula Mo_2B_5 and $N = 21$.
3. Phase with defective structure.
4. Pyrite.
5. Structure of type FeS_2 (pyrite), CaC_2 and ZrC_2 can be considered as introduction structures of pairs of atoms into a cubical denser packing of metallic atoms.
6. Marcasite.
7. Rammel'sbergite.
8. Low temperature modification.
9. According to certain data, the phase is homogeneous approximately at 69 at.% of Al.
10. High temperature modification.
11. Phase with defective structure; to positions fully occupied by atoms would correspond a formula Mn_2B and $N = 48$.

12. Structure $Mg_{17}Al_{12}$ is inherent to cubical body-centered (atomic positions as in α -Mn).

Table VII.

Heterodesmic Phases of Second Order

1. Phases with lamellar structures

MoS₂, ^{hex.} _{гекс.} $N = 6$, D_{6h}^1 : MoS_{2±x}, WS₂, MoSe_{2±x}, WSe₂, MoTe_{2±x}, WTe_{2±x}.
 Cu₂Te, ^{rhomb.} _{ромб.} $N = 6$, D_{6h}^1 : Cu_{2±x}Te.
 ZrSi₂, ^{rhomb.} _{ромб.} $N = 12$, D_{2h}^{17} : ZrSi₂, ZrGe_{2±x}.

2. Phases with tape structures

Bi₂S₃, ^{rhomb.} _{ромб.} $N = 20$, D_{2h}^{14} : δ -Th₂S_{3±x}, U₂S_{3±x}, Np₂S_{3±x}, Sb₂S_{3±x}, Bi₂S_{3±x}.

3. Phases with molecular structures

NiS, ^{rhomb.} _{ромб.} $N = 6$, C_{3v}^3 : NiS_{1±x} (γ)⁽¹⁾, NiSe_{1±x} (γ).
 AuTe₂, ^{rhomb.} _{ромб.} $N = 24$, C_{2v}^4 : AuTe_{2±x}⁽²⁾.

Other heterodesmic phases of second order are given in table III (type UCo) and V (types CdJ₂, GeS, SnS, FeSi, PbC, Bi₂Te₃).

1. Millent.

2. Krennerite, deformed cubical straight packing of atoms as in kavalerite (Table V, a) but with different atom distribution.

Table VIII.

Other Phases with Known Structures

(see page 22a for table)

Table VIII.

Cu_7Hg_6 ^{Cub}(¹), куб., $N = 52$, T_d^3 : $\partial\text{-Cu}_7\text{Hg}_6$ (γ).
 $\text{Li}_{10}\text{Pb}_3$ (¹), куб., $N = 52$, T_d^1 : $\text{Li}_{10}\text{Pb}_3$ (γ).
 $\text{Cu}_{16}\text{Si}_4$, куб., $N = 76$, T_d^6 : $\partial\text{-Cu}_{16}\text{Si}_4$ (ϵ), $\partial\text{-Na}_{16}\text{Pb}_4$.
 Th_3P_4 , куб., $N = 28$, T_d^6 : $\text{Th}_3\text{P}_{4\pm x}$, $\text{U}_3\text{P}_{4\pm x}$, $[\text{Np}_3\text{P}_{4\pm x}]$; $\partial\text{-Ce}_2\text{S}_4$, $[\text{Pr}_2\text{S}_{3\pm x}]^{(2)}$,
 $[\text{Nd}_2\text{S}_{3\pm x}]^{(2)}$, $[\text{Sm}_2\text{S}_{3\pm x}]^{(2)}$, $[\text{Dy}_2\text{S}_{3\pm x}]^{(2)}$, $[\text{Gd}_2\text{S}_{3\pm x}]^{(2)}$, $\text{Ac}_2\text{S}_{3\pm x}^{(2)}$, $\partial\text{-Pu}_8\text{S}_4$,
 $\text{Am}_2\text{S}_{3\pm x}^{(2)}$, $\text{Ce}_2\text{Sc}_{3\pm x}^{(2)}$.
 Pu_2C_3 , куб., $N = 40$, T_d^6 : $\text{Pu}_2\text{C}_{3\pm x}$.
 Cr_{23}C_6 , куб., $N = 116$, O_h^5 : $\partial\text{-Cr}_{23}\text{C}_6$, $\text{Mn}_{23}\text{C}_{6\pm x}$.
 $\text{Th}_6\text{Mn}_{23}$ (³), куб., $N = 116$, O_h^6 : $\text{Th}_6\text{Mn}_{23}$.
 UH_3 , куб., $N = 32$: $\text{UH}_{3\pm x}$ (⁴).
 In_2Bi (⁵), гекс., $N = 3$, D_{6h}^1 : In_2Bi (β), $\text{TlBi}_{1.27\rightarrow 1.59}$ (δ).
 CoSn , гекс., $N = 6$, D_{6h}^1 : NiIn (ϵ) (⁶), PuTi ; FeSn (β), CoSn .
 Th_2S_{12} , гекс., $N = 19$, C_{6h}^2 : $\text{ThS}_{1.70\rightarrow 1.78}$ (⁷).
 Cu_3As , гекс., $N = 24$, D_{3d}^1 : $\partial\text{-Cu}_3\text{P}$, $\text{Cu}_{3\pm x}\text{As}$ (⁸).
 AgZn , гекс., $N = 9$, C_{3v}^1 : $\partial\text{-AgZn}$.
 MoC , гекс., $N = 2$: $\partial\text{-MoC}$ (γ) (⁹), WC ; MoN_{1+x} (δ).
 Cr_7C_3 , ромбоэдр., $N = 80$, C_{3v}^4 : $\partial\text{-Cr}_7\text{C}_3$, $\text{Mn}_7\text{C}_{3\pm x}$.
 Cr_6Al_8 (¹⁰), ромбоэдр., $N = 26$, C_{3v}^5 : $\partial\text{-Cr}_6\text{Al}_8$ (γ_1).
 Ni_3S_2 , ромбоэдр., $N = 5$, D_3^7 : $\text{Ni}_3\text{S}_{2\pm x}$.
 Sn_3As_2 , ромбоэдр., $N = 5$: Sn_3As_2 (¹¹).
 PdS (¹²), тетра., $N = 16$, C_{4h}^2 : $\text{PdS}_{1\pm x}$.
 ThMn_{12} (³), тетра., $N = 26$, D_{4h}^{17} : ThMn_{12} .
 ZnSb , ромбоэдр., $N = 16$, D_{2h}^1 : ZnSb , $\partial\text{-CdSb}$ (γ).
 Fe_3C , ромбоэдр., $N = 16$, D_{2h}^{10} : $\text{Mn}_{3\pm x}\text{C}$, Fe_3C (¹²), $\text{Co}_{3\pm x}\text{C}$, $\text{Ni}_{3\pm x}\text{C}$.
 UAl_4 , ромбоэдр., $N = 20$, D_{2h}^{24} : $\text{UAl}_{4\pm x}$.

1. Atomic positions, as in Cu_5Zn_8 .
2. Part of metal atom position vacant.
3. Structure close to denser packing of atoms of various dimensions.
4. Introduction of H atoms into β -W structure.
5. Atomic positions, as in AlFe_2 , but their distribution is totally orderless.
6. Low temperature modification.
7. Phase with defective structure: fully occupied by atomic positions, would have coincided with formula Ta_2S_3 and $N = 20$.
8. Artificial domeyite.
9. Certain authors negate the existence of hexagonal MoC phase.
10. Deformed structure of Cu_5Zn_8 type.
11. Phase with defective structure: fully occupied by atomic positions would have corresponded to formula Sn_4As_3 and $N = 7$.
12. In addition to rhombic phase Fe_3C (cementite) there is a metastable deformed $\text{Fe}_3 \pm x \text{C}$ modification.
13. Pd atoms form the β -W structure.

Table IX.

Phases with Structures, Not Completely Determined

1. Cubical Syngony

$\text{Ti}_2\text{Fe}^{(1)}$, $N = 96$: $\text{Ti}_{2\pm x}\text{Mn}$; $\text{Ti}_{2\pm x}\text{Fe}$; $\text{Ti}_{2\pm x}\text{Co}$; $\text{Ti}_{2\pm x}\text{Ni}$; $\text{Ti}_{2\pm x}\text{Pd}$; $\text{Ti}_{2\pm x}\text{Pt}$; $\text{Ti}_{2\pm x}\text{Cu}^{(2)}$.
 RuB: $\text{RuB}_{1\pm x}$; $\text{OsB}_{1\pm x}$.

1) Разные неизотипные фазы: $\text{VMn}_{1\pm x}$ ($N = 58$, T_d^3)⁽⁴⁾, $\text{VMn}_{1\pm x}$ ⁽⁶⁾, Cr_3Pd_2 ⁽⁶⁾;
 $\text{Pt}_{2.3 \rightarrow 1.6}\text{Cu}$ (O_h^7)⁽⁷⁾, $\text{PtCu}_{1.2 \pm x}$, Li_3Ag ($N = 52$), $\text{CaAg}^{(8)}$, PrAg ; $\text{CoZn}_{0.03 \rightarrow 1.32}$ (β_1)
 ($N = 20$, O^7)⁽⁹⁾, $\text{CuZn}_{2.02 \rightarrow 3.08}$ (δ)⁽¹⁰⁾, $\text{AuZn}_{1.7 \rightarrow 4.0}$ (γ_2) ($N = 32$)⁽¹¹⁾, $\text{AuZn}_{1.7 \rightarrow 4.0}$ (γ)⁽¹¹⁾,
 $\text{PtCd}_{3.3 \rightarrow 4.0}$ (γ_1)⁽¹¹⁾, $\text{AuCd}_{2.3 \rightarrow 3.4}$ (ϵ')⁽¹¹⁾, $\text{LiCd}_{2.3 \rightarrow 9.0}$ (β), NaCd_2 ,
 CaCd , $\text{UHg}_{4 \pm x}$ ($N = 10$), $\text{NiHg}_{3 \pm x}$ ($N = 4$), CaHg , $\text{ZrB}_{1 \pm x}$ ⁽¹⁴⁾, $\text{Sr}_{1.2 \rightarrow 1.0}\text{Al}$
 ($N = 116$), $\text{FeAl}_{1.44 \rightarrow 1.88}$ (ϵ), $\text{Cu}_{1.32 \rightarrow 1.13}\text{Al}$ (ϵ), $\text{Mn}_3\text{In}^{(11)}$, $\text{Hg}_{4.0 \rightarrow 2.3}\text{Tl}$ (γ), $\text{HgTl}_{6 \rightarrow 4}$
 LaTl , CeTl , PrTl ; $\text{MoC}_{1 \pm x}$, $\text{RuSi}_{1 \pm x}$, Ca_2Si , $\text{Cu}_{2.7 \rightarrow 2.6}\text{Ge}$ (δ)⁽¹⁵⁾, $\text{Tl}_{3.0 \rightarrow 1.2}\text{Pb}$ (γ)⁽¹²⁾,
 $\text{Cu}_{3 \pm x}\text{As}$ ($N = 64$, T_d^6)⁽¹³⁾, $\text{Sb}_{3.0 \rightarrow 1.2}\text{As}$ (β)⁽¹⁴⁾, $\text{Ni}_{13}\text{Sb}_{4 \pm x}$ (δ) ($N = 17$);
 $\text{Tl}_{24 \rightarrow 3}\text{Bi}$ (γ); $\text{Ag}_{2 \pm x}\text{S}$ (α) ($N = 6$), $\text{Ag}_{2 \pm x}\text{Se}$ (α) ($N = 6$); $\text{Pd}_{1.6 \rightarrow 1.3}\text{Hl}^{(10)}$, $\text{ThH}_{3 \pm x}$.

1) Various nonisotonic phases.

2. Hexagonal Syngony

Mg₂Ga, N = 18; Mg₂Ga, Mg_{2+x}In (β₂), Mg₂Tl.

1) Деформированная дефектная структура γ-латуны: N = 550 ± 3; MnZn_{10,8→11,6} (δ₁), FeZn_{6,7→11,6} (δ₁).

2) Разные неизотипные фазы: TiBe_{13+x} (N = 576), CrZn_{21,7+x} (θ = δ), NiZn_{8→10} (δ) (N = 70)⁽¹⁷⁾; Pd₃B_{2+x}, ThAl_{3+x} (N = 8), MnAl_{4+x}, MgAl_{1,80→1,83} (β) (N = 104)⁽¹⁸⁾; YC_{2+x} (N = 6), Ni₃Si₂ (γ₁), Cu_{4,0→3,6}Sn (ζ) (N = 26, D_{3d}¹)⁽¹⁹⁾, HgSn_{16→24}; W_{2+x}P, Ni_{2,6→3,4}As (β); BiSe, Ag₁₂Te_{7+x} (α) (N = 57), Bi₇Te_{3+x}.

1) Deformed defective structure of γ-brass; 2) various nonisotopic phases

3. Rhombohedral Syngony

1) Деформированная дефектная кубическая объемноцентрированная структура: Cu_{3,4→3,0}Si (η), Cu_{3,2→3,0}Co (γ)⁽²⁰⁾.

2) Разные неизотипные фазы: Au_{1,82→1,08}Cd (α₃)⁽²¹⁾, Cu_{2,7→1,5}Al (γ₂) (N = 50, C_{3v}⁶)⁽¹⁷⁾, FeAl_{2+x} (ζ) (N = 18).

1) Deformed defective cubical body-centered structure; 2) various nonisotopic phases.

4. Tetragonal Syngony

Fe₃P, N = 32, S₄²: Cr_{3+x}P¹, [Mo_{3+x}P], Mn₃P, Fe_{3+x}P, Ni_{3+x}P¹.

RuSi₂, RuSi_{2+x}, IrCo_{2+x}, OsSi_{2+x}, OsCo_{2+x}.

Ru₂Si₃; Ru₂Si_{3+x}, Os₂Si_{3+x}.

Pt₃U₂; Pt₃B_{2+x} (или PtB_{1+x}); Pt₃Si_{2+x} (или Pt_{2+x}Si).

«σ-фазы»: N = 30, D_{4h}¹⁴, D_{3d}⁸ или C_{4v}⁴: CrMn_{2,6→4,9} (θ)⁽²²⁾, VMn_{2,1}; CrFe_{0,94→1,05} (σ).

MoFe_{1+x} (η), VFe_{1+x} (ε); V_{1,02}Co, CrCo_{0,81→1,03} (γ = δ), Mo₂Co_{2+x} (δ); V_{1,83→1,02}Ni.

MoVo₁₃; MoVo_{13+x}, [WVo_{13+x}].

1) Разные неизотипные фазы: VNi_{3+x} (θ), MnNi_{1+x} (δ') (t < 650°)⁽¹⁴⁾, Cr_{2+x}Ni (N = 96, D_{4h}¹⁰), MnPd_{0,85→1,16} (η), MnPd_{1,22→1,86} (ζ); Ti_{1,1→1,0}Cu (γ), Au₂Cu_{2+x}, CaAg₃, TiAu₂, MnAu_{2+x} (или MnAu_{2+x})⁽²³⁾; Au_{4,7→3,7}Zn (α₂) (N = 8), HgCd_{2+x} (N = 152); CuGa_{1,38} (φ) (N = 3)⁽²⁴⁾; NaSi_{2+x} (N = 12), MnSi_{2+x} (N = 48), FeSi_{2,4→3,1} (ζ) (N = 3, D_{4h}¹⁴)⁽²⁴⁾, In_{2+x}Sn (β), InSn_{4+x} (γ), In_{6,7→4,0}Pb; Ni₇P_{3+x} (N = 60), Ni₃As₂, Cu_{4,5→3,1}Sb (β) (N = 14), Ni_{2,88→2,22}Sb (β) (N = 14), MnBi_{2+x} (Y); Cu_{1,90±x}Se (β), GeSe_{1+x} (N = 32).

1) Various nonisotopic phases

5. Rhombic Syngony

Mg₂Ga₂, N = 28, D_{2h}¹⁶: Mg₂Ga₂, Mg₂In_{2+x}⁽²⁵⁾, Mg₂Tl₂.

Cr₂Si₂; Cr₂Si_{2+x} (θ), Cr₂Ge_{2+x}.

1) Разные неизотипные фазы: VNi_{2+x} (δ); Cr_{2+x}B (δ), MnAl₆, FeAl_{2,9→3,0} (θ) (N = 400, D_{2h}²³), Fe₂Al₇, CuAl_{0,93→1,04} (r) (N = 32)⁽²⁶⁾; Ni₂Si₂ (δ), Na₁₅Sn₄ (N = 38), Cu_{6±x}Sn (β⁷) (N = 8)⁽²⁷⁾, HgSn_{10±x}, ZnAs_{2→3} (γ) (N = 96), Ag_{2+x}Sb (N = 30, D_{2h}⁵), NiAs_{2+x} (N = 24, D_{2h}¹¹)⁽²⁸⁾, Mn₂Bi_{3+x} (X); Ni₆S_{6±x} (N = 44), Cu_{2,0→1,9}S (t < 52°) (N = 288, C_{2v}¹⁵)⁽²⁹⁾, Ag_{2±x}S (β) (N = 12); Ta_{1,18→1,13}H (γ), Nb_{1,27}H.

1) Various nonisotopic phases

6. Monoclinical Syngony

FeZn_{13} ⁽¹⁷⁾, $N = 28$, C_{2h}^3 ; $\text{MnZn}_{17 \rightarrow 19}$ (ζ), $\text{FeZn}_{13 \rightarrow 15}$ (ζ), $\text{CoZn}_{10,1 \rightarrow 13,3}$ (ζ).
1) Разные неизотопные фазы: $\text{CrAl}_{6,7 \rightarrow 7,3}$ (θ), $\text{FeAl}_{2,3 \rightarrow 2,5}$ (τ) ($N = 56$), $\text{Cu}_{2,1 \rightarrow 1,6}\text{Al}$ (γ_1)
($N = 102$, C_5^3) ⁽¹⁷⁾, $\text{Cu}_{1,27 \rightarrow 1,17}\text{Al}$ (ζ) ($N = 21$) ⁽²⁶⁾, Fe_3Sn_2 (β') ($N = 40$), $\text{PdPb}_{1 \pm x}$;
 Au_3b ($N = 16$), $\text{Cd}_3\text{Sb}_{2 \cdot x}$ (β) ($N = 20$) ⁽²⁷⁾, $\text{Fe}_7\text{S}_{8 \pm x}$ ⁽³⁾, $\text{Ag}_{2 \cdot x}\text{Te}$ (β) ($N = 9$).

1. Probably, $\text{Ti}_4\text{Fe}_2\text{O}$ type structure (derivative of $\text{W}_2\text{Fe}_3\text{C}$ type) with vacant oxygen positions.
2. By other data, phase composition: $\text{Ti}_3 + x\text{Cu}$ (ϵ -phase).
3. Pyrrhotine, structure, allied to NiAs type.
4. Atomic positions of α -Mn structure; atom distribution not established.
5. Body-centered lattice.
6. Phase forms a continuous solid solution with chromium.
7. Displacement structure in cubical denser packing.
8. By other data, noncubical symmetry.
9. Atomic positions of β -Mn structure, distribution of atoms not established.
10. Structure, inherent to the CsCl type.
11. Structure allied to γ -brass types.
12. By other data, superstructure to solid solution on Pb-basis - at Ti_2Pb compositions (type AuCu_3) and Ti_4Pb .
13. Domeykite.
14. Body-centered lattice.
15. Defective cubic body-centered structure; by other data, phase has composition corresponding to formula $\text{Cu}_{3.2 \rightarrow 2.7}\text{Ge}$.
16. Introduction structure into cubical packing of Pd atoms.
17. Deformed defective γ -brass structures.

18. By other data, structure cubical with $N = 1172$.
19. Deformed defective cubical body-centered structure.
20. By other data, the phase has a composition, corresponding to formula $\text{Cu}_{4.3} \rightarrow 3.2 \text{Ge}$.
21. Deformed cubical body-centered packing.
22. By other data, two α and β modifications.
23. Deformed superstructure to cubical denser packing.
24. Position of atoms as in Cu_2Sb structure, distribution of atoms finally determined, most likely partially disordered.
25. By other data, phase has a composition, corresponding to formula $\text{Mg}_{3.3} \rightarrow 3.1 \text{In}$ (β_1 -phase).
26. Structure allied to Ni_2Al_2 type.
27. Metastable phase.
28. Pair-rammelsbergite.
29. Low temperature modification of chalcosine.

