Supplementary Materials for Thermodynamics of Concentrated Solid Solution Alloys

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1. Empirical thermo-physical rules

The following equations are used to calculate those empirical thermos-physical parameters presented in the main text. These parameters are ideal configurational entropy (ΔS_{ideal}^{conf}), enthalpy of mixing of the liquid phase (ΔH_{mix}^{liq}) [1], atomic size difference (δ) [1], melting point of the alloy (T_m) [2], Ω -parameter [2], valence electron concentration ($\overline{VEC}$) [3], the electronegativity difference ($\Delta\chi$) [4], the ϕ -parameter [5], the κ_1^{cr} parameter [6], and the enthalpy of formation of a hypothetical compound (ΔH_{IM}) [6]:

$$\Delta S_{ideal}^{conf} = -R\sum_{i=1}^{N} c_i \ln c_i \tag{S1}$$

$$\Delta H_{mix}^{liq} = 4\sum_{i=1, i\neq j}^{N} \Delta H_{ij}^{liq} c_i c_j \tag{S2}$$

$$\delta = 100\,\% \sqrt{\sum_{i=1}^{N} c_i \left(1 - r_i / \sum_{j=1}^{N} c_j r_j\right)^2} \tag{S3}$$

$$\overline{T_m} = \sum_i c_i T_m^i \tag{S4}$$

$$\Omega = \frac{\overline{T_m}\Delta S_{ideal}^{conf}}{\left|\Delta H_{mix}^{liq}\right|} \tag{S5}$$

$$\overline{VEC} = \sum_i c_i VEC^i \tag{S6}$$

$$\Delta\chi = \sqrt{\sum_{i=1}^{N} c_i \left(\chi_i - \sum_{j=1}^{N} c_j \chi_j\right)^2} \tag{S7}$$

$$\phi = \frac{k_B \Delta S_{ideal}^{conf} - |\Delta H_{mix}^{liq}| / \overline{T_m}}{|S_E|} \tag{S8}$$

$$\eta = \frac{T_{ann} \Delta S_{ideal}^{conf}}{|\Delta H_{ij}^{IM}|^{\max}} \tag{S9}$$

$$\kappa_1^{cr} = 1 + \frac{T_{ann} \Delta S_{ideal}^{conf}}{\left|\Delta H_{mix}^{liq}\right|} (1 - \kappa_2) \tag{S10}$$

$$\Delta H_{IM} = \sum_{i \neq j} 4 H_{ij}^{IM} c_i c_j \tag{S11}$$

$$E_2 / E_0 = \sum_{j \geq i}^{N} \frac{c_i c_j \left| r_i + r_j - 2\bar{r} \right|^2}{4(\bar{r})^2} \text{ where } \bar{r} = \sum_i^N c_i r_i \tag{S12}$$

$$\rho_{mix} = \frac{\sum_{i=1}^{N} c_i W_i}{\sum_{i=1}^{N} c_i W_i / \rho_i} \tag{S13}$$

where the individual items involved are defined as:

c_i (and c_j) are the atomic percentage of the i^{th} (and j^{th}) element.

r_i (and r_j) are the atomic radius of the i^{th} (and j^{th}) element.

χ_i (and χ_j) are the Pauling electronegativity of the i^{th} (and j^{th}) element.

T_m^i is the melting point of the i^{th} element.

R is the gas constant (8.314 $J \cdot K^{-1} \cdot mol^{-1}$); k_B is the Boltzmann constant.

VEC^i is the valence electron concentration of the i^{th} element.

S_E is the excessive entropy of mixing that is modeled as a function of atomic packing and atom size, and can be calculated following the procedure detailed in Ref. [5].

ΔH_{ij}^{liq} is the enthalpy of mixing of equimolar *i-j* binary liquid alloy, which is taken from Ref. [7-9].

H_{ij}^{IM} stands for the enthalpy of formation of the most stable compound of the *i-j* binary system, and can be found from Ref. [10].

E_2 / E_0 refers to the intrinsic strain energy [11].

W_i, and ρ_i are the atomic weight and density of each element *i* respectively.

Table S1. Calculated empirical parameters for various alloys for which the microstructure are experimentally studied. The alloys are listed in sequence of FCC solid solution, BCC solid solution, HCP solid solution, multi-phase state, and amorphous state.

Alloy	ρ	ΔH_{mix}	ΔS_{mix}	T_m	Ω	δ [%]	$\Delta\chi$	VEC	ϕ	RMS [%]	ΔH_{Immix} /ΔH_{mix}	k_{cr}	η	E_2/E_0 [x10^4]
FCC														
Ag1Au1 [12]	14.88	-6	5.76	1286.13	1.24	0.35	0.31	11	314.63	0.35	1.37	1.27	0.50	0.06
Co1Fe1 [12]	8.37	-1	5.76	1789.5	10.31	0.79	0.03	8.5	283.71	0.79	5.79	3.27	0.98	0.31
Co1Ni1 [12]	8.9	0	5.76	1748	200**	0	0.02	9.5	5.2E+14	0	inf	inf	2.73	0.00
Cu1Ni1 [12]	8.91	4	5.76	1542.88	2.22	1.19	0.01	10.5	77.44	1.19	-0.145	1.49	8.45	0.70
Fe1Ni1 [12]	8.37	-2	5.76	1769.5	5.1	0.79	0.04	9	252.55	0.79	4.68	2.12	0.60	0.31
Co1Cr1Ni1 [13]	8.28	-4.89	9.13	1892	3.54	1.12	0.11	8.33	177.73	1.12	0.403	1.78	3.28	0.52
Co1Fe1Ni1 [13]	8.54	-1.33	9.13	1769	12.12	0.75	0.03	9	509.62	0.75	5.72	3.67	0.95	0.23
Cr1Fe1Ni1 [13]	7.94	-4.44	9.13	1906.33	3.92	0.99	0.10	8	241.5	0.99	1.3	1.86	1.02	0.40
Co1Cr1Fe1Ni1 [14]	8.17	-3.75	11.53	1871.75	5.75	1.03	0.10	8.25	308.49	1.03	1.36	2.27	1.27	0.40
Co1Cr1Mn1Ni1 [15]	8.06	-5.5	11.53	1798.75	3.77	0.97	0.15	8	306.34	0.97	1.27	1.83	1.03	0.35
Co1Fe1Mn1Ni1 [15, 16]	8.26	-4	11.53	1706.5	4.92	0.66	0.14	8.5	723.72	0.66	1.83	2.08	0.98	0.16
Co1Fe1Ni1Pd1 [17]	9.6	-2	11.53	1783.76	10.28	4.2	0.14	9.25	19.88	4.17	3.74	3.26	1.01	6.60
Al0.25Co1Cr1Fe1Ni1 [18]	7.72	-6.75	12.71	1816.56	3.42	3.25	0.11	7.94	27.59	3.21	2.1	1.75	0.19	3.09
Al0.3Co1Cr1Fe1Ni1 [19, 20]	7.64	-7.27	12.83	1806.29	3.19	3.49	0.11	7.88	23.48	3.45	2.17	1.7	0.20	3.61
Al0.375Co1Cr1Fe1Ni1 [18]	7.52	-7.99	12.97	1791.33	2.91	3.8	0.11	7.8	19.2	3.75	2.25	1.64	0.20	4.38
Co1.5Cr0.5Fe1Mn0.5Ni1 [20]	8.29	-3.51	12.66	1786.78	6.45	0.87	0.12	8.44	479.48	0.87	1.79	2.42	1.12	0.27
Co1Cr0.75Fe1Mn0.75Ni1 [20]	8.11	-4.07	13.3	1795.83	5.86	0.91	0.13	8.17	455.09	0.91	1.68	2.29	1.18	0.29
Co1Cr1.25Fe1Mn0.25Ni1 [20]	8.07	-4.07	12.63	1869.28	5.8	1.02	0.12	8.06	343.4	1.02	1.33	2.27	1.17	0.39
Co1Cr1Fe0.5Mn0.5Ni1.5 [20]	8.2	-4.84	12.66	1823.33	4.77	0.99	0.13	8.33	349.35	0.99	1.29	2.05	1.14	0.36
Co1Cr1Fe1Mn1Ni1 [21]	8.03	-4.16	13.38	1801.2	5.79	0.92	0.14	8	444.35	0.92	1.66	2.27	1.19	0.30
Co1Cr1Fe1Mo0.1Ni1 [22]	8.24	-3.9	12.2	1896.73	5.93	1.96	0.11	8.2	87.05	1.94	1.59	2.3	0.27	1.13
Co1Cr1Fe1Mo0.2Ni1 [22]	8.31	-4.04	12.57	1920.52	5.98	2.51	0.12	8.14	54.36	2.49	1.79	2.32	0.28	1.85
Co1Cr1Fe1Ni1Pd1 [23]	9.11	-5.6	13.38	1863.01	4.45	3.76	0.18	8.6	24.55	3.74	1.17	1.98	1.23	4.96
Co1Cr1Fe1Ni1Pd2 [23]	9.68	-6.11	12.98	1857.18	3.94	4.33	0.20	8.83	17.56	4.32	1.12	1.87	1.18	7.26
BCC														