Table X.

Phases with Unknown Structure

- 1/1 (β): CsNa_2 .
- 1/11: $\text{Li}_{1.03}\text{Au}$, $\text{Na}_{1.22}\text{Au}$ (β'), KAu_4 , RbAu_4 , $\text{Cs}_{13}\text{Au}_{10}$, CsAu .
- 1/12: $\text{LiMg}_{1 \rightarrow 3}$ (γ), $\text{LiZn}_{1 \rightarrow 3}$ (δ), $\text{LiZn}_{1.5 \rightarrow 2.0}$ (δ'), $\text{LiZn}_{2.3 \rightarrow 3.0}$ (γ), $\text{LiZn}_{2.3 \rightarrow 3.0}$ (γ'), $\text{LiZn}_{3 \rightarrow 10}$ (β), Li_6Hg , Li_2Hg , LiHg_2 , NaCd_{3+x} , NaCd_6 , Na_2Hg , Na_8Hg_2 , Na_3Hg_2 , NaHg , Na_7Hg_8 , NaHg_2 , NaHg_4 , KCa_{13-x} , KHg , KHg_2 , KHg_3 , KHg_4 , KHg_8 , Rb_7Hg_8 , Rb_3Hg_4 , RbHg_2 , Rb_2Hg_7 , $\text{Rb}_6\text{Hg}_{18}$, Rb_2Hg_9 , RbHg_6 , RbHg_9 , Cs_2Hg_3 , CsHg_2 , CsHg_4 , CsHg_6 , CsHg_{10} .
- 1/13: Li_{3+x}Al , Li_2Al , LiAl_{2+x} , Li_{3+x}Ge , Li_4Tl , Li_3Tl , Li_6Tl_2 , Li_2Tl , NaB_{2+x} , Na_6Tl , Na_2Tl , NaTl_2 .
- 1/14: Li_{3+x}Si , Li_3Sn , Li_7Sn_2 , Li_6Sn_2 , Li_2Sn , LiSn , LiSn_2 , Li_4Pb , Li_7Pb , Li_6Pb_2 , LiPb (β), NaSi_{1+x} , NaSi_{2+x} , NaGe_{1+x} , Na_2Sn , Na_4Sn_3 , NaSn , NaSn_2 , $\text{Na}_{2.6-2.3}\text{Pb}$ (δ), Na_2Pb , KSi_{1+x} , KSi_{8+x} , KGe_{1+x} , KGe_{4+x} , K_2Sn , KSn , KSn_2 , KSn_4 , K_{2+x}Pb , KPb_{1+x} , KPb_{2+x} , KPb_{4+x} , RbSi_{1+x} , RbSi_{8+x} , RbGe_{1+x} , RbGe_{4+x} , CsSi_{1+x} , CsSi_{8+x} , CsGe_{1+x} , CsGe_{4+x} .
- 1/15: LiBi (β), KAs_{2+x} , KSb , K_3Bi_2 , Cs_3Sb .
- 2/11: CaAg_2 , CaAg_3 , Ca_2Au , Ca_4Au_3 , $\text{CaAu}_{0.78 \rightarrow 1.04}$, CaAu_2 , CaAu_3 , CaAu_4 , Sr_3Ag_2 , SrAg , Sr_3Ag_5 , SrAg_4 , Ba_3Ag_5 , Ba_2Ag_3 , BaAg_4 .
- 2/12: Ca_4Zn , CaZn , CaZn_{2+x} (β), CaCd_3 , CaHg_3 , CaHg_6 , CaHg_{10+x} , SrMg_{4+x} , SrMg_9 , SrCd_{4+x} , SrHg_{12+x} , BaMg_{4+x} , BaMg_9 , BaHg_{12+x} .
- 2/13: CaAl_3 , CaIn_{1+x} , CaIn_{3+x} , Ca_3Tl_4 .

- 2/14: $\text{CaGe}_{1\pm x}$, Ca_2Sn , CaSn , $\text{Ca}_{3,4-2,0}\text{Pb}$ (γ), CaPb , $\text{SrSi}_{1\pm x}$, $\text{SrSi}_{2\pm x}$, SrSn_3 , SrSn_6 ,
 $\text{BaSi}_{2\pm x}$, BaSn_3 , BaSn_6 , $\text{Ba}_{2\pm x}\text{Pb}$, BaPb , BaPb_2 .
- 2/15: Ca_3As_2 , Ca_3Bi_2 , CaBi_3 , Sr_3As_2 , SrBi_3 , Ba_3As_2 , $\text{Ba}_3\text{Sb}_{2\pm x}$, $\text{Ba}_3\text{Bi}_{2\pm x}$, BaBi_3 .
- 3/8: Ce_2Fe_6 , Th_7Fe_3 , ThFe_3 , $\text{Th}_2\text{Fe}_{17}$.
- 3/9: Ce_3Co , CeCo_3 , CeCo_4 , Th_7Co_3 , ThCo , ThCo_{2-3} , $\text{Th}_2\text{Co}_{17}$.
- 3/10: La_3Ni , LaNi , LaNi_3 , LaNi_4 , Ce_3Ni , CeNi , CeNi_3 , CeNi_4 , Pr_3Ni , PrNi , PrNi_3 ,
 PrNi_4 , Th_7Ni_3 (или Th_2Ni), ThNi , $\text{Th}_2\text{Ni}_{17}$ (или ThNi_9), $\text{UNi}_{1\pm x}$.
- 3/11: LaCu , LaCu_2 , LaCu_6 , CeCu , CeCu_2 , CeCu_6 , PrCu , PrCu_2 , PrCu_4 , PrCu_6 , LaAg_2 ,
 LaAg_3 , CeAg_2 , CeAg_3 , PrAg_2 , PrAg_3 , La_2Au , LaAu , LaAu_2 , LaAu_3 , Ce_2Au , CeAu ,
 CeAu_2 , CeAu_3 , Pr_3Au , PrAu , PrAu_2 , PrAu_4 , ThCu_3 , ThCu_6 , Th_3Ag_6 , ThAg_3 ,
 Th_3Au_6 , ThAu_3 .
- 3/12: La_3Mg , LaMg_6 , CeMg_9 , Pr_3Mg , PrMg_9 , LaZn_{6-9} (δ), $\text{LaZn}_{10,0-11,5}$ (ϵ), Ce_4Zn ,
 Ce_2Zn , CeZn_{6-9} (δ), $\text{CeZn}_{10,0-11,5}$ (ϵ), $\text{LaHg}_{1\pm x}$, $\text{CeHg}_{4\pm x}$, $\text{PrHg}_{4\pm x}$, $\text{NdHg}_{4\pm x}$,
 ThZn_x .
- 3/13: La_3Al_2 , LaAl , Ce_3Al_2 , CeAl , Pr_3Al_2 , PrAl , PrAl_2 , PrAl_4 , Pr_3Ga , Pr_3Ga_2 ,
 PrGa , La_2Tl , Ce_2Tl , CeTl_3 , Pr_2Tl , PrTl_3 , $\text{ThB}_{1\pm x}$, UAl_6 .
- 3/14: $\text{Sc}_3\text{C}_{3\pm x}$, $\text{YSi}_{2\pm x}$, La_2Sn , La_2Sn_3 , Ce_2Sn , Ce_2Sn_3 , Pr_2Sn , Pr_2Sn_3 , La_2Pb , LaPb ,
 Ce_2Pb , Pr_2Pb , PrPb , $\text{U}_2\text{C}_{3\pm x}$, USn_x , $[\text{USn}_y]$, $\text{UPb}_{1\pm x}$, $\text{UPb}_{3\pm x}$.
- 3/15: Ce_3Bi , Ce_4Bi_3 , CeBi_2 , $\text{Th}_3\text{N}_{4\pm x}$, $\text{UP}_{2\pm x}$, $\text{U}_4\text{Bi}_{5\pm x}$, $\text{UBi}_{2\pm x}$.
- 3/16: $\text{Y}_2\text{Se}_{3\pm x}$, $\text{CeSe}_{2\pm x}$, $\text{LaSe}_{2\pm x}$, $\text{Ce}_2\text{Se}_{3\pm x}$, $\text{CeSe}_{4\pm x}$, $\text{PrSe}_{2\pm x}$, $\text{NdSe}_{2\pm x}$, $\text{Nd}_2\text{Se}_{3\pm x}$,
 $\text{Sm}_2\text{Se}_{3\pm x}$, $\text{Er}_2\text{Se}_{3\pm x}$, $\text{Dy}_2\text{Se}_{3\pm x}$, $\text{Yb}_2\text{Se}_{3\pm x}$, CeTe_{1-x} , $\text{Th}_{3\pm x}\text{Te}$, $\text{US}_{2\pm x}$, $\text{US}_{8\pm x}$,
 $\text{U}_2\text{Se}_{3\pm x}$, $\text{USE}_{2\pm x}$, $\text{U}_{2\pm x}\text{Te}$.
- 4/10: $\text{Ti}_2\text{Pd}_{3-x}$, $\text{Ti}_2\text{Pt}_{3+x}$.
- 4/11: ZrCu_3 (β), ZrAu_3 .
- 4/12: $\text{Ti}_{1,3-1,0}\text{Be}$, $\text{TiBe}_{4\pm x}$, $\text{TiBe}_{10\pm x}$, ZrBe_2 (γ), ZrBe_4 (δ), ZrBe_{6-x} (ϵ), ZrZn_x .
- 4/13: $\text{ZrB}_{12\pm x}$, $\text{HfB}_{1\pm x}$.
- 4/14: $\text{TiSi}_{1\pm x}$, Zr_4Si , Zr_2Si , Zr_3Si_2 , Zr_4Si_3 , Zr_6Si_6 , ZrSi , Zr_3Sn , Zr_6Sn_3 , ZrSn .
- 4/15: $\text{Ti}_{2\pm x}\text{P}$, $\text{TiP}_{1\pm x}$, $\text{TiAs}^{(3)}$, $\text{ZrP}_{1\pm x}$, $\text{ZrP}_{2\pm x}$, HfN_{1-x} .
- 4/16: $\text{Ti}_{2,5-1,0}\text{S}$, TiS , $\text{TiS}_{1,1-1,5}$, TiS_3 , Zr_{5-3}S , $\text{Zr}_{2,0-1,1}\text{S}$, $\text{ZrS}_{1,2-1,6}$, $\text{Zr}_{2\pm x}\text{Te}$.
- 5/7: $\text{V}_{3,2-1,0}\text{Mn}$.
- 5/8: $\text{Nb}_3\text{Fe}_{3\pm x}$.
- 5/10: $\text{Ta}_3\text{Ni}_{2\pm x}$.
- 5/12: TaBe_x .
- 5/13: $\text{Nb}_{9\pm x}\text{B}$ (β) (800°), $\text{Nb}_{9\pm x}\text{B}$ (β') (1200°), $\text{Nb}_{9,0-1,0}\text{B}$ (β'').
- 5/14: $\text{V}_{2\pm x}\text{Si}$, $\text{Ta}_6\text{Si}_3\pm x$, $\text{Ta}_6\text{Si}_2\pm x$, $\text{Ta}_6\pm x\text{Si}$.
- 5/15: $\text{V}_{3\pm x}\text{P}$, $\text{V}_{2,0-1,5}\text{P}$, $\text{VP}_{1\pm x}$, $\text{VP}_{2\pm x}$, $\text{VAs}^{(3)}$, $\text{NbP}_{1\pm x}$, $\text{NbP}_{2\pm x}$, $\text{NbAs}_{2\pm x}$, $\text{Ta}_{2\pm x}\text{N}$,
 $\text{TaP}_{1\pm x}$, $\text{TaP}_{2\pm x}$.
- 5/16: $\text{VS}_{1,2-1,5}$, $\text{VS}_{4\pm x}$, Nb_{2-1}S , $\text{NbS}_{1,5-4,0}$, $\text{Ta}_{3,4-1,0}\text{S}$, $\text{TaS}_{1,0-1,0}$, $\text{TaS}_{3\pm x}$.
- 6/7: $\text{W}_3\text{Re}_{3\pm x}$.
- 6/8: $\text{WFe}_{3\pm x}$.
- 6/9: $\text{Cr}_{2,12-1,22}\text{Co}$ (δ), $\text{MoCo}_{1\pm x}$ (γ), $[\text{W}_{3\pm x}\text{Co}]$.
- 6/10: $\text{Cr}_{3\pm x}\text{Pt}$ (или $\text{Cr}_{2\pm x}\text{Pt}$), $\text{CrPt}_{1\pm x}$, MoNi , $\text{WNI}_{1\pm x}$.
- 6/12: WZn_x .
- 6/13: Cr_3B_2 (ϵ), $\text{Cr}_{3\pm x}\text{Al}$, $\text{CrAl}_{1,50-1,63}$ (γ_1), $\text{CrAl}_{1,94-2,03}$ (γ_2), $\text{CrAl}_{1,94-2,22}$ (γ_4),

- $\text{CrAl}_{2,6 \rightarrow 2,1}(\delta)$, $\text{CrAl}_{4,0 \rightarrow 4,7}(\epsilon)$, $\text{CrAl}_{5,2 \rightarrow 6,1}(\eta)$, $\text{MoAl}_{4 \pm x}$, $\text{WAl}_{1,7 \rightarrow 2,0}$, $\text{WAl}_{2,2 \rightarrow 2,0}$
 $\text{WAl}_{2,0 \rightarrow 3,1}$, $\text{WAl}_{4,5 \rightarrow 4,9}$, WAl_{12} .
- 6/14: Cr_2Si , Mo_3Si_2 , $\text{MoSi}_{1 \pm x}$, MoGe_x , W_3Si_2 , WGe_x .
- 6/15: $\text{CrP}_{2 \pm x}$, Cr_2P , $\text{Cr}_3\text{As}_{2 \pm x}$, $\text{Cr}_2\text{As}_{3 \pm x}$, $\text{MoP}_{1 \pm x}$, $\text{MoP}_{2 \pm x}$, $\text{MoAs}_{1 \pm x}$, $\text{MoAs}_{2 \pm x}$
 $\text{WP}_{2 \pm x}$, $\text{WAs}_{1 \pm x}$, $\text{WAs}_{2 \pm x}$.
- 6/16: $\text{Mo}_{2 \pm x}\text{Te}$, $\text{Mo}_2\text{Te}_{3 \pm x}$, $\text{W}_{2 \pm x}\text{Te}$.
- 7/8: $\text{Re}_2\text{Fe}_{3 \pm x}(\epsilon)$, $\text{ReFe}_{3 \pm x}(\tau)$, $\text{ReFe}_{3 \pm x}(\delta)$.
- 7/10: $\text{Mn}_{1 \pm x}\text{Pt}$, $\text{MnPt}_{1 \pm x}$, $\text{MnPt}_{3 \pm x}$.
- 7/11: $\text{Mn}_{3 \pm x}\text{Au}$.
- 7/12: $\text{MnZn}_{10,4 \rightarrow 11,6}(\delta)^{(6)}$, $\text{MnHg}_{2 \pm x}$.
- 7/13: MnAl_3 , $\text{MnAl}_{3,45}(\delta)$, $\text{MnAl}_{12 \pm x}(C)^{(4)}$.
- 7/14: Mn_3Ge_x , ReC_x .
- 7/15: Mn_3P_2 , MnP_3 , $\text{Mn}_3\text{As}_{2 \pm x}$, $\text{Re}_{2 \pm x}\text{P}$, $\text{ReP}_{1 \pm x}$, $\text{ReP}_{2 \pm x}$, $\text{ReP}_{3 \pm x}$, $\text{ReAs}_{2,1 \rightarrow 2,3}$.
- 7/16: $\text{Te}_2\text{S}_{7 \pm x}$, $\text{Re}_2\text{S}_{3 \pm x}$, $\text{Re}_2\text{S}_{7 \pm x}$.
- 8/9: $\text{FeIr}_{1 \pm x}$.
- 8/11: Fe_3Au .
- 8/12: $\text{FeZn}_{7,3 \rightarrow 9,0}(\delta)^{(6)}$, RuBe_x , OsBe_x .
- 8/13: $\text{Ru}_{2 \pm x}\text{B}$, $\text{Ru}_2\text{B}_{3 \pm x}$, $\text{RuB}_{2 \pm x}$, $\text{OsB}_{1 \pm x}$, $\text{OsB}_{2 \pm x}$, $\text{OsB}_{2 \pm x}$.
- 8/14: $\text{FeSi}_x(\alpha'')$, $\text{Ru}_3\text{Si}_{2 \pm x}$.
- 8/15: $\text{FeP}_{2,0 \rightarrow 4,0}$, $\text{Fe}_{1,77 \rightarrow 1,27}\text{As}(\zeta)$, $\text{Ru}_{2 \pm x}\text{P}$, $\text{RuP}_{1 \pm x}$, $\text{RuP}_{2 \pm x}$, $\text{RuAs}_{2 \pm x}$, $\text{OsP}_{2 \pm x}$.
- 9/12: $\text{Co}_6\text{Be}_{21 \pm x}^{(6)}$, $\text{CoZn}_{8,7 \rightarrow 8,1}(\delta)^{(6)}$, $\text{CoZn}_{8,7 \rightarrow 8,1}(\delta_1)^{(6)}$, $\text{RhBe}_{2 \pm x}$, $\text{IrBe}_{2 \pm x}$.
- 9/13: CoAl_3 , $\text{Co}_4\text{Al}_{13}$, $\text{Rh}_{2 \pm x}\text{B}$, $\text{RhB}_{1 \pm x}$, $\text{RhB}_{2 \pm x}$, $\text{Ir}_3\text{B}_{2 \pm x}$, $\text{IrB}_{1 \pm x}$, $\text{IrB}_{2 \pm x}$.
- 9/14: Co_3Si , Co_3Si_2 , $\text{CoGe}_{0,08 \rightarrow 1,04}$, Co_2Ge_3 , $\text{Rh}_{1,5 \pm x}\text{Si}$, $\text{Rh}_3\text{Si}_{2 \pm x}$, $\text{RhSi}_{1 \pm x}$, $\text{RhSi}_{2 \pm x}$
 ($\text{u.m. Rh}_2\text{Si}_{3 \pm x}$), $\text{Rh}_{2 \pm x}\text{Sn}$, $\text{RhSn}_{4 \pm x}$, $\text{Rh}_{2 \pm x}\text{Pb}$, $\text{Ir}_{1,5 \pm x}\text{Si}$, $\text{Ir}_3\text{Si}_{2 \pm x}$, $\text{IrSi}_{1 \pm x}$
 $\text{Ir}_2\text{Si}_{3 \pm x}$, $\text{IrSi}_{3 \pm x}$.
- 9/15: $\text{CoP}_{3 \pm x}$, Co_6As_2 , Co_2As , Co_3As_2 , $\text{Rh}_6\text{P}_{4 \pm x}$, $\text{RhP}_{2 \pm x}$, $\text{RhP}_{3 \pm x}$, $\text{RhAs}_{2 \pm x}$, $\text{Rh}_3\text{Sb}_{4 \pm x}$
 RhSb_2 , RhBi , RhBi_2 , RhBi_4 , $\text{IrP}_{2 \pm x}$, $\text{IrAs}_{2 \pm x}$, Ir_2Bi , IrBi .
- 9/16: $\text{CoS}_{1 \pm x}$, $\text{Co}_{1,33 \rightarrow 1,27}\text{S}(\beta)$, $\text{Rh}_6\text{S}_{8 \pm x}$, $\text{Rh}_2\text{S}_{3 \pm x}$, $\text{Rh}_2\text{S}_{6 \pm x}$, $\text{Rh}_2\text{Se}_{6 \pm x}$, $\text{Rh}_2\text{Te}_{6 \pm x}$
 $\text{Ir}_2\text{S}_{3 \pm x}$, $\text{IrS}_{2 \pm x}$, $\text{Ir}_3\text{S}_{8 \pm x}$, $\text{IrSe}_{3 \pm x}$, $\text{IrTe}_{3 \pm x}$.
- 10/10: $\text{PtNi}_{1 \pm x}$, $\text{PtNi}_{3 \pm x}$.
- 10/11: $\text{PtAu}_{1 \pm x}(\beta)$.
- 10/12: $\text{NiB}_{1,5 \rightarrow 4,0}(\gamma)^{(5)}$, $\text{NiZn}_{3,0 \rightarrow 3,8}(\Gamma_1)^{(5)}$, Pd_3Be , Pd_2Be , $\text{Pd}_3\text{Be}_{2 \pm x}$, $\text{Pd}_{1,3 \pm x}\text{Be}$
 $\text{Pd}_{1,08 \pm x}\text{Be}$, $\text{Pd}_{1,0}\text{Zn}(\xi)$, $\text{PdZn}_{1,5 \rightarrow 1,65}(\xi_1)$, $\text{PdZn}_{3,2 \rightarrow 4,0}(\gamma_1)^{(7)}$, $\text{PdCd}_{1,1}(\delta)^{(4)}$
 $\text{PtCd}_{3 \pm x}(\gamma')$, $\text{Pt}_5\text{Be}_{21 \pm x}^{(6)}$, $\text{PtZn}_{4 \pm x}$, $\text{PtCd}_{2 \pm x}$, $\text{Pt}_{3 \pm x}\text{Hg}(\beta)$, $\text{Pt}_{2 \pm x}\text{Hg}(\gamma)$
 $\text{PtHg}_{1 \pm x}(\delta)$.
- 10/13: $\text{Ni}_{3,0 \rightarrow 2,3}\text{B}(\gamma)$, $\text{Ni}_3\text{B}_2(\epsilon)$, $\text{NiB}(\zeta)$, Ni_2B_3 , $\text{Pd}_{3 \pm x}\text{Ga}$, $\text{Pd}_{2 \pm x}\text{Ga}$, $\text{Pd}_{2 \pm x}\text{In}(\gamma)$.
- 10/14: $\text{NiSn}_{1,17 \pm x}(\theta)$, $\text{Pd}_{2 \pm x}\text{Si}^{(9)}$, $\text{Pd}_{4 \pm x}\text{Ge}$, $\text{Pd}_5\text{Ge}_{2 \pm x}$, Pd_2Ge , Pd_2Sn , Pt_6Si_2 , $\text{Pt}_{1,6 \rightarrow 1,0}\text{Si}$
 $\text{Pt}_{2 \pm x}\text{Ge}$, $\text{Pt}_2\text{Ge}_{3 \pm x}$.
- 10/15: $\text{Ni}_6\text{P}_{2 \pm x}$, $\text{Ni}_8\text{P}_{6 \pm x}$, $\text{NiP}_{2 \pm x}$, $\text{NiP}_{3 \pm x}$, $\text{Ni}_{2,6 \rightarrow 2,4}\text{As}(\beta)$, NiBi_3 , $\text{Pd}_{6,7 \rightarrow 4,01}(\beta)$
 $\text{Pd}_{4 \rightarrow 3}\text{P}(\gamma)$, $\text{Pd}_6\text{P}_2(\delta)$, PdP_2 , $\text{Pd}_{3 \pm x}\text{Sb}(\beta)$, $\text{Pd}_{2,1 \rightarrow 1,6}\text{Sb}(\gamma)$, PdBi_2 , Pt_{20}P_7 , Pt_3Sb .
- 10/16: $\text{Ni}_7\text{S}_{6 \pm x}$, $\text{Pd}_{4 \pm x}\text{S}$, $\text{Pd}_{2 \pm x}\text{S}$, $\text{PdS}_{2 \pm x}$, $\text{PdSe}_{1 \pm x}$, $\text{PdSe}_{2 \pm x}$, $\text{PtSe}_{1 \pm x}$.
- 10/17: $\text{Pd}_{4 \pm x}\text{H}$.
- 11/12: $\text{Cu}_{1,32 \rightarrow 1,27}\text{Cd}(\gamma)$, $\text{CuCd}_3(\epsilon)$, $\text{AgBe}_{1,71}(\gamma)$, $\text{AgMg}_{3,0 \rightarrow 3,6}(\gamma)$, Au_3Be , Au_2Be , Au_4Be_3
 $\text{AuBe}(\alpha)^{(9)}$, $\text{AuBe}_{3 \pm x}$, AuMg_2 , Au_2Mg_6 , $\text{Au}_{1,02 \rightarrow 1,08}\text{Cd}(\alpha_1)$, $\text{AuCd}_{1,8 \rightarrow 2,0}(\gamma)$.

AuCd_{1.5→1.9} (γ'), **AuCd**_{1.5→2.1} (δ), **AuCd**_{1.5→2.0} (δ'), **AuCd**_{2.3→3.1} (ϵ), **Au₂Hg** (γ), **AuHg₂** (δ).
11/13: Cu_{3±x}Al (β')⁽¹¹⁾, **Cu_{3±x}Al** (β'')⁽⁴⁾, **Cu_{1.6→1.5}Al** (δ), **Cu_{2.33→1.77}Ga** (γ), **Cu_{1.59→1.22}Ga** (ϵ), **Cu_{1.27→1.22}Ga** (ϵ'), **Cu_{2.2}In** (ϵ), **Cu_{2.0→1.8}In** (τ), **AgGa**_{1.5→1.6} (δ), **Au_{2.7→2.6}Al**, **Au_{1.94→1.85}Al**, **AuAl**_{1±x}, **Au_{2.8→2.5}Ga** (β), **Au_{2.3→2.2}Ga** (γ), **Au_{2.6}In** (γ), **Au_{2.5→2.2}In** (δ'), **AuIn**.
11/14: Cu_{4.6→4.3}Si (δ)⁽⁵⁾, **Cu_{6.7→2.7}Sn** (γ), **Cu_{6±x}Sn** (β')⁽⁴⁾, **AuSn₂**.
11/15: CuP_{2±x}, **Cu₅As₂**, **AgP**_{2±x}, **AgP**_{3±x}, **Au₂P**_{3±x}, **AuAs**_{1±x}.
11/16: Ag₁₂Te_{7±x} (β), **Au₂Se_{3±x}**.
12/12: Zn₃Mg₂, **ZnMg_{2.2→2.61}** (x), **Mg₆Hg₂** (γ), **Mg₂Hg** (δ).
12/13: MgAl_{4±x} (γ')⁽¹¹⁾, **MgAl**_{1.2±x} (β'), **MgGa**, **MgGa₂**.
12/14: CdSn_{1.1→1.2} (β).
12/15: Mg₃Sb₂ (β), **Mg₃Bi₂** (β), **Zn₃Sb₂**, **Zn₄Sb₃**, **CdAs₂**, **Hg₃Sb_{2±x}**.
13/14: B_{6±x}Si, **B_{3±x}Si**, **Al_{3±x}C**.
13/16: Ga₂S, **Ga₃S**, **Ga₂Se**, **GaSe**, **GaTe**, **In_{2±x}S**, **In_{2±x}Se**, **InSe**_{1±x}, **In₂Se_{3±x}**, **In₂Te**, **InTe**, **InTe₃**, **Tl₄S₃**, **Tl₂Se**, **Tl₂Se₃**, **Tl_{2±x}Te**, **TlTe**_{1±x}.
14/15: SiAs, **SiAs₂**, **GeP**, **GeAs**, **GeAs₂**, **Sn₄P₃**, **Sn₃P**_{4±x}, **SnP₃**, **Pb₃P**_{3±x}.
14/16: SnSe, **SnSe₂**.
15/15: As_{4→1}P.
15/16: Sb₂Se₃.

1. Numerals designate the numbers of vertical rows of the periodic system of elements, in which phase components are situated.
2. Probably, heterodesmic structure of first order (zinc atom grids).
3. Several phases of unknown composition.
4. Metastable phase.
5. Deformed defective structure of γ -brass.
6. Probably, structure of α -Mn type (atom distribution not established).
7. Structure, allied to γ -brass type.
8. See remark (11) to table V, a.
9. High temperature modification.
10. Structure, close to hexagonal denser packing.
11. Deformed α -Mn structure.

Index of Double Intermetallic Phases

Systems, in which binary intermetallic phases are formed, are given in alphabetic order; phases in each system are given in the order of growing content of B-component. Designations are the same as in tables. The Roman numerals in each formula designate the number of the systematization table (i. e., class number), arabic numerals (in straight parentheses) - literature reference; the number of the basic reference is in first place. References to reports, contributing no substantial changes (as well as to reports with incorrect data) are not given.

Systematism of Binary Intermetallic Phases

	Ac — S				Ag — Ce		
Ac_2S_{3+x}		VIII	[269]	CeAg	III	[9, 168, 279]	
	Ag — Al			CeAg ₂	X	[168]	
$Ag_{3,1 \rightarrow 3,6}$	Al	(θ)	IV [4, 8, 147a]	CeAg ₃	X	[168]	
$Ag_{3,3 \rightarrow 3,0}$	Al	(θ')	IV [8, 147a]				
$Ag_{3,2 \rightarrow 1,4}$	Al	(ζ)	IV [8, 147a]	Ag — Ga			
	Ag — As			$Ag_{2,7 \rightarrow 2,0}$	Ga (β)	IV [496, 4]	
$Ag_{8,5}As$	(β)	I	[8]	$Ag_{2,0 \rightarrow 2,0}$	Ga (γ)	IV [4, 1476, 169, 496]	
	Ag — Ba			$AgGa_{1,6 \rightarrow 1,6}$	(δ)	X [4]	
Ba_3Ag_5		X	[8]		Ag — Hg		
Ba_2Ag_5		X	[8]	$Ag_{1,24}Hg$	(β)	IV [8]	
$BaAg_4$		X	[8]	$\partial-Ag_5Hg_8$	(γ)	IV [8, 133]	
	Ag — Be				Ag — In		
$AgBe_{1,7}$	(γ)	X	[81]	$Ag_{3,2 \rightarrow 3,0}$	In (β)	IV [3, 1476]	
$AgBe_{2,7}$	(δ)	II	[81]	$Ag_{3,4 \rightarrow 2,0}$	In (γ)	IV [377, 3]	
	Ag — Ca			$\partial-Ag_3In$	(γ')	I [377]	
CaAg		IX	[125, 460, 8]	$Ag_{2,1 \rightarrow 2,0}$	In (ϵ)	IV [377, 35, 3]	
CaAg ₂		X	[8]	$AgIn_2$	(ϕ)	VI [377, 35, 3]	
CaAg ₃		IX	[125, 460, 8]		Ag — Ln		
$CaAg_4$		X	[8]	LaAg	III	[9, 279]	
	Ag — Cd			LaAg ₂	X	[8]	
$AgCd_{0,7 \rightarrow 1,8}$	(θ)	IV	[7]	LaAg ₃	X	[8]	
$AgCd_{1,0 \rightarrow 1,1}$	(ζ)	IV	[7]		Ag — Li		
$\partial-Ag_5Cd_8$	(γ)	IX	[7]	Li ₁₀ Ag	IX	[8]	
$AgCd_{1,8 \rightarrow 5,2}$	(δ)	IV	[7]	$\partial-LiAg$	III	[8]	

	Ag - Mg			Ag - Zn	
$\partial\text{-AgMg}$ (β)	IV	[8, 317, 318, 319]	$\text{AgZn}_{0.7 \rightarrow 1.4}$ (β)	IV	[6]
$\text{AgMg}_{3.0 \rightarrow 3.6}$ (γ)	X	[8]	$\partial\text{-AgZn}$ (ζ)	VIII	[445, 6]
	Ag - P		$\partial\text{-Ag}_5\text{Zn}_8$ (γ)	IV	[6]
$\text{AgP}_{2 \pm x}$	X	[11]	$\text{AgZn}_{2.1 \rightarrow 7.3}$ (δ)	IV	[6]
$\text{AgP}_{3 \pm x}$	X	[11]		Ag - Zr	
	Ag - Pr		ZrAg	I	[499, 236]
PrAg	IX	[8]		Al - As	
PrAg ₂	X	[8]	$\text{AlAs}_{1 \pm x}$	V, b	[8]
PrAg ₃	X	[8]		Al - Au	
	Ag - Pt		Au_4Al (β')	I	[207, 397]
$\partial\text{-Pt}_3\text{Ag}$ (γ)	I	[8, 148]	$\text{Au}_{4.0 \rightarrow 3.9}\text{Al}$ (β)	III	[397]
$\text{PtAg}_{1 \pm x}$ (β)	X	[8, 188]	$\text{Au}_{2.7 \rightarrow 2.6}\text{Al}$	X	[253a]
$\text{PtAg}_{3 \pm x}$	I	[188]	$\text{Au}_{1.94 \rightarrow 1.85}\text{Al}$	X	[253a]
	Ag - S		$\text{Au}_5\text{Al}_{3 \pm x}$	IV	[133]
$\text{Ag}_{2 \pm x}\text{S}$ (α)	X	[4]	$\text{AuAl}_{1 \pm x}$	X	[307]
$\text{Ag}_{2 \pm x}\text{S}$ (β)	IX	[128]	$\partial\text{-AuAl}_2$	V, b	[8]
	Ag - Sb			Al - B	
$\text{Ag}_{9 \rightarrow 8}\text{Sb}$ (ϵ)	IV	[8]	$\text{AlB}_{2 \pm x}$	VI	[3, 12]
$\partial\text{-Ag}_3\text{Sb}$ (ϵ')	I	[277, 8, 133, 431]		Al - Ba	
$\text{Ag}_{2 \pm x}\text{Sb}$	IX	[7]	$\text{BaAl}_{4 \pm x}$	VI	[3]
	Ag - Se			Al - C	
$\text{Ag}_{1 \pm x}\text{Se}$ (α)	IX	[4]	$\text{Al}_{3 \pm x}\text{C}$	X	[8]
	Ag - Sn			Al - Ca	
$\text{Ag}_{7.1 \rightarrow 3.8}\text{Sn}$ (β)	IV	[8]	CaAl_2	II	[7, 8]
$\text{Ag}_{3.0 \rightarrow 2.8}\text{Sn}$ (ϵ')	IV	[8, 133]	CaAl_1	X	[8]
	Ag - Sr		CaAl_4	VI	[37]
Sr_3Ag_2	X	[8]		Al - Ce	
SrAg	X	[8]	Ce_3Al_2	X	[168]
Sr_3Ag_3	X	[8]	CeAl	X	[168]
SrAg_4	X	[8]	$\partial\text{-CeAl}_2$	II	[168, 13]
	Ag - Te		CeAl_4	VI	[168, 37]
$\text{Ag}_{1 \pm x}\text{Te}$ (α)	V, b	[4]		Al - Co	
$\text{Ag}_{2 \pm x}\text{Te}$ (β)	IX	[129]	$\partial\text{-CoAl}$ (γ)	IV	[7, 8, 14, 253a]
$\text{Ag}_{12}\text{Te}_{7 \pm x}$ (α)	IX	[10]	$\partial\text{-Co}_2\text{Al}_6$	VI	[8, 14]
$\text{Ag}_{12}\text{Te}_{7 \pm x}$ (β)	X	[10]	CoAl_3	X	[7, 14]
	Ag - Th		$\text{Co}_4\text{Al}_{13}$	X	[7, 14]
Th_3Ag_5	X	[205]	Co_2Al_9	VI	[14]
ThAg_3	X	[205]		Al - Cr	
			$\text{Cr}_{3 \pm x}\text{Al}$	X	[15]
			$\partial\text{-Cr}_2\text{Al}$ (β)	III	[16]
			$\text{CrAl}_{1.60 \rightarrow 1.63}$ (γ_1)	X	[15]

$\partial\text{-Cr}_5\text{Al}_8$	(γ_2) VIII	[16]
$\text{CrAl}_{1.91\rightarrow 2.03}$	(γ_3) X	[15]
$\text{CrAl}_{1.91\rightarrow 2.22}$	(γ_4) X	[15]
$\text{CrAl}_{2.6\rightarrow 3.1}$	(δ) X	[15]
$\text{CrAl}_{1.9\rightarrow 1.7}$	(ϵ) X	[15]
$\text{CrAl}_{5.3\rightarrow 6.1}$	(ζ) X	[15]
$\text{CrAl}_{6.7\rightarrow 7.3}$	(θ) IX	[15, 350]

Al — Cu

$\text{Cu}_{4.0\rightarrow 2.8}\text{Al}$	(β) IV	[8, 147b]
$\text{Cu}_{3\pm x}\text{Al}$	(β_1) IV	[253r, 276a]
$\text{Cu}_{3\pm x}\text{Al}$	(β') X	[428, 253e]
$\text{Cu}_{3\pm x}\text{Al}$	(β'') X	[428]
$\text{Cu}_{2.5\pm x}\text{Al}$	(γ') I	[428, 253e]
$\partial\text{-Cu}_9\text{Al}_4$	(γ) IV	[3, 147b]
$\text{Cu}_{2.1\rightarrow 1.6}\text{Al}$	(γ_1) IX	[429, 182, 147b]
$\text{Cu}_{2.1\rightarrow 1.6}\text{Al}$	(γ_2) IX	[182, 147b]
$\text{Cu}_{1.6\rightarrow 1.5}\text{Al}$	(δ) X	[147b]
$\text{Cu}_{1.32\rightarrow 1.18}\text{Al}$	(ϵ) IX	[147b]
$\text{Cu}_{1.27\rightarrow 1.17}\text{Al}$	(ζ) IX	[7, 147b]
$\text{CuAl}_{0.95\rightarrow 1.05}$	(η) IX	[7, 147b]
CuAl_2	(θ) VI	[8, 147b]
$\text{CuAl}_{2\pm x}$	(θ') V, b	[253r]

Al — Fe

$\partial\text{-Fe}_3\text{Al}$	(β_1) V, b	[8, 133]
$\partial\text{-FeAl}$	(β_2) IV	[8, 6]
$\text{FeAl}_{1.44\rightarrow 1.86}$	(ϵ) IX	[8]
$\text{FeAl}_{2\pm x}$	(ζ) IX	[8]
$\text{FeAl}_{2.3\rightarrow 2.5}$	(η) IX	[8, 492]
$\text{FeAl}_{2.9\rightarrow 3.0}$	(θ) IX	[17, 492]
Fe_2Al_7	IX	[7, 492]

Al — La

La_3Al_2	X	[168]
LaAl	X	[168]
LaAl_2	II	[168, 18]
LaAl_4	VI	[168, 37]

Al — Li

$\text{Li}_{3\pm x}\text{Al}$	X	[218]
Li_2Al	X	[508, 19]
$\partial\text{-LiAl}$ (β)	III	[508, 20]
$\text{LiAl}_{2\pm x}$	X	[138]

Al — Mg

$\partial\text{-Mg}_{17}\text{Al}_{12}$	(γ) VI	[6, 21, 306]
$\text{MgAl}_{1\pm x}$	(γ') X	[6, 21]
$\text{MgAl}_{1.2\pm x}$	(β') X	[6, 21]
$\text{MgAl}_{1.50\rightarrow 1.63}$	(β) IX	[483, 6, 21, 201, 509]

Al — Mn

$\partial\text{-MnAl}$	IV	[22, 281]
MnAl_2	X	[23, 281]
$\text{MnAl}_{3.55}$ (δ)	X	[281]
$\text{MnAl}_{4\pm x}$	IX	[23, 24, 281]
MnAl_6	IX	[23, 24]
MnAl_{12}	(G) X	[23]

Al — Mo

$\text{MoAl}_{4\pm x}$	X	[367]
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Al — Nb

$\text{NbAl}_{3\pm x}$	I	[25]
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Al — Nd

$\text{NdAl}_{1\pm x}$	III	[8]
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Al — Ni

$\partial\text{-Ni}_3\text{Al}$	(α_1) I	[5, 148]
$\partial\text{-NiAl}$	(β) IV	[5, 324, 326, 364, 413]
$\partial\text{-Ni}_2\text{Al}_3$	(δ) IV	[5, 326]
NiAl	(ϵ) VI	[5]