Mo1Nb1 [12]	9.36	-6	5.76	2823	2.71	2.44	0.28	5.5	21.04	2.44	2.14	1.6	0.70	2.97
Mo1Ta1 [12]	13.71	-5	5.76	3093	3.57	2.44	0.33	5.5	23.98	2.44	3.72	1.78	0.53	2.97
Mo1Ti1 [12]	7.21	-4	5.76	2418.5	3.48	2.1	0.31	5	32.1	2.1	4.03	1.77	0.48	2.20
Mo1V1 [12]	8.31	0	5.76	2539.5	200**	1.82	0.27	5.5	59.92	1.82	inf	inf	0.66	1.65
Mo1W1 [12]	14.82	0	5.76	3295.5	200**	0.36	0.10	6	1562.29	0.36	inf	inf	13.53	0.06
Nb1Ta1 [12]	12.61	0	5.76	3020	200**	0	0.05	5	1.56E+15	0	inf	inf	9.92	0.00
Nb1Ti1 [12]	6.56	2	5.76	2345.5	6.76	0.34	0.03	4.5	1447.22	0.34	0.531	2.49	7.00	0.06
Nb1W1 [12]	13.57	-8	5.76	3222.5	2.32	2.08	0.38	5.5	25.99	2.08	0.917	1.51	1.39	2.17
V1W1 [12]	13.13	-1	5.76	2939	16.94	2.17	0.37	5.5	39.46	2.17	9.36	4.73	1.00	2.36
Al1Nb1Ti1V1 [24]	5.5	-16.25	11.53	1951.87	1.38	3.3	0.03	4.25	10.3	3.32	1.49	1.3	0.30	4.08
Hf1Nb1Ta1Zr1	11.06	3.5	11.53	2668.5	8.79	3.95	0.12	4.5	22.6	3.95	0.669	2.93	3.58	5.85
Hf1Nb1Ti1Zr1 [25]	8.4	2.5	11.53	2331.25	10.75	4.12	0.13	4.25	21.22	4.13	0.453	3.36	6.38	6.38
Mo1Nb1Ta1V1 [26]	10.68	-3.25	11.53	2779.75	9.86	3.56	0.26	5.25	28.35	3.58	4.76	3.17	0.95	4.76
Mo1Nb1Ta1W1 [27, 28]	13.64	-6.5	11.53	3157.75	5.6	2.27	0.36	5.5	62.99	2.28	1.98	2.23	1.08	1.94
Mo25.6Nb22.7Ta24.4W27.3 [27, 28]	13.85	-6.49	11.51	3177.12	5.63	2.27	0.37	5.53	63.19	2.27	1.97	2.24	1.08	1.93
Nb1Ta1Ti1V1 [29]	9.16	-0.25	11.53	2541	117.15	3.53	0.05	4.75	32.48	3.56	10.52	26.77	1.37	4.66