Al — P

$\text{AlP}_{1\pm x}$	V, b	[8]
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Al — Pd

$\text{PdAl}_{1\pm x}$	IV	[402]
$\text{Pd}_2\text{Al}_{3\pm x}$	IV	[402]

Al — Pr

Pr_3Al_2	X	[168]
PrAl	X	[168]
PrAl_2	X	[168]
PrAl_4	X	[168]

Al — Pt

$\text{PtAl}_{2\pm x}$	V, b	[26]
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Al — Sb

AlSb	V, b	[8, 133, 348]
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Al — Sr

$\text{Sr}_{1.2\rightarrow 1.0}\text{Al}$	IX	[27]
$\partial\text{-SrAl}_4$ (β)	VI	[27]

Al — Ta

$\text{TaAl}_{3\pm x}$	I	[25]
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Al — Th

ThAl_4	IV	[25]
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	Al — Ti	CrAs _{1±x}	V, a [8]
2-TiAl	I [440]	Cr ₂ As _{3±x}	X [8]
TiAl _{3±x}	I [25]		As — Cu
	Al — U	Cu _{3±x} As	VIII [6, 180]
UAl ₂	II [262, 382]	(искусственный домейнит)	
UAl ₃	I [262, 382]	Cu _{3±x} As	IX [6, 180]
UAl _{4±x}	VIII [443]	(домейнит)	
UAl ₅	X [262, 382]	Cu _{3±x} As	I [6, 180]
	Al — V	(альгодонит)	
VAI _{3±x}	I [28]	Cu ₅ As ₂	X [8]
	Al — W		As — Fe
WAl _{1.7→2.0}	X [29]	Fe ₂ As	V, b [8, 3]
WAl _{2.2→2.6}	X [29]	Fe _{1.77→1.27} As (ζ)	X [3]
WAl _{3.0→3.3}	X [29]	FeAs	(η) V, a [3, 8]
WAl _{3.5→4.4}	IX [29]	FeAs ₂	VI [8]
WAl _{4.5→4.9}	X [29]		As — Ga
WAl ₁₂	X [29]	GaAs _{1±x}	V, b [3]
	Al — Zr		As — Ge
ZrAl _{3±x}	I [7, 25]	GeAs	X [165]
	Am — S	GeAs ₂	X [165]
Am ₂ S _{3±x}	VIII [269]		As — In
	As — Au	InAs _{1+x}	V, b [3]
AuAs _{1±x}	X [2766]		As — Ir
	As — Ba	IrAs _{2±x}	X [8]
Ba ₃ As ₂	X [8]		As — K
	As — Ca	K ₃ As	V, 6 [32]
Ca ₃ As ₂	X [8]	KAs _{3±x}	X [8]
	As — Cd		As — La
Cd ₃ As ₂	V, b [8, 3]	LaAs _{1±x}	V, b [5]
CdAs ₂	X [8]		As — Li
	As — Ce	Li ₃ As	V, 6 [32]
CeAs _{1±x}	V, b [5]		As — Mg
	As — Co	Mg ₃ As ₂	V, b [3]
Co ₃ As ₂	X [8]		As — Mn
Co ₂ As	X [8]	Mn _{3±x} As	III [453, 232]
Co ₃ As ₂	X [8]	θ-Mn _{1/2} As (β)	B [8, 232, 453]
CoAs	V, a [3, 8]	Mn ₃ As _{2±x}	[453]
CoAs _{1±x}	VI [130]	MnAs	[453, 456, 457]
CoAs _{3±x}	VI [1, 95a]		
	As — Cr		
Cr _{2±x} As	V, b [30]		
Cr ₃ As _{2±x}	X [30]		

As—Mo		
MoAs _{1±x}	X	[33]
MoAs _{2±x}	X	[5]
As—Na		
Na ₃ As	V, 6	[32]
As—Nb		
NbAs _{2±x}	X	[8]
As—Nd		
NdAs _{1±x}	V, 6	[5]
As—Ni		
Ni _{2.0→2.4} As (β)	IX	[496, 8]
Ni ₃ As ₂	IX	[8, 30 ¹]
NiAs	V, a	[8, 133]
NiAs _{2±x}	VI	[7]
(раммельсбергит) RAMMELSBERGITE		
NiAs _{2-x}	IX	[7]
(пара-раммельсбергит) PAIR-RAMM.		
As—P		
As _{4→1} P	X	[300]
As—Pd		
PdAs _{2±x}	VI	[8]
As—Pr		
PrAs _{1±x}	V, 6	[5]
As—Pt		
PtAs _{2±x}	VI	[8]
As—Re		
ReAs _{2,1→2.3}	X	[34]
As—Rh		
RhAs _{2±x}	X	[8]
As—Ru		
RuAs _{2,1x}	X	[8]
As—Sb		
Sb _{3,0→1.2} As (β)	IX	[484, 7]
As—Se		
As ₃ Se _{3±x}	V, 6	[2]

As—Si		
SiAs	X	[36]
SiAs ₂	X	[36]
As—Sn		
Sn ₃ As ₂	VIII	[3]
SnAs	V, 6	[3]
As—Sr		
Sr ₂ As ₂	X	[6]
As—Ti		
TiAs _x	X	[453]
(несколько фаз неизвестного состава)		
Several Phases of UNKNOWN COMP.		
As—V		
VAs _x	X	[453]
(несколько фаз неизвестного состава)		
Several Phases of UNKNOWN COMP.		
WAs _{1±x}		[33]
WAs _{2±x}	X	[8]
As—Zn		
Zn ₃ As ₂	V, 6	[3]
ZnAs _{2→3} (γ)	IX	[3]
Au—Be		
Au ₃ Be	X	[81, 373]
Au ₂ Be	X	[81, 373]
Au ₄ Be ₃	X	[81]
AuBe (α)	X	[81, 39]
AuBe (β)	V, 6	[81, 39,]
		[373]
AuBe _{3±x}	X	[373]
AuBe _{6±x}	II	[3, 40,]
		[373]
Au—Bi		
Au ₃ Bi	II	[478]
Au—Ca		
Ca ₂ Au	X	[8]
Ca ₄ Au ₃	X	[8]
CaAu _{0.78→1.04}	X	[8]
CaAu ₂	X	[8]
CaAu ₃	X	[8, 480]
CaAu ₄	X	[8]

Au — Cd				$Au_{2.5 \rightarrow 2.2}In$ (δ')	X	[43]	
$\partial-Au_3Cd$	(α')	I	[365, 41]	$AuIn$	X	[43]	
$\partial-Au_3Cd$	(α'')	I	[365, 41]	$AuIn_2$	V, n	[26, 43]	
$Au_{2.7 \rightarrow 1.5}Cd$ (α_2)	I	[365, 41]	Au — K				
$Au_{1.8 \rightarrow 1.08}Cd$ (α_3)	IX	[41]	KAu_4	X	[42]		
$\partial-AuCd$	(β)	IV	[8]	Au — La			
$\partial-AuCd$	(β')	I	[8]	La_2Au	X	[8]	
$AuCd_{1.8 \rightarrow 2.0}$ (γ)	X	[8]	$LaAu$	X	[8]		
$AuCd_{1.5 \rightarrow 1.9}$ (γ')	X	[8]	$LaAu_2$	X	[8]		
$AuCd_{1.5 \rightarrow 2.1}$ (δ)	X	[8]	$LaAu_3$	X	[8]		
$AuCd_{1.5 \rightarrow 2.0}$ (δ')	X	[8]	Au — Li				
$AuCd_{2.3 \rightarrow 3.4}$ (ϵ)	X	[8]	$Li_{1.08}Au$	X	[8]		
$AuCd_{2.3 \rightarrow 3.4}$ (ϵ')	IX	[8]	Au — Mg				
Au — Ce				$\partial-AuMg$ (β)	IV	[2, 8]	
Ce_2Au	X	[168]	$AuMg_2$	X	[8]		
$CeAu$	X	[168]	Au_2Mg	X	[8]		
$CeAu_2$	X	[168]	$AuMg_3$	V, 6	[314, 8]		
$CeAu_3$	X	[168]	Au — Mn				
Au — Cs				$Mn_{3 \pm x}Au$	X	[137]	
Cs_2Au_{10}	X	[42]	$\partial-MnAu$ (β)	I	[137, 253b, 433]		
$CsAu$	X	[42]	$MnAu_{2 \pm x}$ (III)	$MnAu_{3 \pm x}$	IX	[253b, 137, 433]	
Au — Cu				Au — Na			
$Au_3Cu_{2 \pm x}$	IX	[2]	$\partial-Na_2Au$ (γ)	VI	[44]		
$\partial-AuCu$	I	[1, 8, 320]	$Na_{1.22}Au$ (β)	X	[44]		
$AuCu_{1 \pm x}$	I	[216, 253b]	$\partial-NaAu_2$ (β)	II	[44]		
$\partial-AuCu_3$	I	[1, 8, 320, 334, 335]	Au — Ni				
Au — Fe				$NiAu_{1 \pm x}$	III	[216]	
Fe_3Au	X	[8]	Au — P				
Au — Ga				$Au_2P_{3 \pm x}$	X	[8]	
$Au_{2.5 \rightarrow 2.0}Ga$ (β)	X	[170]	Au — Pb				
$Au_{2.3 \rightarrow 2.1}Ga$ (γ)	X	[170]	Au_2Pb	II	[40, 8]		
$AuGa$	V, a	[193, 170]	$AuPb_2$	VI	[45, 8]		
$AuGa_2$	V, n	[20, 170]	Au — Pr				
Au — Hg				Pr_3Au	X	[168]	
$Au_{3 \pm x}Hg$ (β)	I	[133, 258]	$PrAu$	X	[168]		
Au_2Hg (γ)	X	[258]	$PrAu_2$	X	[168]		
$AuHg_2$ (δ)	X	[258]	$PrAu_3$	X	[168]		
Au — In				Au — Rb			
$Au_{5.7 \rightarrow 4.0}In$ (β)	IV	[43, 1476]	$RbAu_4$	X	[42]		
$Au_{3.6}In$ (γ)	X	[43]	Au — Sb				
$\partial-Au_4In_4$	IV	[35, 43]	$AuSb_2$	VI			

	Au — Se			B — Cr	
Au_2Se_{3+x}	X	[8]	$Cr_{2-x}B$ (δ)	IX	[358, 309]
	Au — Sn		Cr_3B_2 (ϵ)	X	[309]
$Au_{7,1 \rightarrow 6,7}Sn$ (β)	IV	[8, 133]	CrB (ζ)	VI	[309]
$AuSn$	V, a	[8]	Cr_3B_4 (η)	VI	[358, 309]
$AuSn_2$	X	[8]	CrB_2 (θ)	VI	[309]
$AuSn_4$	VI	[294, 8]		B — Er	
	Au — Te		ErB_{6+x}	VI	[46]
$AuTe_{2+x}$ (калаверит)	V, a	[3, 502]		B — Fe	
$AuTe_{2-x}$ (кремнерит)	VII	[4, 502]	Fe_3B	VI	[3]
	Au — Th		FeB	VI	[3]
Th_3Au_6	X	[205]		B — Gd	
$ThAu_3$	X	[205]	GdB_{6+x}	VI	[46]
	Au — Ti			B — Hf	
$Ti_{3+x}Au$	III	[452, 148, 185]	HfB_{1+x}	X	[135r]
$TiAu_{3+x}$ (или $TiAu_2$)	I	[151, 499]		B — Ir ₂	
$TiAu_6$	IX	[499]	Ir_3B_{2+x}	X	[393]
	Au — Zn		IrB_{1+x}	X	[393]
$Au_{1,7 \rightarrow 2,7}Zn$ (α_1)	I	[287, 8]	IrB_{2+x}	X	[393]
$\delta-Au_3Zn$ (α_2)	I	[287, 8]		B — La	
$\rho-AuZn$ (β)	IV	[8, 133, 321]	LaB_{6+x}	VI	[4]
$AuZn_{1,7 \rightarrow 4,9}$ (γ)	IX	[8]		B — Mn	
$AuZn_{1,8 \rightarrow 3,8}$ (γ_1)	IV	[8]	$Mn_{4+x}B$ (δ)	VI	[316]
$AuZn_{1,7 \rightarrow 4,9}$ (γ_2)	IX	[8]	Mn_3B (ϵ)	VI	[316]
$AuZn_8$ (ϵ)	IV	[8]	MnB (ζ)	VI	[316]
	Au — Zr		Mn_3B_4 (η)	VI	[316]
$ZrAu_3$	X	[236]		B — Mo	
	B — Ba		Mo_2B (γ)	VI	[237]
BaB_{6+x}	VI	[46]	$\delta-MoB$ (δ)	VI	[257, 300]
	B — C		MoB_{1+x} (β)	VI	[300]
$\delta-B_4C$	VI	[485]	MoB_{2+x}	VI	[389, 330]
	B — Ca		Mo_3B_7 (ϵ)	VI	[237]
CaB_{6+x}	VI	[46]		B — Na	
	B — Ce		NaB_{2+x}	X	[2]
CeB_{4+x}	VI	[300]		B — Nb	
CeB_{6+x}	VI	[3]	$Nb_{6+x}B$ (β)	X	[358]
	B — Co		$Nb_{6+x}B$ (β')	X	[358]
Co_3B	VI	[3]	$Nb_{3,0 \rightarrow 1,0}B$ (β'')	X	[358]
CoB	VI	[3]	NbB (γ)	VI	[358]
			Nb_3B_4 (δ)	VI	[358]
			$\delta-NbB_2$ (ϵ)	VI	[264, 47, 358]
				B — Nd	
			NdB_{6+x}	VI	[46]

	B - Ni			B - Ti	
$Ni_{2.0 \rightarrow 2.3}B$	(γ)	X [358]	$Ti_{10.0 \rightarrow 1.3}B$	V, 6	[288]
Ni_2B	(δ)	VI [3, 358]	$Ti_{2 \cdot x}B$	VI	[510]
Ni_3B_2	(ϵ)	X [8, 149, 358]	$\partial-TiB$	V, n	[288, 358, 510]
NiB	(ζ)	X [8, 149, 358]	$\partial-TiB_2$	VI	[264, 288]
Ni_2B_3		X [3, 149, 358]	$Ti_2B_{6 \pm x}$	VI	[510]
	B - Os			B - U	
$OsB_{1 \pm x}$	IX	[393]	$UB_{4 \pm x}$	VI	[355, 269, 263]
$OsB_{2 \pm x}$	X	[393]	$UB_{12 \pm x}$	VI	[418, 269, 263]
OsB_{2+x}	X	[393]		B - V	
	B - Pd		$VB_{3 \pm x}$	VI	[264]
$Pd_3B_{1 \pm x}$	IX	[393]		B - W	
	B - Pr		W_2B (γ)	VI	[237, 33]
$PrB_{6 \pm x}$	VI	[46]	$\partial-WB$ (δ)	VI	[237, 33, 510]
	B - Pt		$WB_{1 \pm x}$	VI	[510]
$Pt_1B_{2 \pm x}$ (n.m. $PtB_{1 \cdot x}$)	IX	[393]	$WB_{2.0 \rightarrow 2.1}(\epsilon)$	VI	[237]
	B - Rh		$YB_{6 \pm x}$	B - Y	
$Rh_2 \pm x B$	X	[393]	$YbB_{6 \pm x}$	VI	[46]
$RhB_{1 \pm x}$	X	[393]		B - Yb	
$RhB_{2 \pm x}$	X	[393]	$ZrB_{1 \pm x}$	IX	[510]
	B - Ru		$ZrB_{2 \pm x}$	VI	[264, 47, 141]
$Ru_{2 \pm x} B$	X	[393]	$ZrB_{12 \pm x}$	X	[404]
$RuB_{1 \pm x}$	IX	[393]		Ba - Bi	
$Ru_2B_{3 \pm x}$	X	[393]	$Ba_3Bi_{2 \pm x}$	X	[272]
$RuB_{2 \pm x}$	X	[393]	$BaBi_3$	X	[48]
	B - Si			Ba - Hg	
$B_{6 \pm x}Si$	X	[135a]	$BaHg_{12 \pm x}$	X	[8]
$B_{3 \pm x}Si$	X	[135a]		Ba - Mg	
$SrB_{6 \pm x}$	VI	[40]	$BaMg_2$	II	[172, 202]
	B - Ta		$BaMg_{1 \pm x}$	X	[202, 48]
Ta_2B (β)	VI	[510]	$BaMg_6$	X	[202, 48]
TaB (γ)	VI	[510]		Ba - Pb	
Ta_3B_4 (δ)	VI	[510]	$Ba_{2 \pm x}Pb$	X	[48]
$\partial-TaB_2$ (ϵ)	VI	[210, 264, 47]	$BaPb$	X	[48]
	B - Th		$BaPb_3$	X	[48]
$ThB_{1 \pm x}$	X	[358]		Ba - Sb	
$ThB_{* \pm x}$	VI	[55]	$Ba_3Sb_{2 \pm x}$	X	[272]
$ThB_{6 \pm x}$	VI	[40]			

	Ba — Si					
BaSi _{2+x}	X	[8]	Pd ₃ Be _{2-x}	X	[81]	
	Ba — Sn		Pd _{1.3-x} Be	X	[81]	
BaSn ₃	X	[8]	Pd _{1.08-x} Be	X	[81]	
BaSn ₅	X	[8]	PdBe	III	[4]	
	Ba — Zn		PdBe _{5+x}	II	[3, 40]	
BaZn _{13+x}	II	[49]		Be — Pt		
	Be — Co		Pt ₅ Be _{21+x}	X	[51]	
CeBe _{13+x}	II	[283]		Be — Re		
	Be — Co		ReBe _{2+x}	II	[4]	
CoBe _{1+x}	III	[50, 491]		Be — Rh		
Co ₅ Be _{21+x}	X	[491]	RhBe _{3-x}	X	[4]	
	Be — Cr			Be — Ru		
CrBe _{2+x}	II	[4]		RuBe _x	X	[4]
	Be — Cu			Be — Ta		
Cu _{1.85→1.17} Be (β)	III	[3, 488]		TaBe _x	X	[4]
Cu _{1.08→1.04} Be (γ)	IV	[51, 488, 3]			Be — Th	
CuBe _{2.3→3.7} (δ)	II	[51, 488, 3]	ThBe _{13+x}	II	[283]	
	Be — Fe			Be — Ti		
δ-FeBe ₂ (β)	II	[51, 375]	Ti _{1.3→1.0} Be	X	[288]	
FeBe _{4.9→15.7} (ε)	II	[51, 375]	θ-TiBe ₂	II	[4, 288]	
FeBe _{10.1→11.5} (ζ)	I	[375, 399, 51]	TiBe _{4+x}	X	[288]	
	Be — Ir		TiBe _{10+x}	X	[288]	
IrBe _{2+x}	X	[4]	TiBe _{12+x}	IX	[487]	
	Be — Mn			Be — U		
MnBe _{2+x}	II	[4]		UBe _{13+x}	II	[283]
	Be — Mo			Be — V		
MoBe _{2+x}	II	[4, 410]		VBe _{2+x}	II	[4]
MoBe _{13+x}	IX	[410]			Be — W	
	Be — Ni			WBe _{2+x}	II	[4]
δ-NiBe (β)	III	[50, 434]		WBe _{13-x}	IX	[4]
NiBe _{3.5→4.9} (γ)	X	[50, 51, 434]			Be — Zr	
	Be — Os			ZrBe ₂ (γ)	X	[4, 378]
OsBe _x	X	[4]		ZrBe ₄ (δ)	X	[378]
	Be — Pd			ZrBe _{5+x} (ε)	X	[378]
Pd ₃ Be	X	[81]		θ-ZrBe ₁₂ (η)	II	[283, 378]
Pd ₂ Be	X	[81]			Bi — Ca	
				Ca ₃ Bi ₂	X	[8]
				CaBi ₃	X	[8, 460]