Nb1Ta1V1W1 [29]	12.85	-4.5	11.53	2979.5	7.63	3.49	0.34	5.25	28.63	3.51	2.55	2.68	1.60	4.57
Nb1Ti1V1Zr1 [30]	6.46	-0.25	11.53	2250.5	103.76	6.03	0.12	4.5	10.87	6.05	-6.08	23.83	2.64	13.62
Al1Cr1Mo1Ti1W1 [31]	8.69	-10.08	13.38	2329.09	3.09	4.41	0.33	5	16.59	4.46	2.23	1.68	0.42	6.80
Al1Cr0.5Nb1Ti1V1 [32]	5.63	-15.41	13.15	1977.22	1.69	4.55	0.04	4.44	9.16	4.59	1.64	1.37	0.35	6.94
Al1Nb1Ta1Ti1V1 [33]	7.89	-13.44	13.38	2219.49	2.21	3.16	0.05	4.4	25.78	3.19	1.64	1.49	0.40	3.50
Al1Nb1.5Ta0.5Ti1.5Zr0.5 [34]	6.85	-15.12	12.51	2135.79	1.77	3.07	0.08	4.2	19.17	3.04	1.45	1.39	0.28	2.92
Hf1Mo1Nb1Ti1Zr1 [35, 36]	8.7	-1.6	13.38	2444.2	20.44	5.06	0.31	4.6	17.17	5.07	5.42	5.5	1.09	8.96
Hf1Nb1Ta1Ti1Zr1 [37]	9.9	2.72	13.38	2523	12.41	4.01	0.12	4.4	26.09	4.01	0.868	3.73	3.93	5.64
Hf1Nb1Ti1V1Zr1 [10]	8.06	0.16	13.38	2301.6	192.49	6.08	0.14	4.4	12.67	6.12	5.89	43.35	3.14	12.92
Mo1Nb1Re1Ta1W1 [38]	14.96	-13.92	13.38	3218	3.09	2.61	0.33	5.8	45.65	2.61	1.06	1.68	1.09	2.38
Mo1Nb1Ta1Ti1V1 [38]	9.37	-2.56	13.38	2612	13.65	3.34	0.24	5	38.89	3.36	4.4	4	1.03	3.90
Mo1Nb1Ta1V1W1 [27, 28]	12.36	-4.64	13.38	2962.8	8.54	3.21	0.34	5.4	39.63	3.22	3.11	2.88	1.17	3.61
Mo21.7Nb20.6Ta15.6V21W21.1 [27, 28]	12.11	-4.54	13.33	2946.25	8.64	3.18	0.34	5.43	40.19	3.19	3.12	2.9	1.16	3.53
Mo1Nb1Ti1V1Zr1 [39]	7.13	-2.72	13.38	2379.6	11.71	5.77	0.28	4.8	12.53	5.77	2.85	3.58	1.09	11.66

Nb1Re1Ta1Ti1V1 [38]	11.28	-14.24	13.38	2724.6	2.56	3.56	0.14	5.2	22.37	3.58	0.948	1.56	0.92	4.45
Nb1Ta1Ti1V1W1 [29]	11.08	-3.68	13.38	2771.8	10.08	3.26	0.32	5	39.81	3.28	2.01	3.22	1.73	3.71
Al0.4Hf0.6Nb1Ta1Ti1Zr1 [6]	9.09	-6.33	14.5	2397.2	5.49	4.11	0.12	4.32	23.83	4.1	1.46	2.21	0.37	5.68
Al0.75Hf1Nb1Ta1Ti1Zr1 [40]	9.1	-11.55	14.86	2315.67	2.98	4.23	0.12	4.22	18.76	4.23	1.38	1.66	0.36	5.97
Al0.3Nb1Ta0.8Ti1.4V0.2Zr1.3 [34]	7.71	-4.86	13.46	2316.49	6.41	4.5	0.11	4.34	19.1	4.5	1.37	2.41	0.33	7.17
Cr1Mo1Nb1Ta1V1W1 [41]	11.68	-4.89	14.9	2832.33	8.63	4.78	0.32	5.5	20.25	4.81	2.48	2.9	1.25	7.61
Hf1Nb1Ta1Ti1V1Zr1[42]	9.43	0.778	14.9	2466.33	47.24	5.59	0.13	4.5	16.3	5.62	0.62	11.39	1.72	10.40
Mo1Nb1Re1Ta1V1W1 [38]	13.68	-11.44	14.9	3045.5	3.96	3.13	0.31	5.67	39.1	3.13	1.41	1.87	1.14	3.26
Mo1Nb1Ta1Ti1V1W1 [43]	10.96	-4.22	14.9	2792.5	9.85	3.1	0.33	5.17	48.47	3.11	2.81	3.17	1.23	3.20
Cr1Mo1Nb1Re1Ta1V1W1 [44]	12.95	-9.96	16.18	2921.86	4.75	4.45	0.30	5.71	22.53	4.48	1.34	2.04	1.19	6.37
Mo1Nb1Re1Ta1Ti1V1W1 [38]	12.26	-11.18	16.18	2887.71	4.18	3.1	0.31	5.43	44.14	3.11	1.31	1.92	1.18	3.10
HCP														
Co1Os1 [12]	16.57	0	5.76	2537	200**	3.85	0.16	8.5	13.45	3.85	inf	inf	2.45	7.40
Co1Re1 [12]	15.84	2	5.76	2613.5	7.53	4.94	0.01	8	7.09	4.96	-3.47	2.66	1.19	12.22
Co1Ru1 [12]	10.82	-1	5.76	2187.5	12.61	3.47	0.16	8.5	15.15	3.48	-5.02	3.77	1.38	6.04
Os1Re1 [12]	21.79	-1	5.76	3382.5	19.49	1.1	0.15	7.5	155.5	1.1	8.59	5.29	1.25	0.60
Os1Ru1 [12]	17.57	0	5.76	2956.5	200**	0.37	0.00	8	1431.71	0.37	-inf	inf	6.07	0.07
Re1Ru1 [12]	16.87	-1	5.76	3033	17.48	1.47	0.15	7.5	86.32	1.47	8.39	4.85	1.15	1.08
Re1Tc1 [12]	16.35	0	5.76	2944.5	200**	0.73	0.00	7	371.41	0.73	-inf	inf	21.82	0.27
Rh1Ru1 [12]	12.41	1	5.76	2422	13.96	0.37	0.04	8.5	1329.13	0.37	-0.772	4.07	9.95	0.07
Co1Fe1Re1Ru1 [45]	13.08	-1.5	11.53	2411.25	18.53	4	0.15	8	23.41	4.01	2.43	5.08	1.82	6.01
Mo1Pd1Rh1Ru1 [46]	11.74	-8.75	11.53	2392.01	3.15	1.74	0.04	8.25	88.73	1.74	0.907	1.69	0.63	1.14
Dy1Gd1Ho1Tb1Y1 [47]	7.56	0	13.38	1685.6	200**	0.76	0.01	3	794.01	0.76	N/A	inf	inf	0.20
Dy1Gd1Lu1Tb1Tm1 [47]	8.74	0	13.38	1727.6	200**	1.37	0.03	3	245.74	1.37	N/A	inf	inf	0.66
Dy1Gd1Lu1Tb1Y1 [48]	7.74	0	13.38	1723.8	200**	1.45	0.03	3	219.95	1.45	N/A	inf	inf	0.74
Gd1Ho1La1Tb1Y1 [49]	7.06	0	13.38	1588.2	200**	2.15	0.05	3	98.32	2.14	N/A	inf	40.38	1.61
multi-phase														
Al1Cu1Ni1 [50]	6.29	-8.44	9.13	1339.75	1.45	5.97	0.14	8	2.71	5.95	4.61	1.32	0.10	14.83
Al1Co1Cu1Ni1 [50]	6.86	-8	11.53	1446.81	2.08	5.73	0.13	8.25	6.12	5.7	4.53	1.46	0.14	12.31
Co1Cr2Fe1Ni1 [51]	7.96	-4.32	11.08	1933.4	4.96	1.07	0.11	7.8	264.86	1.07	0.872	2.09	1.26	0.45