	Bi — Ce		Bi — Pr
Ce_3Bi	X [8]	$PrBi_{1\pm x}$	V, u [5]
Ce_4Bi_3	X [8]		Bi — Pt
$CeBi$	V, u [5, 8]	$PtBi_{1\pm x}$	V, a [8]
$CeBi_2$	X [8]	$PtBi_{2\pm x}$	VI [173]
	Bi — In		Bi — Rh
In_2Bi (β)	VIII [254, 302]	$RhBi$	V, a [402, 423, 8]
$InBi$ (γ)	V, u [52, 249, 302]	$RhBi_2$	X [423, 8]
	Bi — Ir	$RhBi_4$	X [423, 8]
$IrBi$	X [257]		Bi — S
$IrBi$	X [257]	$Bi_2S_3 \cdot x$	VII [3]
	Bi — K		Bi — Se
K_3Bi	V, 6 [8, 32]	$BiSe$	IX [2, 8]
K_3Bi_2	X [8]	Bi_2Se_3	V, 6 [2, 8]
KBi_2	II [8]		Bi — Sr
	Bi — La	$SrBi_3$	X [514]
$LaBi_{1-x}$	V, u [5]		Bi — Te
	Bi — Li	$Bi_7Te_3 \cdot x$	IX [278]
Li_3Bi	V, u [53]	$\delta-Bi_2Te_3$	V, 6 [7, 95]
$LiBi$ (α)	I [53]		Bi — Tl
$LiBi$ (β)	X [53]	$Tl_{21\rightarrow 3}Bi$ (γ)	IX [57, 350]
	Bi — Mg	$TlBi_{1,37\rightarrow 1,59}$ (δ)	VIII [306, 57, 340]
Mg_2Bi_2 (α)	V, u [54]		Bi — U
Mg_3Bi_2 (β)	X [8]	$UBi_{1\pm x}$	V, u [419]
	Bi — Mn	$U_4Bi_{5\pm x}$	X [419]
$MnBi_{1-x}$	V, a [7]	$UBi_{2\pm x}$	X [419]
Mn_2Bi_{3-x} (X)	IX [55, 56]		C — Ce
$MnBi_{2-x}$ (Y)	IX [55, 56]	CeC_{2+x}	VI [8]
	Bi — Na		C — Co
Na_3Bi	V, 6 [8, 32, 339]	$Co_{3+x}C$	VIII [6]
$NaBi$	I [8]	$Co_{2+x}C$	V, 6 [458, 459]
	Bi — Ni		C — Cr
$Ni_{1,32\rightarrow 1,13}Bi$ (β)	V, a [8]	$\sigma-Cr_{23}C_6$	VIII [3, 8]
$NiBi_3$	X [8]	$\delta-Cr_7C_3$	VIII [3, 8]
	Bi — Pb	$\delta-Cr_3C_2$	VI [3, 8]
$Pb_{3\rightarrow 2}Bi$ (β)	I [2, 430]		C — Fe
	Bi — Pd	Fe_3C (цементит)	VIII [8]
$PdBi_{2\pm x}$	X [8]	$Fe_{3-x}C$ (ϵ)	V, 6 [241]

$Fe_{3-x}C$ (деформир. VIII)		[241]			C — Th	
$Fe_{2+x}C$ (цементит) V, 6		[221]	$ThC_{1\pm x}$	V, n	[222]	
	C — Hf		$ThC_{2\pm x}$	VI	[466]	
HfC_{1-x}	V, n	[4]	$\delta-TiC$	C — Ti		
	C — La			V, n	[59, 288, 329]	
$LaC_{2\pm x}$	VI	[8]	UC	C — U		
	C — Mn			V, n	[217, 223, 224]	
$Mn_{23}C_{6\pm x}$	VIII	[8]	U_2C_3	X	[223]	
$Mn_{3\pm x}C$	VIII	[8]	$\delta-UC_2$	VI	[223, 224, 273]	
$Mn_7C_{8\pm x}$	VIII	[8]				
	C — Mo			C — V		
$\delta-Mo_2C$ (β)	V, 6	[3, 217]	$V_{2+x}C$ (β)	V, 6	[59, 131, 217]	
$\delta-MoC$ (γ)	VIII	[3, 217]	$\delta-VC$ (ϵ)	V, n	[59, 131, 217, 330]	
MoC_{1-x}	IX	[462]	VC_{2+x}	VI	[1436]	
	C — Nb			C — W		
$\delta-Nb_4C$	V, n	[58, 217]	$\delta-W_2C$	V, 6	[134, 217]	
$Nb_{1,38-1,08}C$	V, n	[58, 217]	WC	VIII	[134]	
	C — Nd			C — Y		
$NdC_{2\pm x}$	VI	[2]	$YC_{2\pm x}$	IX	[133]	
	C — Ni		$\delta-ZrC$	C — Zr		
$Ni_{3\pm x}C$	VIII	[6]	$ZrC_{2\pm x}$	V, n	[217]	
	C — Pr			VI	[1436]	
$PrC_{1\pm x}$	VI	[2]	CaCd	Ca — Cd		
	C — Pu		$CaCd_{2\pm x}$	IX	[460, 8]	
$PuC_{1\pm x}$	V, n	[290]	$CaCd_3$	II	[183]	
$Pu_2C_{3\pm x}$	VIII	[486]		X	[8, 460]	
	C — Re		$CaCu_{3\pm x}$	Ca — Cu		
ReC_x	X	[291]		II	[60]	
	C — Se		$CaGa_{2\pm x}$	Ca — Ge		
$Sc_{4\pm x}C$	X	[8]		VI	[61]	
$ScC_{1\pm x}$	V, n	[8]	$CaGe_{1\pm x}$	Ca — Ge		
	C — Sm		$CaGe_{2\pm x}$	X	[135b]	
$SmC_{2\pm x}$	VI	[8]		VI	[152]	
	C — Ta		$CaHg$	Ca — Hg		
$Ta_{2-x}C$	V, 6	[2]	$CaHg_3$	IX	[460]	
$\delta-TaC$	V, n	[217]	$CaHg_6$	X	[8, 460]	
			$CaHg_{10-x}$	X	[8]	
				X	[8]	

	Ca — In		CuCd _{1,1→1,5} (δ) IV [2, 8]
CuCd _{1±x}	X [460]		CuCd ₃ (ε) X [8]
CuIn _{3±x}	X [460]		Cd — Hg
	Ca — Li		HgCd _{1,1→1,7} I [133, 175]
Li _{2±x} Ca	II [172]		HgCd ₃ IX [131]
	Ca — Mg		Cd — K
δ-CaMg ₂	II [40, 189, 202]		KCd _{13-x} X [62]
	Ca — Ni		KCd ₁₃ II [62]
CuNi _{3±x}	II [189]		Cd — La
	Ca — Pb		LaCd _{1±x} III [5]
Cu _{1-x} Pb _x (γ)	X [8]		Cd — Li
CuPb	X [8, 460]		Li _{3,8→2,7} Cd (γ') I [8]
CuPb ₃	I [8, 460]		δ-LiCd (γ) III [8]
	Ca — Si		LiCd _{2,6→5,7} (β') I [8]
Cu ₂ Si	IX [154]		LiCd _{2,3→0,0} (β) IX [8]
Cu ₃ Si	VI [359, 8]		Cd — Mg
CuSi ₂	VI [1]		δ-Cd ₃ Mg I [133, 322, 63]
	Ca — Sn		δ-CdMg I [176, 322, 63]
Cu ₂ Sn	X [8]		δ-CdMg ₃ I [133, 322, 63]
Cu ₃ Sn	X [8, 460]		Cd — Na
CaSn ₃	I [8, 460]		NaCd ₂ IX [1, 8, 372]
	Ca — Tl		NaCd _{5±x} X [372]
δ-CaTl (γ)	III [8]		NaCd ₆ X [8, 372]
Cu ₃ Tl ₄	X [8]		Cd — Ni
CuTl ₃	I [8]		Ni ₅ Cd _{21±x} IV [8]
	Ca — Zn		Cd — P
Cu ₂ Zn	X [8]		Cd ₃ P ₂ V, n [1]
CuZn	X [8]		Cd — Pd
CuZn _{2±x}	X [150, 60]		Pd _{2,0→1,1} Cd (δ) I [505, 47]
CuZn _{3±x}	II [60]		PdCd _{1,1} (δ') X [505]
CuZn _{13±x}	II [49, 60]		PdCd _{1,15→1,70} (ε) III [505]
	Cd — Ce		PdCd _{3;x} (γ') X [505]
CdCd _{1±x}	III [5]		PdCd _{3,3→4,0} (γ ₁) IX [505]
	Cd — Co		PdCd _{4,3→4,7} (γ) IV [505]
Co ₃ Cd _{21±x}	IV [8]		Cd — Pr
	Cd — Cs		PrCd _{1±x} III [8]
CsCd _{13±x}	II [62]		Cd — Pt
	Cd — Cu		Pt _{3±x} Cd I [493]
Cu ₂ Cd (z) II [112, 8]			PtCd _{1±x} I [391]
Cu _{1,32→1,27} Cd (γ) X [8]			PtCd _{2±x} VI [493]
			Pt ₆ Cd _{21±x} (γ) IV [8]

	Cd — Rb			Ce — N		
$BbCd_{1\pm x}$	II	[62]	$CeN_{1\pm x}$	V, B	[276n]	
	Cd — Rh			Ce — Ni		
$Rh_3Cd_{21\pm x}$	IV	[8]	Ce_3Ni	X	[196]	
	Cd — Sb		$CeNi$	X	[196]	
$Cd_3Sb_{2\pm x}$ (β)	IX	[8]	$\delta-CeNi_2$	II	[184]	
$\delta-CdSb$ (γ)	VIII	[38, 3, 8, 323]	$CeNi_3$	X	[196]	
	Cd — Se		$CeNi_4$	X	[196]	
$CdSe_{1\pm x}$	V, B	[8]	$CeNi_5$	II	[186, 196]	
$CdSe_{1\pm x}$	V, G	[8]		Ce — P		
	Cd — Sn		$CeP_{1\pm x}$	V, B	[276n]	
$CdSn_{1\rightarrow 32}$ (β)	X	[8, 256]	Ce_2Pb	X	[168]	
	Cd — Sr		$CePb_3$	I	[8]	
$SrCd_{9\pm x}$	X	[8]		Ce — Pt		
	Cd — Te		$CePt_{2\pm x}$	II	[290]	
$CdTe_{1\pm x}$	V, B	[8]		Ce — S		
	Ce — Co		$\delta-CeS$	V, B	[252, 477]	
Ce_3Co	X	[196]	$\delta-Ce_3S_4$	VIII	[269, 297, 477]	
$CeCo_2$	II	[184, 196]	$CeS_{2\pm x}$	X	[297]	
$CeCo_3$	X	[196]		Ce — Sb		
$CeCo_4$	X	[196]	$CeSb_{1\pm x}$	V, B	[8]	
$CeCo_5$	II	[196]		Ce — Se		
	Ce — Cu			$Ce_3Se_{3\pm x}$	VIII	[497, 293]
$CeCu$	X	[8, 168]	$CeSe_{1\pm x}$	V, B	[497]	
$CeCu_2$	X	[8, 168]	$CeSe_{2\pm x}$	X	[293]	
$CeCu_4$	II	[8, 168, 261]		Ce — Si		
$CeCu_6$	X	[8, 168]	$CeSi_{2\pm x}$	VI	[268, 360]	
	Ce — Fe			Ce — Sn		
$CeFe_2$	II	[184, 8]	Ce_2Sn	X	[168]	
Ce_2Fe_3	X	[8]	Ce_3Sn_3	X	[168]	
	Ce — Ga		$CeSn_3$	I	[168, 8]	
$CeGa_{2\pm x}$	VI	[61]		Ce — Te		
	Ce — Hg		$CeTe_{1\pm x}$	X	[243]	
$CeHg_{1\pm x}$	III	[408]		Ce — Tl		
$CeHg_{4\pm x}$	X	[8]	Ce_2Tl	X	[168]	
	Ce — Mg		$CeTl$	IX	[9, 168]	
$CeMg$	III	[199, 311]	$CeTl_3$	X	[168]	
$CeMg_3$	II	[155, 311]				
$\delta-CeMg_3$	V, B	[3, 311]				
$CeMg_9$	X	[8, 311]				

	Co — Zn			Co — Sb	
Ce_2Zn	X	[8]	$Co_{1.33 \rightarrow 1.02}Sb$	V, a	[8]
Ce_2Zn	X	[8]	$CoSb_2$	VI	[55, 8]
$CeZn_{1-x}$	III	[5]		Co — Se	
$CeZn_{0 \rightarrow 0}(\delta)$	X	[235]	$\beta-CoSe$	V, a	[8, 253a]
$CeZn_{1.0 \rightarrow 11.8}(\epsilon)$	X	[235]	$CoSe_{2+x}$	VI	[8]
	Co — Cr			Co — Si	
$CrCo_{0.51 \rightarrow 1.05}(\gamma=\delta)$	IX	[385, 387]	Co_3Si	X	[8]
	Co — Fe		$Co_2Si(\theta)$	V, a	[234, 3, 8, 134, 415]
$FeCo_{1 \pm x}$	III	[246]	Co_3Si_2	X	[8]
	Co — Ge		$CoSi(\epsilon)$	V, b	[8, 134]
$\alpha-Co_2Ge$	V, a	[296, 178]	$CoSi_2$	V, b	[295, 306, 81]
$CoGe_{0.99 \rightarrow 1.01}$	X	[296]		Co — Sn	
Co_2Ge_3	X	[296]	$Co_{1.11 \rightarrow 1.38}Sn(\gamma)$	V, a	[270]
$\beta-Co_2Ge$	VI	[295, 296]	$Co_{1.44 \rightarrow 1.38}Sn(\gamma')$	V, a	[270]
	Co — Mo		$CoSn$	VIII	[270]
$Mo_3Co_{2 \pm x}(\delta)$	X	[446, 8]	$CoSn_2$	VI	[6, 270]
$MoCo_{1 \pm x}(\gamma)$	X	[8]		Co — Ta	
$\beta-Mo_2Co_7(\xi)$	II	[139, 414, 446]	$TaCo_{2 \pm x}$	II	[65]
$MoCo_{1 \pm x}$	I	[139]	$TaCo_{2.85}$	II	[65]
	Co — N			Co — Te	
$Co_3N(\gamma)$	V, G	[208]	$\beta-CoTe - CoTe_2$	V, a	[67, 326]
$Co_2N(\delta)$	V, G	[208, 244, 271, 459]	$CoTe_{2 \pm x}$	VI	[67]
	Co — Nb			Co — Th	
$NbCo_{2 \pm x}$	II	[65]	Th_7Co_3	X	[520]
$NbCo_{2.85}$	II	[65]	$ThCo$	X	[520]
	Co — P		$ThCo_{2 \rightarrow 3}$	X	[520]
$\beta-Co_2P$	V, G	[238]	$ThCo_6$	II	[261, 520]
$CoP_{1 \pm x}$	V, a	[3, 7]	Th_2Co_{17}	X	[520]
$CoP_{3 \pm x}$	X	[7]		Co — Ti	
	Co — Pt		$Ti_{2 \pm x}Co$	IX	[185, 388]
$\alpha-CoPt$	I	[392, 66]	$TiCo_{1 \pm x}$	III	[185, 388]
$CoPt_{2 \pm x}$	I	[490]	$TiCo_{2 \pm x}$	II	[65, 388, 508, 511]
	Co — S		$TiCo_{2 \pm x}$	II	[65, 508, 511]
$Co_{1.33 \rightarrow 1.27}S(\beta)$	X	[4]		Co — U	
Co_9S_4	V, b	[6]	U_6Co	VI	[289]
$\alpha-CoS$	V, a	[6, 253a]	UCo	III	[289]
$CoS_{1 \pm x}$	X	[6]	$\beta-UCo_2$	II	[289]
Co_3S_4	V, b	[6]		Co — V	
$CoS_{2 \pm x}$	VI	[6]	$V_{3 \pm x}Co$	III	[452]
			$V_{1.02}Co$	IX	[368]

	Co — W			Cr — Pd	
$W_{3\pm x}Co$	X	[374]	Cr_3Pd_2	IX	[69]
$\partial-W_6Co_7$	II	[482]		Cr — Pt	
WCo_3	I	[482, 139]	$Cr_{3\pm x}(Pt \text{ или } Cr_{2\pm x}Pt)$	X	[8, 409]
	Co — Zn		$CrPt_{1\pm x}$	X	[8, 409]
$\partial-CoZn$	(β) III	[68]		Cr — S	
$CoZn_{0,92\rightarrow 1,32}$	(β_1) IX	[68]	$\partial-CrS$	(α) V, a	[70]
$CoZn_{2,3\rightarrow 5,7}$	(I) IV	[68]	$CrS_{1,22\rightarrow 1,41}$	(β) V, a	[70]
$CoZn_{6,7\rightarrow 8,1}$	(δ) X	[68]		Cr — Sb	
$CoZn_{8,7\rightarrow 8,1}$	(δ_1) X	[68]	$CrSb_{1\pm x}$	(β) V, a	[8]
$CoZn_{10,1\rightarrow 13,3}$	(ζ) IX	[68, 351]	$CrSb_2$	VI	[71, 8]
	Co — Zr			Cr — Se	
$ZrCo_{2\pm x}$	II	[65]	$\partial-CrSe$	(α) V, a	[6]
	Cr — Fe		$CrSe_{1,16\rightarrow 1,39}$	(β) V, a	[6]
$CrFe_{0,91\rightarrow 1,05}$	(σ) IX	[239, 240, 250, 384, 385, 386]	$CrSe_{1,44\rightarrow 1,60}$	(γ) V, a	[6]
	Cr — Ge		X	Cr — Si	
$Cr_{3\pm x}Ge$	III	[152]	Cr_8Si	(β) III	[3, 72]
$Cr_3Ge_{2\pm x}$	IX	[152]	Cr_2Si	X	[72]
$CrGe_{1\pm x}$	V, b	[152]	$Cr_3Si_{2\pm x}$	(θ) IX	[3, 72]
	Cr — H		$CrSi$	(ϵ) V, b	[3, 72]
$CrH_{1\pm x}$	V, δ	[227]	$CrSi_2$	(γ) III	[3, 72]
$CrH_{2\pm x}$	V, b	[227]		Cr — Ta	
	Cr — Mn		$TaCr_{2\pm x}$	II	[248]
$CrMn_{2,6\rightarrow 4,9}$	(θ) IX	[368, 369, 470]		Cr — Te	
	Cr — N		$\partial-CrTe$	(α) V, a	[73]
$Cr_{2\pm x}N$	(β) V, δ	[8]	$CrTe_{1,17\rightarrow 1,60}$	(β) V, a	[73]
CrN	(γ) V, b	[8]		Cr — Ti	
	Cr — Nb		$TiCr_{2\pm x}$	II	[411, 495]
$NbCr_{2\pm x}$	II	[248]		Cr — Zn	
$NbCr_{2\pm x}$	II	[248]	$CrZn_{21\pm x}$	($\theta=\delta$) IX	[206, 74]
	Cr — Ni			Cr — Zr	
$Cr_{2\pm x}Ni$	IX	[2]	$ZrCr_{2\pm x}$	II	[75]
	Cr — P		$ZrCr_{2\pm x}$	II	[461]
$Cr_{3\pm x}P$	IX	[6]		Cs — Ge	
$Cr_{2\pm x}P$	X	[157]	$CsGe_{1\pm x}$	X	[219]
$CrP_{1\pm x}$	V, a	[6]	$CsGe_{4\pm x}$	X	[219]
$CrP_{2\pm x}$	X	[157]			