Cr1Cu1Fe1Ni2 [52]	8.33	2.24	11.08	1760.95	8.71	1.07	0.10	9	293.7	1.07	-0.696	2.92	1.03	0.47
Cr1Fe1.5Mn1Ni0.5 [20]	7.7	-2.12	10.98	1819.88	9.41	0.76	0.13	7.5	578.33	0.76	2.88	3.07	0.99	0.20
Cr1Nb1Ti1Zr1 [53]	6.64	-5	11.53	2249.75	5.19	7.84	0.12	4.75	5.39	7.94	2.47	2.14	0.40	23.05
Nb1Ti1V2Zr1 [53]	6.4	-1.28	11.08	2237	19.36	6.41	0.11	4.6	8.76	6.41	-0.844	5.26	2.52	16.13
Al1Co1Cr1Cu0.5Ni1 [54]	6.71	-10.17	13.15	1619.63	2.09	5.44	0.13	7.44	7.75	5.4	2.86	1.46	0.18	10.67
Al1Co1Cr1Cu1Ni1 [50]	6.92	-6.56	13.38	1593.45	3.25	5.19	0.13	7.8	11.45	5.15	3.67	1.72	0.18	9.42
Al0.3Co1Cr2Fe1Ni1 [20]	7.54	-6.92	12.26	1876.8	3.32	3.15	0.11	7.53	28.16	3.11	1.65	1.73	0.19	2.86
Al0.5Co1Cr1Fe1Ni1 [55]	7.33	-9.09	13.15	1767.5	2.56	4.22	0.11	7.67	14.71	4.17	2.34	1.56	0.20	5.59
Al0.75Co1Cr1Fe1Ni1 [55]	7	-10.9	13.33	1723.6	2.11	4.83	0.12	7.42	9.91	4.78	2.46	1.46	0.19	7.78
Al0.875Co1Cr1Fe1Ni1 [55]	6.86	-11.66	13.37	1703.34	1.95	5.06	0.12	7.31	8.45	5.01	2.5	1.43	0.19	8.75
Al1.17Co1Cr1Fe1Ni1 [56]	6.54	-13.1	13.36	1659.41	1.69	5.46	0.12	7.06	6.12	5.42	2.57	1.37	0.19	10.71
Al1.25Co1Cr1Fe1Ni1 [55]	6.47	-13.42	13.35	1648.35	1.64	5.55	0.12	7	5.66	5.51	2.58	1.36	0.19	11.17
Al1.5Co1Cr1Fe1Ni1 [55]	6.25	-14.28	13.25	1615.86	1.5	5.76	0.13	6.82	4.47	5.74	2.62	1.33	0.18	12.41
Al1Co1Cr1Fe1Ni1 [57]	6.72	-12.32	13.38	1684.09	1.83	5.25	0.12	7.2	7.32	5.21	2.54	1.4	0.19	9.64
Al2.5Co1Cr1Fe1Ni1 [58]	5.57	-16.09	12.63	1510.87	1.19	6.19	0.13	6.23	1.77	6.19	2.69	1.26	0.16	15.20
Al2Co1Cr1Fe1Ni1 [55]	5.87	-15.44	12.98	1558.99	1.31	6.04	0.13	6.5	2.86	6.03	2.66	1.29	0.17	14.17
Al3Co1Cr1Fe1Ni1 [58]	5.32	-16.41	12.26	1469.63	1.1	6.26	0.13	6	0.968	6.27	2.71	1.24	0.15	15.73
Al1Co1Cu1Fe1Ni1 [59]	7.06	-5.28	13.38	1519.65	3.85	5.25	0.11	8.2	11.96	5.21	5.74	1.85	0.17	9.64
Al1Co1Fe1Mn1Ni1 [60]	6.78	-13.92	13.38	1551.89	1.49	5.37	0.15	7.4	5.07	5.33	2.5	1.33	0.18	10.10
Al1Co1Fe1Mo0.5Ni1 [61]	7.11	-12.74	13.15	1708.55	1.76	5.93	0.16	7.33	5.48	5.92	3.37	1.39	0.19	12.43
Al0.25Cr1Cu1Fe1Ni2 [2]	7.95	-0.363	12.14	1721.55	57.61	2.93	0.11	8.71	45.11	2.89	24.02	13.67	0.18	2.58
Al0.5Cr1Cu1Fe1Ni2 [2]	7.62	-2.51	12.6	1685.73	8.46	3.82	0.11	8.45	24.92	3.77	5.81	2.86	0.18	4.60
Al0.8Cr1Cu1Fe1Ni2 [62]	7.27	-4.61	12.88	1646.82	4.6	4.5	0.12	8.17	16.42	4.45	4.4	2.01	0.18	6.78
Al1.3Cr1Cu1Fe1Ni2 [62]	6.79	-7.24	13.02	1590.2	2.86	5.19	0.13	7.76	10.47	5.15	3.78	1.63	0.17	9.73
Al1.5Cr1Cu1Fe1Ni2 [62]	6.63	-8.05	13.01	1570	2.54	5.38	0.13	7.62	9.12	5.34	3.66	1.56	0.17	10.69
Al1Cr1Cu1Fe1Ni2 [62]	7.07	-5.78	12.98	1623.04	3.65	4.82	0.12	8	13.4	4.78	4.06	1.8	0.18	8.06
Al2Cr1Cu1Fe1Ni2 [2]	6.27	-9.63	12.89	1524.53	2.04	5.71	0.13	7.29	6.8	5.69	3.49	1.45	0.17	12.57
Al3Cr1Cu1Fe1Ni2 [62]	5.72	-11.5	12.42	1450.65	1.57	6.04	0.14	6.75	4.22	6.03	3.33	1.34	0.15	14.71
Al0.3Cr1Fe1.5Mn1Ni0.5 [63]	7.23	-5.51	12.32	1758.03	3.93	3.32	0.13	7.19	27.1	3.27	2.45	1.87	0.18	3.22
Al0.5Cr1Fe1.5Mn1Ni0.5 [63]	6.96	-7.26	12.66	1721.39	3	4.04	0.13	7	16.96	3.99	2.38	1.66	0.18	5.08