	Co - W			Cr - Pd	
$W_{3\pm x}Co$	X	[374]	Cr_3Pd_2	IX	[69]
$\partial-W_8Co_7$	II	[482]		Cr - Pt	
WCo_3	I	[482, 139]	$Cr_{3\pm x} (Pt \text{ или } Cr_{2\pm x}Pt)$	X	[8, 409]
	Co - Zn		$CrPt_{1\pm x}$	X	[8, 409]
$\partial-CoZn$	(β) III	[68]		Cr - S	
$CoZn_{0,02 \rightarrow 1,32}$	(β_1) IX	[68]	$\partial-CrS$	(α) V, a	[70]
$CoZn_{2,3 \rightarrow 5,7}$	(I') IV	[68]	$CrS_{1,22 \rightarrow 1,44}$	(β) V, a	[70]
$CoZn_{8,7 \rightarrow 8,1}$	(δ) X	[68]		Cr - Sb	
$CoZn_{8,7 \rightarrow 8,1}$	(δ_1) X	[68]	$CrSb_{1\pm x}$	(β) V, a	[8]
$CoZn_{10,1 \rightarrow 13,3}$	(ζ) IX	[68, 351]	$CrSb_2$	VI	[71, 8]
	Co - Zr			Cr - Se	
$ZrCo_{2\pm x}$	II	[65]	$\partial-CrSe$	(α) V, a	[6]
	Cr - Fe		$CrSe_{1,18 \rightarrow 1,38}$	(β) V, a	[6]
$CrFe_{0,94 \rightarrow 1,05}$	(σ) IX	[239, 240, 250, 384, 385, 386]	$CrSe_{1,44 \rightarrow 1,60}$	(γ) V, a	[6]
	Cr - Ge			Cr - Si	
$Cr_{3\pm x}Ge$	III	[152]	Cr_3Si	(β) III	[3, 72]
$Cr_3Ge_{2\pm x}$	IX	[152]	Cr_2Si	X	[72]
$CrGe_{1\pm x}$	V, b	[152]	$Cr_3Si_{2\pm x}$	(θ) IX	[3, 72]
	Cr - H		$CrSi$	(ϵ) V, b	[3, 72]
$CrH_{1\pm x}$	V, b	[227]	$CrSi_2$	(γ) III	[3, 72]
$CrH_{2\pm x}$	V, b	[227]		Cr - Ta	
	Cr - Mn		$TaCr_{2\pm x}$	II	[248]
$CrMn_{2,8 \rightarrow 4,9}$	(θ) IX	[368, 369, 470]		Cr - Te	
	Cr - N		$\partial-CrTe$	(α) V, a	[73]
$Cr_{2\pm x}N$	(β) V, b	[8]	$CrTe_{1,17 \rightarrow 1,60}$	(β) V, a	[73]
CrN	(γ) V, b	[8]		Cr - Ti	
	Cr - Nb		$TiCr_{2\pm x}$	II	[411, 495]
$NbCr_{2\pm x}$	II	[248]		Cr - Zn	
$NbCr_{2\pm x}$	II	[248]	$CrZn_{21\pm x}$	($\theta = \delta$) IX	[206, 74]
	Cr - Ni			Cr - Zr	
$Cr_{2\pm x}Ni$	IX	[2]	$ZrCr_{2\pm x}$	II	[75]
	Cr - P		$ZrCr_{2\pm x}$	II	[461]
$Cr_{3\pm x}P$	IX	[6]		Cs - Ge	
$Cr_{2\pm x}P$	X	[157]	$CsGe_{1\pm x}$	X	[219]
$CrP_{1\pm x}$	V, a	[6]	$CsGe_{4\pm x}$	X	[219]
$CrP_{2\pm x}$	X	[157]			

	Cs — Hg			Cu — Mg	
Cs ₂ Hg ₃	X	[8]	∂-Cu ₂ Mg (β)	II	[1, 2, 331]
CsHg ₂	X	[8]	CuMg ₂	VI	[308, 314, 331]
CsHg ₄	X	[8]		Cu — P	
CsHg ₆	X	[8]	∂-Cu ₃ P	VIII	[79]
CsHg ₁₀	X	[8]	CuP _{2±x}	X	[79]
	Cs — Na			Cu — Pd	
CsNa ₂	X	[8]	PdCu _{1±x}	III	[8, 216, 133, 405]
	Cs — Sb		(или Pd ₈ Cu _{5±x})		
Cs ₃ Sb	X	[127]	PdCu _{3±x}	I	[7, 8, 405]
	Cs — Si		(или PdCu _{5±x})		
CsSi _{1±x}	X	[8]		Cu — Pr	
CsSi _{8±x}	X	[8]	PrCu	X	[8]
	Cu — Ga		PrCu ₂	X	[8]
Cu _{3,0→3,0} Ga (β)	IV	[76]	PrCu ₄	X	[8]
Cu _{1,0→3,2} Ga (μ)	IV	[4]	PrCu ₆	X	[8]
Cu _{2,33→1,77} Ga (γ)	X	[76]		Cu — Pt	
∂-Cu ₉ Ga ₄ (δ)	IV	[4, 76]	Pt _{2,3→1,6} Cu	IX	[1]
Cu _{1,50→1,22} Cu (ε)	X	[76]	∂-PtCu	I	[1, 328]
Cu _{1,27→1,22} Ga (ε')	X	[76]	PtCu _{1,2±x}	IX	[1]
CuGa _{1,38} (φ)	IX	[4]	∂-PtCu ₃	I	[1]
	Cu — Ge			Cu — Rh	
Cu _{6,2→4,7} Ge (β)	IV	[500, 231, 363]	Rh _{3±x} Cu	I	[421]
Cu _{3,2→3,0} Ge (γ)	IX	[500, 231]	RhCu _{1±x}	I	[421]
Cu _{3,2→2,9} Ge (ε)	IV	[500, 231]	RhCu _{3±x}	I	[421]
Cu _{2,7→2,6} Ge (δ)	IX	[500, 231]		Cu — S	
	Cu — Hg		∂-Cu ₂ S	V, 6	[230]
∂-Cu ₇ Hg ₆ (γ)	VIII	[233, 133]	(халькозин, выс. t)		
	Cu — In		Cu _{2,0→1,9} S	IX	[225]
Cu _{4,3→3,2} In (β)	IV	[77]	(халькозин, низ. t)		
∂-Cu ₉ In ₄ (γ)	IV	[35, 77]	Cu _{1,9→1,6} S	V, в	[4, 7]
Cu _{2,6→1,8} In (δ)	V, а	[35, 77]	(дигенит)		
Cu _{2,2} In (ε)	X	[77]	CuS _{1±x}	VI	[2]
Cu _{2,0→1,8} In (η)	X	[77]		Cu — Sb	
∂-Cu ₂ In (η')	V, а	[35, 78]	Cu _{4,4→3,8} Sb (ε)	IV	[416, 255]
Cu _{1,49→1,44} In (φ)	V, а	[78]	Cu _{4,4→3,8} Sb (ε')	IV	[416]
	Cu — La		Cu _{4,6→2,1} Sb (β)	IX	[7]
LaCu	X	[168]	∂-Cu ₃ Sb (β')	V, в	[255, 417]
LaCu ₂	X	[168]	∂-Cu ₂ Sb (γ)	V, в	[3, 7]
LaCu ₄	II	[168, 261]			
LaCu ₈	X	[168]			

Cu — Sc				$\partial\text{-Cu}_5\text{Zn}_8$ (γ) IV [8]	
$\text{Cu}_{2,00 \rightarrow 1,74}\text{Sc}$ (α)	V, b	[4, 266]		$\text{CuZn}_{2,92 \rightarrow 3,08}$ (δ) IX [401, 8]	
$\text{Cu}_{1,98 \pm x}\text{Sc}$ (β)	IX	[266]		$\text{CuZn}_{3,0 \rightarrow 4,7}$ (ϵ) IV [8]	
$\text{CuSc}_{1, x}$	VI	[130, 265]			Cu — Zr .
Cu — Si				ZrCu_3 (β)	X [80, 236]
$\text{Cu}_{8 \rightarrow 6}\text{Si}$ (α)	I	[379, 380, 435]			Dy — S
$\text{Cu}_{6,7 \rightarrow 5,3}\text{Si}$ (β)	IV	[2]		$\text{Dy}_2\text{S}_{3 \pm x}$	VIII [297]
$\text{Cu}_{4,0 \rightarrow 4,6}\text{Si}$ (γ)	IV	[2]			Dy — Se
$\text{Cu}_{4,0 \rightarrow 4,3}\text{Si}$ (δ)	X	[2]		$\text{Dy}_2\text{Se}_{3 \pm x}$	X [293]
$\partial\text{-Cu}_{16}\text{Si}_4$ (ϵ)	VIII	[2]			Er — Se
$\text{Cu}_{3,4 \rightarrow 3,0}\text{Si}$ (η)	IX	[500, 2]		$\text{Er}_2\text{Se}_{3 \pm x}$	X [293]
Cu — Sn					Eu — S
$\text{Cu}_{6,7 \rightarrow 5,3}\text{Sn}$ (β)	IV	[8, 147 r]		$\text{EuS}_{1 \pm x}$	V, b [197]
$\text{Cu}_{6 \pm x}\text{Sn}$ (β')	X	[253 o]			Eu — Se
$\text{Cu}_{5 \pm x}\text{Sn}$ (β'')	IX	[312, 253 o]		$\text{EuSe}_{1 \pm x}$	V, b [197]
$\text{Cu}_{31}\text{Sn}_8$ (δ)	IV	[133, 147 r]			Eu — Te
$\text{Cu}_{4,0 \rightarrow 3,8}\text{Sn}$ (ζ)	IX	[2, 500, 147 r]		$\text{EuTe}_{1 \pm x}$	V, b [197]
$\text{Cu}_{5,7 \rightarrow 2,7}\text{Sn}$ (γ)	X	[8, 147 r]			Fe — Ge
Cu_3Sn (ϵ)	IV	[500, 144, 147 r]		$\partial\text{-Fe}_2\text{Ge}$	V, a [178, 215]
$\text{Cu}_{1,22}\text{Sn}$ (η')	V, a	[1, 147 r]		$\text{FeGe}_{2 \pm x}$	VI [45]
$\text{Cu}_{1,32 \rightarrow 1,22}\text{Sn}$ (η)	V, a	[1, 147 r]			Fe — Gd
Cu — Te				$\text{GdFe}_{2 \pm x}$	II [515, 504]
$\text{Cu}_{2 \pm x}\text{Te}$	VII	[183]			Fe — Ir
$\text{Cu}_{1,4}\text{Te}$	V, b	[259]		$\text{Ir}_{1 \pm x}$	X [146]
Cu — Th					Fe — Mn
Th_3Cu	VI	[520]		$\text{MnFe}_{3,4 \rightarrow 6,7}$ (ϵ)	I [2]
ThCu_2 (или Th_3Cu_6)	VI	[520, 205]			Fe — Mo
	X	[205]		$\text{MoFe}_{1 \pm x}$ (η)	IX [2, 260]
ThCu_3	X	[205]		$\partial\text{-Mo}_6\text{Fe}_7$ (ϵ)	II [3]
ThCu_6	X	[205]		$\text{MoFe}_{2 \pm x}$	II [398, 3]
Cu — Ti					Fe — N
$\text{Ti}_{2 \pm x}\text{Cu}$ (или $\text{Ti}_{3 \pm x}\text{Cu}$)	(ϵ) IX	[185, 455, 407]		$\text{Fe}_{11 \rightarrow 10,6}\text{N}$ (α'')	V, b [471, 241]
$\text{Ti}_{1,1 \rightarrow 1,0}\text{Cu}$ (γ)	IX	[407, 499]		$\partial\text{-Fe}_6\text{N}$ (γ')	V, b [1, 133, 253 л, 471]
$\partial\text{-TiCu}$ (δ)	I	[407, 499]		$\partial\text{-Fe}_3\text{N}$ (ϵ)	V, b [519, 241, 156, 133, 471]
$\partial\text{-TiCu}_3$ (β)	I	[407, 185, 499]		Fe_2N (ζ)	V, b [133, 471, 519]
$\text{TiCu}_{3,0 \rightarrow 3,8}$ (β')	I	[407]			
Cu — U					
$\partial\text{-UCu}_6$	II	[289, 354]			
Cu — Zn					
$\text{CuZn}_{0,67 \rightarrow 1,38}$ (β)	IV	[8]			
$\partial\text{-CuZn}$ (β')	IV	[8]			

	Fe — Nb				Fe — Sn
NbFe _{2±x}	II	[65]	Fe ₃ Sn (β ⁰)	I	[270, 203]
	Fe — Ni		Fe ₃ Sn ₂ (β')	IX	[270]
∂-FeNi ₃	I	[216, 8]	Fe _{1,27} Sn (γ)	V, a	[270]
	Fe — P		FeSn (β)	VIII	[270]
Fe _{3±x} P	IX	[82]	FeSn ₂	VI	[270, 45]
Fe _{2±x} P	V, 6	[2, 332]		Fe — Ta	
FeP _{1±x}	V, a	[3]	TaFe _{2±x}	II	[65]
FeP _{2±x}	VI	[3]		Fe — Te	
Fe _{1,2,6→1,0}	X	[153]	∂-FeTe	V, a	[8, 253a]
	Fe — Pd		FeTe _{2±x}	VI	[6]
FePd _{1±x}	I	[6]		Fe — Th	
∂-FePd ₃	I	[6, 438]	Th ₇ Fe ₃	X	[520]
	Fe — Pt		ThFe ₃	X	[520]
∂-FePt	III	[2, 325]	ThFe ₆	II	[520]
	Fe — Re		Th ₂ Fe ₁₇	X	[520]
Re ₂ Fe _{3±x} (ε)	X	[83]		Fe — Ti	
ReFe _{3±x} (η)	X	[83]	Ti _{2±x} Fe	IX	[185]
ReFe _{3+x} (δ)	X	[83]	TiFe _{1±x}	II	[185, 495]
	Fe — S		TiFe _{2±x}	II	[65]
∂-FeS	V, a	[8, 326]		Fe — U	
Fe ₇ S _{8±x}	IX	[524]	U ₆ Fe	VI	[289, 357, 382]
(шпротин)			UFe ₂	II	[289, 357, 382]
FeS ₂	VI	[8, 1]		Fe — V	
(шприт)			VFe _{1±x} (z)	IX	[239, 8]
FeS ₂	VI	[8, 1]		Fe — W	
(марказит)			W ₆ Fe _{7±x} (ζ)	II	[3]
	Fe — Sb		WFe _{2±x} (c)	II	[40, 3]
Fe _{1,38→1,08} Sb (ε)	V, a	[8, 326, 323]	WFe _{3±x}	IX	[2]
FeSb ₂ (ζ)	VI	[8, 323]		Fe — Zn	
	Fe — Se		FeZn _{2,1→3,4} (Γ)	IV	[86]
FeSe _{1±x} (α)	V, n	[8]	FeZn _{7,3→9,0} (δ)	X	[86]
∂-FeSe (β)	V, a	[8, 253a]	FeZn _{6,7→11,6} (δ ₁)	IX	[86, 87]
FeSe _{2±x}	VI	[6]	FeZn _{13→16} (ζ)	IX	[86, 88]
	Fe — Si			Fe — Zr	
Fe ₃ Si (θ)	V, n	[84]	ZrFe _{2±x}	II	[65]
FeSi _x (α')	X	[274]	ZrFe _{2,85}	II	[65]
Fe ₆ Si ₃ (η)	V, 6	[230]		Ga — La	
FeSi (ε)	V, n	[2, 956]	LaGa _{2±x}	VI	[61]
FeSi _{2,1→3,1} (ζ)	IX	[1, 341, 454]		Ga — Li	
			Li _{3±x} Ga	X	[218]
			LiGa _{1±x}	III	[8]

	Ga — Mg			
Mg ₃ Ga ₂	IX	[89, 90, 496]		
Mg ₂ Ga	IX	[89, 90]		
MgGa	X	[89, 90]		
MgGa ₂	X	[90]		
	Ga — N			
GaN _{1±x}	V, 6	[6]		
	Ga — Ni			
Ni _{1,78} Ga	(δ) I	[35, 467]		
Ni _{1,78→1,44} Ga	(γ) V, a	[35, 467]		
Ni _{1,44} Ga	(γ') V, a	[35, 467]		
δ-NiGa	(β) IV	[467, 35]		
Ni ₂ Ga ₃	(β') IV	[35, 467]		
NiGa _{4±x}	(ε) VI	[295, 35, 467]		
	Ga — P			
GaP _{1±x}	V, b	[8]		
	Ga — Pd			
Pd _{3±x} Ga	X	[35]		
Pd _{2±x} Ga	X	[35]		
PdGa _{1±x}	V, b	[35]		
Pd ₃ Ga _{7±x}	VI	[35, 295]		
	Ga — Pr			
Pr ₃ Ga	X	[267]		
Pr ₃ Ga ₃	X	[267]		
PrGa	X	[267]		
PrGa ₂	VI	[267]		
	Ga — Pt			
PtGa _{1±x}	V, b	[35]		
Pt ₂ Ga _{3±x}	IV	[35]		
PtGa _{2±x}	V, b	[26, 35]		
Pt ₃ Ga _{7±x}	VI	[35, 295]		
	Ga — S			
Ga ₂ S	X	[8]		
GaS	X	[8]		
	Ga — Sb			
GaSb _{1±x}	V, b	[8]		
	Ga — Se			
Ga ₂ Se	X	[8]		
GaSe	X	[8]		
Ga ₂ Se ₃	V, b	[282, 8]		
	Ga — Te			
GaTe	X	[8]		
Ga ₂ Te ₃	V, b	[282, 8]		
	Ga — Ti			
TiGa _{3±x}	I	[186]		
	Ga — Zr			
ZrGa _{3±x}	I	[186]		
	Gd — Mn			
GdMn _{2±x}	II	[515, 504]		
	Gd — N			
GdN _{1±x}	V, b	[220]		
	Gd — Ni			
GdNi _{5±x}	II	[153]		
	Gd — S			
Gd ₂ S _{3±x}	VIII	[297]		
	Ge — Ir			
IrGe	V, a	[193]		
Ir ₃ Ge _{7±x}	VI	[295]		
	Ge — K			
KGe _{1±x}	X	[219]		
KGe _{4±x}	X	[219]		
	Ge — Mg			
Mg ₂ Ge	V, b	[8]		
	Ge — Mn			
Mn _{3,25} Ge	I	[304]		
Mn ₆ Ge ₂ (выс. t)	V, a	[304]		
Mn ₆ Ge ₂ (низ. t)	V, a	[304]		
Mn _{1,85→1,60} Ge	V, a	[304]		
Mn ₃ Ge ₂	X	[304]		
	Ge — Mo			
MoGe _x	X	[152]		
	Ge — Na			
NaGe _{1±x}	X	[219]		

	Ge — Nb		Ge — W
$NbGe_{2\pm x}$	III [152]	WGe_x	X [152]
	Ge — Ni		Ge — Zr
$Ni_{3\pm x}Ge$	I [402]	$ZrGe_{2\pm x}$	VII [152]
$\beta-Ni_2Ge$	V, a [178, 275]		H — Nb
$NiGe$	V, a [295]	$Nb_{1,27\pm x}H$	IX [58]
	Ge — Os		H — Ni
$OsGe_{2\pm x}$	IX [152]	$Ni_{2\pm x}H$	V, 6 [59]
	Ge — P		H — Pd
GeP	X [166]	$Pd_{4\pm x}H$	X [92]
	Ge — Pd	$Pd_{1,6\rightarrow 1,3}H$	IX [50, 133]
$Pd_{1\pm x}Ge$	X [193]		H — Ta
$Pd_{3\pm x}Ge_2$	X [193]	$Ta_{2\pm x}H$ (β)	V, 6 [2]
Pd_2Ge	X [193]	$Ta_{1,23\rightarrow 1,13}H$ (γ)	IX [2, 58]
$PdGe$	V, a [193]		H — Th
	Ge — Pt	$ThH_{2\pm x}$	V, b [450]
$Pt_{2\pm x}Ge$	X [193]	$ThH_{3\pm x}$	D. [450]
$PtGe$	V, a [193]		H — Ti
Pt_2Ge_3	X [193]	$\beta-TiH$ (β)	V, b [59, 2]
	Ge — Rb		H — U
$RbGe_{1\pm x}$	X [219]	$UH_{3\pm x}$	VIII [464, 285]
$RbGe_{4\pm x}$	X [219]		H — Zr
	Ge — Ru	$Zr_{4\pm x}H$ (β)	V, b [2]
$RuGe_{2\pm x}$	IX [152]	$Zr_{2\pm x}H$ (γ)	V, 6 [2]
	Ge — S	$ZrH_{1\pm x}$ (δ)	V, b [2]
$GeS_{1\pm x}$	V, b [2]	$ZrH_{2\pm x}$ (ϵ)	V, b [450]
	Ge — Se		H — N
$GeSe_{1\pm x}$	IX [91]	$HfN_{1\pm x}$	X [8]
	Ge — Ta		Hg — K
$TaGe_{2\pm x}$	III [152]	KHg	X [8]
	Ge — Te	KHg_2	X [8]
$\beta-GeTe$	V, b [468, 91]	KHg_3	X [8]
	Ge — Ti	KHg_4	X [8]
$Ti_3Ge_{3\pm x}$	V, 6 [507]	KHg_8	X [8]
$TiGe_{2\pm x}$	III [152]		Hg — La
	Ge — V	$LaHg_{1\pm x}$	III [408]
$V_{3\pm x}Ge$	III [152]	$LaHg_{4\pm x}$	X [8]

	Hg — Li	
Li ₄ Hg	X	[8, 313]
Li ₃ Hg	V, b	[93, 8]
Li ₂ Hg	X	[8]
δ-LiHg	III	[8]
LiHg ₂	X	[8]
LiHg ₃	I	[93, 8]
	Hg — Mg	
Mg ₃ Hg ([187, 159]
Mg ₆ Hg ₂ (γ)	X	[159]
Mg ₂ Hg (δ)	X	[159]
Mg ₆ Hg ₃ (ε)	V, 6	[187, 159]
MgHg (ζ)	III	[2, 159]
MgHg ₂ (η)	III	[159]
	Hg — Mn	
MnHg _{2±x}	X	[8]
	Hg — Na	
Na ₃ Hg	X	[8]
Na ₆ Hg ₂	X	[8]
Na ₃ Hg ₂	X	[8]
NaHg	X	[8]
Na ₇ Hg ₈	X	[8]
NaHg ₂	X	[8]
NaHg ₄	X	[8]
	Hg — Nd	
NdHg _{1±x}	III	[408]
NdHg _{4±x}	X	[8]
	Hg — Ni	
NiHg _{3±x}	IX	[133]
	Hg — Pd	
PdHg _{1±x}	I	[526, 228]
	Hg — Pr	
PrHg _{1±x}	III	[408]
PrHg _{4±x}	X	[8]
	Hg — Pt	
Pt _{3±x} Hg (β)	X	[94]
Pt _{2±x} Hg (γ)	X	[94]
PtHg _{1±x} (δ)	X	[94]
	Hg — Rb	
Rb ₇ Hg ₈	X	[8]
Rb ₃ Hg ₄	X	[8]

RbHg ₂	X	[8]
Rb ₂ Hg ₇	X	[8]
Rb ₆ Hg ₁₂	X	[8]
Rb ₂ Hg ₉	X	[8]
RbHg ₆	X	[8]
RbHg ₉	X	[8]
	Hg — Sb	
Hg ₃ Sb _{2±x}	X	[8]
	Hg — Se	
HgSe _{1±x}	V, b	[8]
	Hg — Sn	
HgSn _{10±x}	IX	[134]
HgSn _{16→24}	IX	[134]
	Hg — Sr	
SrHg _{12±x}	X	[8]
	Hg — Te	
HgTe _{1±x}	V, b	[8]
	Hg — Tl	
Hg _{4,0→2,3} Tl (γ)	IX	[3, 4, 8, 343]
HgTl _{6→9}	IX	[3]
	Hg — U	
UHg _{2±x}	VI	[262]
UHg _{3±x}	I	[262]
UHg _{4±x}	IX	[262]
	Hg — Zn	
HgZn _{1,5→1,9} (β)	I	[8]
HgZn _{2,3→3,0} (γ)	I	[8, 133]
	In — Li	
δ-LiIn	III	[313]
	In — Mg	
Mg ₃ In _{2±x} (when $Mg_{2.3→3.1}$ In (β ₁))	IX	[89, 427]
Mg _{2±x} In (β ₂)	IX	[89, 427]
δ-MgIn	I	[89, 427]
MgIn _{3-x}	I	[89]
	In — Mn	
Mn ₃ In	IX	[381]

	In - N		In_2Te_3	V, b [268, 8]
$\text{InN}_{1\pm x}$	V, 6 [6]		InTe_3	X [8]
	In - Na			Ir - P
$\text{NaIn}_{1\pm x}$	III [8]		$\text{Ir}_{2\pm x}\text{P}$	V, b [97]
	In - Ni		$\text{IrP}_{2\pm x}$	X [160]
Ni_3In (γ)	I [35]			Ir - Pb
$\delta\text{-Ni}_2\text{In}$ (β)	V, a [35, 249]		$\text{IrPb}_{1\pm x}$	V, a [402]
$\delta'\text{-NiIn}$ (δ)	IV [35, 376]			Ir - S
NiIn (ϵ)	VIII [35, 78]		$\text{Ir}_2\text{S}_{3\pm x}$	X [5]
Ni_2In_3 (δ')	IV [35]		$\text{IrS}_{2\pm x}$	X [5]
$\text{Ni}_{10}\text{In}_{27\pm x}$ (η)	VI [376, 35]		$\text{Ir}_3\text{S}_{8\pm x}$	X [5]
	In - P			Ir - Se
$\text{InP}_{1\pm x}$	V, b [31]		$\text{IrSe}_{3\pm x}$	X [292]
	In - Pb			Ir - Si
$\text{In}_{1.7\rightarrow 1.0}\text{Pb}$	IX [96]		$\text{Ir}_{1.5\pm x}\text{Si}$	X [393]
	In - Pd		$\text{Ir}_3\text{Si}_{2\pm x}$	X [393]
$\text{Pd}_{3\pm x}\text{In}$ (β)	I [35]		$\text{IrSi}_{1\pm x}$	X [393]
$\text{Pd}_{2\pm x}\text{In}$ (γ)	X [35]		$\text{Ir}_2\text{Si}_{3\pm x}$	X [393]
$\text{PdIn}_{1\pm x}$	IV [35]		$\text{IrSi}_{3\pm x}$	X [393]
$\text{Pd}_2\text{In}_{3\pm x}$	IV [35]			Ir - Sn
$\text{PdIn}_{3\pm x}$	VI [35]		$\text{IrSn}_{1\pm x}$	V, a [195]
	In - Pt		IrSn_2	V, b [270]
$\text{Pt}_2\text{In}_{3\pm x}$	IV [35]		Ir_3Sn_7	VI [270]
$\text{PtIn}_{2\pm x}$	V, b [26]			Ir - Te
$\text{Pt}_3\text{In}_{7\pm x}$	VI [295]		$\text{IrTe}_{3\pm x}$	X [292]
	In - S			Ir - Zr
$\text{In}_{2\pm x}\text{S}$	X [8]		$\text{ZrIr}_{2\pm x}$	II [75]
	In - Sb			K - Na
InSb	V, b [8]		KNa_2	II [172, 426]
	In - Se			K - Pb
$\text{In}_{2\pm x}\text{Se}$	X [8]		$\text{K}_{2\pm x}\text{Pb}$	X [8]
$\text{InSe}_{1\pm x}$	X [8]		$\text{KPb}_{1\pm x}$	X [8]
$\text{In}_2\text{Se}_{3\pm x}$	X [8]		$\text{KPb}_{2\pm x}$	X [8]
	In - Sn		$\text{KPb}_{4\pm x}$	X [8]
$\text{In}_{3\pm x}\text{Sn}$ (β)	IX [370, 214]			K - Sb
$\text{InSn}_{4\pm x}$ (γ)	IX [370, 214]		K_3Sb	V, 6 [32, 8]
	In - Te		KSb	X [8]
In_2Te	X [8]			
InTe	X [8]			

	K - Si		La - Sn
KSi _{1±x}	X [219]	La ₂ Sn	X [168]
KSi _{8±x}	X [219]	La ₂ Sn ₃	X [168]
	K - Sn	LaSn ₃	I [3, 168]
K ₂ Sn	X [8]		La - Tl
KSn	X [8]	La ₂ Tl	X [8]
KSn ₂	X [8]	LaTl	IX [9, 8]
KSn ₄	X [8]	LaTl ₃	I [3, 8]
	K - Tl		La - Zn
KTl	III [8]	LaZn _{1±x}	III [5]
	K - Zn	LaZn _{5±x}	II [189]
KZn ₁₃	II [62, 8]	LaZn _{6→0} (δ)	X [235]
	La - Mg	LaZn _{10,0→11,6} (ε)	X [235]
La ₃ Mg	X [168, 311]		Li - Mg
LaMg	III [168, 189, 311]	LiMg _{1→3} (γ)	X [8]
LaMg ₃	II [155, 311]		Li - Pb
δ-LaMg ₃	V, n [3, 168, 311]	Li ₄ Pb 3/4	X [8]
LaMg ₅	X [168, 311]	Li ₇ Pb ₃	X [8]
	La - N	Li ₁₀ Pb ₃ (γ)	VIII [7]
LaN _{1±x}	V, n [276n]	Li ₈ Pb ₃	X [8]
	La - Ni	LiPb (β')	III [150, 383, 8]
La ₃ Ni	X [196]	LiPb (β)	X [383]
LaNi	X [196]		Li - Sb
LaNi ₂	II [196]	Li ₃ Sb (α)	V, 6 [32]
LaNi ₃	X [196]	Li ₃ Sb (β)	V, n [32]
LaNi ₄	X [196]		Li - Si
LaNi ₆	II [180, 196]	Li _{3±x} Si	X [356]
	La - P		Li - Sn
LaP _{1±x}	V, n [276 n]	Li ₄ Sn	X [8]
	La - Pb	Li ₇ Sn ₃	X [8]
La ₂ Pb	X [168]	Li ₆ Sn ₃	X [8]
LaPb	X [168]	Li ₅ Sn	X [8]
LaPb ₃	I [3, 168]	LiSn	X [8]
	La - Sb	LiSn ₂	X [8]
LaSb _{1±x}	V, n [5]		Li - Tl
	La - Se	Li ₄ Tl	X [8]
LaSe _{2±x}	X [293]	Li ₃ Tl	X [8]
	La - Si	Li ₆ Tl ₂	X [8]
LaSi _{2±x}	VI [360, 361]	Li ₂ Tl	X [8]
		LiTl	III [133, 8]
			Li - Zn
		δ-LiZn (δ'')	III [8]
		LiZn _{1.5→2.0} (δ')	X [8]

$\text{LiZn}_{1 \rightarrow 2}$	(δ)	X	[8]		
LiZn_2		X	[8]		
$\text{LiZn}_{2.5 \rightarrow 3.0}$	(γ')	X	[98, 8]		
$\text{LiZn}_{2.2 \rightarrow 3.6}$	(γ)	X	[8]		
$\text{LiZn}_3 \rightarrow 10$	(β')	I	[98, 8]		
$\text{LiZn}_3 \rightarrow 10$	(β)	X	[8]		
		Mg — Ni			
Ni_2Mg		II	[8]		
NiMg_2		VI	[314, 8]		
		Mg — Pb			
Mg_2Pb		V, b	[8, 174, 396]		
		Mg — Pr			
Pr_2Mg		X	[168]		
PrMg		III	[168, 189]		
PrMg_2		V, b	[3, 168]		
PrMg_3		X	[168]		
		Mg — Sb			
Mg_2Sb_2	(α)	V, b	[3]		
Mg_2Sb_2	(β)	X	[8]		
		Mg — Si			
Mg_2Si		V, b	[8, 439]		
		Mg — Sn			
Mg_2Sn		V, b	[8, 174, 396]		
		Mg — Sr			
SrMg		III	[189]		
SrMg_2		II	[172, 202]		
SrMg_{4+x}		X	[202]		
SrMg_6		X	[202]		
		Mg — Tl			
Mg_2Tl_2		IX	[89, 8]		
Mg_2Tl		IX	[89, 8]		
MgTl		III	[89, 8, 133]		
		Mg — Zn			
$\sigma\text{-Zn}_{11}\text{Mg}_2$	(θ)	II	[298, 21, 99]		
$\sigma\text{-Zn}_2\text{Mg}$	(η)	II	[1, 21, 475]		
Zn_3Mg_2		X	[209, 475]		
$\delta\text{-ZnMg}$	(ζ)	II	[3, 21, 475]		
$\text{ZnMg}_{2.28 \rightarrow 2.81}$	(α)	X	[21, 209, 475]		
		Mn — N			
$\alpha\text{-Mn}_4\text{N}$	(ϵ)	V, b	[133, 253a, 436]		
Mn_{1+x}N	(δ)	V, b	[133]		
$\beta\text{-Mn}_2\text{N}$	(ζ)	V, b	[133, 436]		
$\text{Mn}_3\text{N}_{2-x}$	(η)	V, b	[133, 436]		
		Mn — Nb			
$\text{NbMn}_{2 \pm x}$		II	[65]		
		Mn — Ni			
$\delta\text{-MnNi}$ ($\beta=\delta$)		III	[463, 371]		
$\delta\text{-MnNi}$ (δ')		I	[463, 371]		
$\text{MnNi}_{3 \pm x}$		I	[8, 132, 337, 338, 371]		
		Mn — P			
Mn_3P		IX	[82, 305]		
Mn_2P		V, b	[82, 305]		
Mn_3P_2		X	[305]		
MnP		V, a	[3, 82, 305]		
MnP_3		X	[100]		
		Mn — Pd			
$\text{MnPd}_{0.85 \rightarrow 1.18}$ (η)		IX	[101, 346, 437]		
$\text{MnPd}_{1.22 \rightarrow 1.86}$ (ζ)		IX	[101, 437]		
		Mn — Pt			
$\text{Mn}_{4 \pm x}\text{Pt}$		X	[136]		
$\text{MnPt}_{1 \pm x}$		X	[136]		
$\text{MnPt}_{3 \pm x}$		X	[136]		
		Mn — S			
$\text{MnS}_{2 \pm x}$		VI	[8]		
		Mn — Sb			
$\delta\text{-Mn}_2\text{Sb}$ (δ)		V, b	[102, 8]		
$\text{Mn}_{1.37 \rightarrow 1.14}\text{Sb}$ (ϵ)		V, a	[275]		
		Mn — Se			
MnSe_{2+x}		VI	[213]		
		Mn — Si			
$\text{Mn}_{3 \pm x}\text{Si}$		III	[103]		
$\text{Mn}_5\text{Si}_{3 \pm x}$		V, b	[103]		
MnSi (ϵ)		V, b	[3, 8]		
$\text{MnSi}_{2 \pm x}$ (γ)		IX	[8]		
		Mn — Sn			
$\text{Mn}_{3.4 \rightarrow 3.1}\text{Sn}$ (β')		I	[270]		
$\text{Mn}_{1.86 \rightarrow 1.80}\text{Sn}$ (γ')		V, a	[270]		
MnSn_2 (δ)		VI	[270]		
		Mn — Ta			
TaMn_{2-x}		II	[65]		

	Mn — Te		Mo — S
MnTe _{1+x}	V, a [8]	MoS _{2+x}	VII [1]
MnTe _{2+x}	VI [8]		Mo — Sc
	Mn — Th	MoSc _{2+x}	VII [143a]
ThMn ₂	II [520]		Mo — Si
Th ₆ Mn ₂₃	VIII [520]	Mo ₃ Si	III [356, 438]
ThMn ₁₂	VIII [520]	Mo ₃ Si ₂	X [498]
	Mn — Ti	MoSi _{1+x}	X [448]
Ti _{2+x} Mn	IX [185]	MoSi ₂	III [1, 498]
TiMn _{2+x}	II [65]		Mo — Te
	Mn — U	Mo _{2+x} Te	X [204]
U ₆ Mn	VI [289, 354]	Mo ₂ Te _{3+x}	X [204]
UMn ₂	II [289, 354]	MoTe _{2+x}	VII [143a]
	Mn — V		Mo — Zr
V _{3.8→1.0} Mn	X [104]	ZrMo _{2+x}	II [465]
VMn _{1+x}	IX [368, 104]		N — Nb
VMn _{1+x}	IX [104]	Nb _{2+x} N	V, 6 [210]
VMn _{3,1}	IX [368]	NbN _{1+x}	V, b [58]
	Mn — Zn		N — Nd
Mn _{1.88→1.35} Zn (β)	III [303]	NdN _{1+x}	V, b [5]
MnZn _{0.7→7.3} (ε)	IV [303]		N — Ni
MnZn _{2.4→3.0} (α)	I [432]	Ni ₃ N	V, 6 [156, 366]
MnZn _{4.4→5.9} (Γ)	IV [432]		N — Np
MnZn _{10.8→11.5} (δ)	X [432]	NpN _{1+x}	V, b [290]
MnZn _{10.8→11.5} (δ ₁)	IX [432]		N — Pr
MnZn _{17→19} (ζ)	IX [432, 192]	PrN _{1+x}	V, b [276b]
	Mn — Zr		N — Pu
ZrMn _{2+x}	II [65]		V, b [290]
	Mo — N		N — Re
Mo _{2,70→2,33} N (β)	V, b [133, 8]	ReN _{0,43-x}	V, b [518]
Mo _{2,12→1,95} N (γ)	V, b [217]		N — Sc
MoN _{1+x} (δ)	VIII [8]	ScN _{1+x}	V, b [1]
	Mo — Ni		N — Ta
MoNi	X [105]		X [107]
MoNi ₃	I [105]	Ta _{2+x} N	V, 6 [8, 107]
δ-MoNi ₄ (β)	I [106, 2536, 105]	TaN _{1+x}	
	Mo — P		
Mo _{3+x} P	IX [157]		
MoP _{1+x}	X [157]		
MoP _{2+x}	X [157]		

	N - Th		Na_2Tl	X	[110]
$\text{ThN}_{1\pm x}$	V, n	[222]	$\delta\text{-NaTl}$	III	[3, 8, 110]
$\text{Th}_3\text{N}_{4\pm x}$	X	[8]	NaTl_2	X	[110]
$\text{Th}_2\text{N}_{3\pm x}$	V, n	[290]		Na - Zn	
	N - Ti		$\text{NaZn}_{13\pm x}$	II	[6, 62, 521]
$\text{TiN}_{1\pm x}$	V, n	[59]		Nb - Ni	
	N - U		NbNi_3	I	[111, 151]
UN	V, n	[223]		Nb - P	
$\delta\text{-U}_2\text{N}_3 - \text{UN}_2$	V, n	[223]	$\text{NbP}_{1\pm x}$	X	[176]
	N - V		$\text{NbP}_{2\pm x}$	X	[176]
$\text{V}_{2.7\rightarrow 2.3}\text{N}$ (β)	V, G	[284]		Nb - S	
$\delta\text{-VN}$ (γ)	V, n	[284, 8]	$\text{Nb}_{2\rightarrow 1}\text{S}$	X	[6]
	N - W		$\text{NbS}_{1.5\rightarrow 4.0}$	X	[6]
$\text{WN}_{1\pm x}$	V, n	[217]		Nb - Si	
	N - Zr		$\text{NbSi}_{2\pm x}$	III	[352, 177]
$\text{ZrN}_{1\pm x}$	V, n	[8]		Nd - P	
	Na - P		$\text{NdP}_{1\pm x}$	V, n	[5]
Na_3P	V, G	[32]		Nd - S	
	Na - Pb		$\text{Nd}_2\text{S}_{3\pm x}$	VIII	[297]
$\delta\text{-Na}_{16}\text{Pb}_4$	VIII	[108]		Nd - Sb	
$\text{Na}_{2.6\rightarrow 2.3}\text{Pb}$ (δ)	X	[109, 8]	$\text{NdSb}_{1\pm x}$	V, n	[5]
Na_2Pb	X	[109]		Nd - Se	
$\delta\text{-NaPb}$ (γ)	VI	[516, 109, 8]	$\text{Nd}_2\text{Se}_{3\pm x}$	X	[293]
$\text{NaPb}_{1.85\rightarrow 2.01}$ (β)	I	[249, 333, 344, 109]	$\text{NdSe}_{2\pm x}$	X	[293]
	Na - Sb			Nd - Si	
Na_3Sb	V, G	[32, 8]	$\text{NdSi}_{2\pm x}$	VI	[360]
NaSb	IX	[8]		Ni - P	
	Na - Si		$\text{Ni}_{3\pm x}\text{P}$	IX	[112]
$\text{NaSi}_{1\pm x}$	X	[219]	$\text{Ni}_5\text{P}_{2\pm x}$	X	[112]
$\text{NaSi}_{2\pm x}$	X	[198]	$\text{Ni}_7\text{P}_{3\pm x}$	IX	[112]
	Na - Sn		$\text{Ni}_{2\pm x}\text{P}$	V, G	[112]
$\text{Na}_{16}\text{Sn}_4$	IX	[108]	$\text{Ni}_6\text{P}_{6\pm x}$	X	[113]
Na_2Sn	X	[8]	$\text{NiP}_{2\pm x}$	X	[113]
Na_4Sn_3	X	[8]	$\text{NiP}_{3\pm x}$	X	[113]
NaSn	X	[8]		Ni - Pd	
NaSn_2	X	[8]	$\text{PdNi}_{3\pm x}$	I	[253b]
	Na - Tl				
Na_6Tl	X	[110]			

	Ni — Pr			Ni — Ta	
Pr ₃ Ni	X	[196]	Ta ₃ Ni _{2+x}	X	[247]
PrNi	X	[196]	δ-TaNi ₃	I	[151]
PrNi ₂	II	[196]		Ni — Te	
PrNi ₃	X	[196]	δ-NiTe—NiTe ₂	V, a	[326, 67]
PrNi ₄	X	[196]		Ni — Th	
PrNi ₆	II	[196]	Th ₇ Ni ₃ (или Th ₂ Ni)	X	[520, 229]
	Ni — Pt		ThNi	X	[520, 229]
PtNi _{1±x}	X	[6, 400]	ThNi ₂ (или Th ₂ Ni ₆)	VI	[520, 229]
PtNi _{9±x}	X	[400]	ThNi ₅	II	[261, 520, 229]
	Ni — S		Th ₂ Ni ₁₇ (или ThNi ₉)	X	[520, 229]
Ni ₃ S _{2+x}	VIII	[6, 226]		Ni — Ti	
Ni ₆ S _{5+x}	IX	[226]	Ti _{2+x} Ni	IX	[388, 185, 455]
Ni ₇ S _{6+x}	X	[226]	TiNi _{1+x}	III	[388, 185]
NiS _{1+x} (β)	V, a	[2, 114, 226]	TiNi _{3+x}	I	[388, 7]
NiS _{1+x} (γ)	VII	[114, 226]		Ni — U	
Ni ₃ S ₄	V, b	[226]	U _{6+x} Ni	X	[289]
NiS _{2+x}	VI	[1, 226]	UNi _{1+x}	X	[289]
	Ni — Sb		UNi _{2+x}	II	[289]
Ni ₁₃ Sb _{4+x} (δ)	IX	[55]	UNi _{5+x}	II	[289]
Ni _{2.59→2.22} Sb (β)	IX	[55]		Ni — V	
δ-NiSb (γ)	V, a	[327, 8]	V _{1.85→1.22} Ni	IX	[368, 451]
NiSb ₂ (ε)	VI	[55]	VNi _{2+x} (δ)	IX	[525]
	Ni — Se		VNi _{3+x} (θ)	IX	[525]
NiSe _{1+x} (β)	V, a	[114]		Ni — W	
NiSe _{1+x} (γ)	VII	[114]	WNi _{1+x}	X	[374]
NiSe _{3+x}	VI	[8]	WNi _{4+x}	I	[245, 2535, 101]
	Ni — Si			Ni — Zn	
Ni ₃ Si (β ₁)	I	[115, 448, 403, 512]	δ-NiZn (β)	III	[118]
Ni ₆ Si ₂ (γ ₁)	IX	[512, 115]	δ-NiZn (β')	I	[362, 118]
Ni ₂ Si (θ)	V, a	[501, 402, 115, 512]	NiZn _{2,3→5,7} (Γ)	IV	[118, 249]
Ni ₂ Si (δ)	V, a	[501, 512]	NiZn _{3,0→3,8} (Γ ₁)	X	[118]
Ni ₃ Si ₂ (ε)	IX	[512, 115]	NiZn _{8→10} (δ)	IX	[118, 181]
NiSi (ζ)	V, a	[444, 512]		Np — P	
NiSi ₂ (ζ)	V, b	[295, 512]	Np ₃ P _{4+x}	VIII	[503]
	Ni — Sn			Np — S	
Ni ₁ Sn (β)	I	[270, 116]	Np ₂ S _{3+x}	VII	[252]
Ni ₃ Sn (β')	I	[116]		Np — Si	
Ni _{1.51→1.36} Sn (γ)	V, a	[270, 116, 249]	NpSi _{2+x}	VI	[268]
Ni _{1.60→1.35} Sn (γ')	V, a	[270]			
NiSn _{1,17+x} (θ)	X	[270]			
Ni ₃ Sn ₄ (δ)	V, a	[194, 116, 161, 270]			

	Os — P			P — Ru	
$\text{OsP}_{2\pm x}$	X	[119]	$\text{Ru}_{2\pm x}\text{P}$	X	[119]
	Os — S		$\text{RuP}_{1\pm x}$	X	[119]
$\text{OsS}_{2\pm x}$	VI	[8]	$\text{RuP}_{2\pm x}$	X	[119]
	Os — Se			P — Sn	
$\text{OsSe}_{2\pm x}$	VI	[8]	Sn_4P_3	X	[8]
	Os — Si		$\text{Sn}_3\text{P}_{4-x}$	X	[8]
$\text{Os}_2\text{Si}_{3-x}$	IX	[393]	SnP_3	X	[8]
OsSi_{2-x}	IX	[152, 393]		P — Ta	
	Os — Te		TaP_{1-x}	X	[167]
OsTe_{2-x}	VI	[8]	TaP_{2-x}	X	[167]
	Os — Ti			P — Th	
TiOs_{1-x}	III	[185]	$\text{Th}_{1.44}\text{P}$	V, b	[120]
	Os — Zr		$\text{Th}_3\text{P}_{4\pm x}$	VIII	[120]
$\text{ZrOs}_{2\pm x}$	II	[75]		P — Ti	
	P — Pb		$\text{Ti}_{2\pm x}\text{P}$	X	[480]
$\text{Pb}_3\text{P}_{2-x}$	X	[8]	$\text{TiP}_{1\pm x}$	X	[480]
	P — Pd			P — U	
$\text{Pd}_{0.7\rightarrow 1.0}\text{P} (\beta)$	X	[4]	UP_{1-x}	V, b	[162]
$\text{Pd}_{1\rightarrow 3}\text{P} (\gamma)$	X	[4]	U_3P_{4-x}	VIII	[162]
$\text{Pd}_5\text{P}_2 (\delta)$	X	[4]	UP_{2-x}	X	[162]
PdP_2	X	[4]		P — V	
	P — Pr		V_{3-x}P	X	[176]
PrP_{1-x}	V, b	[276b]	$\text{V}_{2.0\rightarrow 1.5}\text{P}$	X	[176]
	P — Pt		VP_{1-x}	X	[176]
Pt_{20}P_7	X	[3]	VP_{2-x}	X	[176]
PtP_2	VI	[3]		P — W	
	P — Re		W_{2-x}P	IX	[4]
Re_{2-x}P	X	[8]	WP_{1-x}	V, a	[157]
ReP_{1-x}	X	[8]	WP_{3-x}	X	[157]
ReP_{2-x}	X	[8]		P — Zn	
ReP_{3-x}	X	[8]	Zn_3P_2	V, b	[3]
	P — Rh			P — Zr	
Rh_{2-x}P	V, b	[97]	ZrP_{1-x}	X	[6]
$\text{Rh}_5\text{P}_{4-x}$	X	[117]	ZrP_{2-x}	X	[6]
RhP_{2-x}	X	[117]		Pb — Pd	
RhP_{3-x}	X	[117]	Pd_{3-x}Pb	I	[195]
			$\text{Pd}_3\text{Pb}_{2-x}$	V, a	[195]
			PdPb_{1-x}	IX	[195]
			PdPb_{2-x}	VI	[195]

	Pb - Pr			Pd - Si	
Pr ₂ Pb	X	[168]	Pd _{2;x} Si	X	[8, 393]
PrPb	X	[168]	PdSi	V, a	[193, 8, 393]
PrPb ₃	I	[3, 168]			
	Pb - Pt			Pd - Sn	
Pt _{2+x} Pb	I	[195]	Pd ₂ Sn	X	[195, 270]
PtPb _{1+x}	V, a	[195]	Pd _{1.78→1.38} Sn	V, a	[270, 195]
PtPb _{4+x}	VI	[454]	PdSn _{1+x}	V, a	[195]
	Pb - Rh		PdSn _{2+x}	VI	[295]
Rh _{2+x} Pb	X	[8]	PdSn _{4+x}	VI	[294]
RhPb _{2+x}	VI	[45]			
	Pb - S			Pd - Te	
PbS _{1+x}	V, n	[8]	PdTe _{1+x}	V, a	[8]
	Pb - Se		PdTe _{2;x}	V, a	[8]
PbSe _{1;x}	V, n	[8]			
	Pb - Sr			Pd - Ti	
SrPb _{3;x}	I	[3]	Ti _{2+x} Pd	IX	[185]
	Pb - Te		Ti ₂ Pd _{3+x}	X	[185]
β-PbTe	(β) V, n	[8]	TiPd _{3;x}	I	[151]
	Pb - Ti				
Ti ₄ Pb	I	[513, 453]		Pd - Zn	
	Pb - Tl		Pd _{2,3→1,9} Zn (β)	III	[506]
Tl _{3,0→1,2} Pb (γ)	IX	[8, 342, 345, 479]	Pd _{1,9} Zn (ξ)	X	[506]
	Pb - U		σ-PdZn (δ)	I	[506, 362]
UPb _{1;x}	X	[522]	PdZn _{1,4→1,6} (β ₁)	III	[506]
UPb _{3;x}	X	[522]	PdZn _{1,60→1,65} (ξ ₁)	X	[506]
	Pd - S		PdZn _{3,2→1,0} (γ ₁)	X	[506]
Pd _{1;x} S	X	[8]	PdZn _{4,0→5,7} (γ)	IV	[506]
Pd _{2;x} S	X	[8]	PdZn _{12→11} (τ)	I	[506]
PdS _{1+x}	VIII	[5]			
PdS _{2;x}	X	[4]		Pr - S	
	Pd - Sb		Pr ₂ S _{3;x}	VIII	[297]
Pd _{3;x} Sb (β)	X	[8, 424]		Pr - Sb	
Pd _{2,1→1,6} Sb (γ)	X	[8, 424]	PrSb _{1;x}	V, b	[5]
PdSb	V, a	[8, 424]		Pr - Se	
PdSb ₂	VI	[8, 424]	PrSe _{2;x}	X	[293]
	Pd - Se			Pr - Si	
PdSe _{1;x}	X	[8]	PrSi _{2;x}	VI	[360]
PdSe _{2+x}	X	[8]		Pr - Sn	
			Pr ₂ Sn	X	[168]
			Pr ₂ Sn ₃	X	[168]
			PrSn ₃	I	[3, 168]
				Pr - Tl	
			Pr ₂ Tl	X	[168]

PtI	IX	[9, 168]	$Pt_6Zn_{21\pm x}$	IV	[8]
$PtTi_3$	X	[168]	$PtZn_{8\pm x}$	X	[493]
	Pr - Zn			Pt - Zr	
$PrZn_{1\pm x}$	III	[5]	$ZrPt_{3\pm x}$	I	[151]
	Pt - S			Pu - S	
$PtS_{1\pm x}$	V, b	[2]	$PuS_{1\pm x}$	V, b	[252]
$PtS_{2\pm x}$	V, a	[8]	$\beta\text{-Pu}_3S_4$	VIII	[269]
	Pt - Sb			Pu - Si	
Pt_3Sb	X	[420]	$PuSi_{2\pm x}$	VI	[268]
$PtSb$	V, a	[8, 420]		Rb - Si	
$PtSb_2$	VI	[1, 8, 420]		X	[219]
	Pt - Se			X	[219]
$PtSe_{1\pm x}$	X	[8]	$RbSi_{1\pm x}$	Re - S	
$PtSe_{2\pm x}$	V, a	[8]	$RbSi_{8\pm x}$	X	[8]
	Pt - Si			V, a	[8]
Pt_3Si_2	X	[422]	$Re_2S_{3\pm x}$	X	[8]
$Pt_{2\pm x}Si$ (nam $Pt_3Si_{2\pm x}$)	IX	[422, 393]	$ReS_{2\pm x}$	V, a	[8]
$Pt_{1.5\rightarrow 1}Si$	X	[393]	$Re_3S_{7\pm x}$	X	[8]
$PtSi$	V, a	[193, 422]		Re - Si	
	Pt - Sn			III	[352, 177]
Pt_3Sn	I	[472, 473]	$ReSi_{2\pm x}$	Re - W	
$\beta\text{-PtSn}$	V, a	[270, 473]	$W_2Re_{3\pm x}$	X	[2]
Pt_2Sn_3	V, 6	[242, 472, 473]		Re - Zr	
$PtSn_2$	V, b	[173, 270, 473]	$ZrRe_{2\pm x}$	II	[75]
$PtSn_4$	VI	[294, 474, 473]		Rh - S	
	Pt - Te			X	[212]
$PtTe_{1\pm x}$	V, a	[133]	$Rh_3S_{8\pm x}$	X	[212]
$PtTe_{2\pm x}$	V, a	[1]	$Rh_2S_{3\pm x}$	VI	[1]
	Pt - Ti			X	[212]
$Ti_{3\pm x}Pt$	III	[452]	$Rh_2S_{6\pm x}$	Rh - Sb	
$Ti_{2\pm x}Pt$	IX	[185]		X	[193]
$Ti_2Pt_{3\pm x}$	X	[185]	$Rh_3Sb_{2\pm x}$	V, a	[193]
$TiPt_{3\pm x}$	I	[148]	$RhSb$	X	[193]
	Pt - Tl			Rh - Se	
$PtTl$	VIII	[121, 8]	$Rh_2Se_{6\pm x}$	X	[292]
	Pt - Zn			Rh - Si	
$Pt_{3\pm x}Zn$	I	[493]	$Rh_{1.5\pm x}Si$	X	[393]
$PtZn_{1\pm x}$	I	[394]	$Rh_3Si_{2\pm x}$	X	[393]
$PtZn_{2\pm x}$	VI	[493]	$RhSi_{1\pm x}$	X	[393]

	Sb - Se		Se - Y
$\alpha_2\text{Se}_3$	X [8]	$\text{Y}_2\text{Se}_{3\pm x}$	X [293]
	Sb - Sn		Se - Yb
$\alpha\text{-SnSb} (\beta)$	V, u [3]	$\text{YbSe}_{1\pm x}$	V, n [199]
	Sb - Te	$\text{Yb}_2\text{Se}_{3\pm x}$	X [293]
$2\text{Sb}_2\text{Te}_3$	V, u [2, 8]		Se - Zn
	Sb - Ti	$\text{ZnSe}_{1\pm x}$	V, u [8]
Ti_xSb	I [513, 453]		Se - Zr
$\text{TiSb}_{2\pm x}$	VI [453]	$\text{ZrSe}_{2\pm x}$	V, n [8]
	Sb - V		Si - Sm
$\text{VSb}_{2\pm x}$	VI [453]	$\text{SmSi}_{2\pm x}$	VI [360]
	Sb - Tl		Si - Sr
$\text{Tl}_x\text{Sb}_2 (\gamma)$	III [3, 8, 348]	SrSi_{1-x}	X [8]
	Sb - Zn	$\text{SrSi}_{2\pm x}$	X [8]
Zn_xSb_2	X [8]	Ta_{3-x}Si	X [404]
Zn_xSb_3	X [8]	$\text{Ta}_6\text{Si}_{2\pm x}$	X [404]
ZnSb	VIII [38, 8]	$\text{Ta}_6\text{Si}_{3\pm x}$	X [404]
	Se - Sm	$\text{TaSi}_{2\pm x}$	X [352, 177]
$\text{Sm}_2\text{Se}_{3\pm x}$	X [293]		Si - Th
	Se - Sn	$\text{ThSi}_{2\pm x}$	VI [177]
SnSe	X [8]		Si - Ti
SnSe_2	X [8]	$\text{Ti}_2\text{Si}_{3\pm x}$	V, u [507, 441]
	Se - Tl	$\text{TiSi}_{1\pm x}$	X [441]
$\alpha\text{-TiSe} - \text{TiSe}_2$	V, a [394]	$\text{TiSi}_{2\pm x}$	III [7, 441]
	Se - Tl		Si - U
Tl_xSe	X [251, 395]	U_{3-x}Si	I [268]
TlSe	VI [7, 251, 395]	$\text{U}_3\text{Si}_{2\pm x}$	VI [268]
Tl_2Se_3	X [251]	$\text{USi}_{1\pm x}$	VI [268]
	Se - U	$\text{USi}_{2\pm x} (\alpha)$	VI [268]
$\text{U}_2\text{Se}_{3\pm x}$	X [8]	$\text{USi}_{3\pm x} (\beta)$	VI [268]
$\text{USe}_{2\pm x}$	X [8]		Si - V
	Se - V	$\text{V}_{3\pm x}\text{Si}$	III [7]
$2\text{-VSe} - \text{VSe}_2$	V, a [7, 326]	$\text{V}_{2\pm x}\text{Si}$	X [8]
	Se - W	$\text{VSi}_{2\pm x}$	III [352, 177, 8]
WSe_2	VII [143a, 288]	W_3Si_2	X [517, 404]
		$\text{WSi}_{2\pm x}$	III [1, 517]

	Si - Y		Te - Ti
YSi _{2±x}	X [523]	δ-TiTe - TiTe ₂	V, a [394]
	Si - Zr		Te - Tl
Zr ₄ Si	X [527]	Tl _{2±x} Te	X [395, 251]
Zr ₂ Si	X [527]	TlTe _{1±x}	X [395, 251]
Zr ₃ Si ₂	X [527]		Te - U
Zr ₄ Si ₃	X [527]	U _{2±x} Te	X [440, 243]
Zr ₆ Si ₅	X [527]		Te - V
ZrSi	X [527]	VTe _{1±x}	V, a [394]
ZrSi ₂	VII [126, 177, 527]		Te - W
	Sn - Sr		X [440]
SrSn ₃	X [8]	W _{2±x} Te	VII [142, 143a]
SrSn ₅	X [8]	WTe _{2±x}	
	Sn - Te		Te - Yb
SnTe	V, u [8]	YbTe _{1±x}	V, u [199]
	Sn - Ti		Te - Zn
Ti _{3±x} Sn	I [513, 442]	ZnTe _{1±x}	V, u [8]
Ti ₅ Sn _{3±x}	V, 6 [507]		Te - Zr
	Sn - U	Zr _{2±x} Te	X [200]
USn _{3±x}	I [262]		Th - Zn
USn _x	X [262]	ThZn ₉	II [183]
USn _y	X [262]	ThZn _x	X [183]
	Sn - Zr		Ti - Zn
Zr ₄ Sn	X [528]	TiZn _{1±x}	III [185]
Zr ₅ Sn ₃	X [528]	TiZn _{3±x}	I [185]
ZrSn	X [528]		V - Zr
	Sr - Tl	ZrV _{2±x}	II [75]
SrTl _{1±x}	III [8]		W - Zn
	Sr - Zn	WZn _x	X [206]
SrZn _{13±x}	II [40]		W - Zr
	Te - Th	ZrW _{2±x}	II [40]
Th _{3±x} Te	X [243]	ZrZn _x	X [207]

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to index of binary intermetallic phases*

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* Adopted abbreviations: NIKK = New investigation of crystallography and crystallo-chemistry. Collected by N. S. Kurnakova, Collection of Selected reports by N. S. Kurnakov, Vol. I-II, 1938-1939.

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