Al0.8Cr1Fe1.5Mn1Ni0.5 [20]	6.61	-9.32	12.9	1672.14	2.31	4.73	0.13	6.75	10.82	4.68	2.34	1.51	0.18	7.53
Al1.5Cr1Fe1.5Mn1Ni0.5 [20]	5.98	-12.33	12.86	1578.13	1.65	5.55	0.12	6.27	5.5	5.52	2.29	1.36	0.17	11.55
Al1.5Cr1Fe1Mn1Ti1 [64]	5.3	-17.98	13.25	1609.31	1.19	6.41	0.10	5.36	1.75	6.42	2.13	1.26	0.28	14.47
Al1Cr1Fe1Mn1Ti0.25 [64]	5.87	-12.07	12.71	1630.29	1.72	5.78	0.11	5.88	5.35	5.75	2.24	1.38	0.28	11.69
Al2Cr1Fe1Mn1Ti0.25 [64]	5.15	-14.8	12.14	1497.56	1.23	6.07	0.10	5.33	2.11	6.07	2.04	1.27	0.242	14.072
Al3Cr1Fe1Mn1Ti025 [64]	4.7	-15.31	11.31	1407.31	1.04	6.02	0.09	4.96	0.418	6.04	1.97	1.23	0.212	14.19
Al4Cr1Fe1Mn1Ti0.25 [64]	4.39	-14.99	10.51	1341.95	0.941	5.86	0.08	4.69	-0.68	5.91	1.93	1.21	0.188	13.48
Al2Cr1Fe1Mn1Ti1 [64]	5.06	-19	12.98	1552.99	1.06	6.33	0.10	5.17	0.643	6.36	2.03	1.23	0.27	14.21
Al0.3Cr1Fe1Ni1V1 [65]	6.98	-11.83	12.83	1902.8	2.06	3.96	0.12	6.95	14.15	3.94	1.92	1.45	0.21	5.15
Al0.5Cr1Fe1Ni1V1 [65]	6.73	-13.14	13.15	1859.72	1.86	4.39	0.12	6.78	10.63	4.36	2.01	1.41	0.21	6.36
Al1Cr1Mo1Nb1Ti1 [66]	6.57	-13.6	13.38	2140.09	2.11	4.87	0.23	4.8	10.6	4.93	1.92	1.46	0.38	8.29
Al1Cr1Mo1Si1Ti1 [67]	5.09	-34.08	13.38	1927.49	0.757	8.01	0.23	4.6	-2.43	8.15	1.29	1.17	0.19	22.45
Al1Cr1.5Nb1Ti1V1 [68]	5.85	-13.75	13.25	2014.09	1.94	5.55	0.04	4.73	7.33	5.59	1.83	1.43	0.36	11.24
Al1Cr1Nb1Ti1V1 [68]	5.75	-14.56	13.38	1997.49	1.84	5.19	0.04	4.6	8	5.23	1.75	1.4	0.36	9.41
Al1Cu0.5Li0.5Mg1Sn0.2 [69]	2.96	-3.65	12.31	894.75	3.02	7.42	0.31	3.69	5.37	7.54	4.48	1.66	0.15	19.87
Al1Cu0.2Li0.5Mg1Zn0.5 [69]	2.75	-3.3	12.31	844.13	3.15	6.51	0.26	4.28	6.96	6.56	N/A	1.69	0.11	15.21
Al80Cu5Li5Mg5Zn5 [69]	2.91	-1.14	6.47	918.13	5.21	3.85	0.17	3.7	12.05	3.85	N/A	2.15	0.07	4.09
Al1Fe1Mg1Ti1Zn1 [70]	4.33	-6.4	13.38	1260.23	2.63	7.47	0.17	5.8	5.19	7.51	4.9	1.58	0.19	19.51
Al20Li20Mg10Sc20Ti30 [71]	2.67	-0.4	12.95	1314.83	42.56	5.2	0.23	2.8	15.97	5.19	39.31	10.36	0.22	9.50
Al1Li0.5Mg1Sn0.2Zn0.5 [65]	2.9	-3.89	12.31	790.83	2.5	5.49	0.27	3.84	8.5	5.5	N/A	1.55	0.11	11.48
Al1Li1Mg1Sn1Zn1 [69]	3.89	-6.08	13.38	701.58	1.54	5.16	0.33	4.4	6.17	5.18	N/A	1.34	0.10	9.32
Al80Li5Mg5Sn5Zn5 [69]	3.05	-0.53	6.47	875.5	10.68	3.36	0.17	3.35	17.19	3.33	N/A	3.35	0.06	3.52
Al0.5Nb1Ti1V1Zr1 [72]	6.07	-10.86	13.15	2104.16	2.55	5.76	0.11	4.33	8.26	5.77	1.24	1.56	0.29	11.96
Al1.5Nb1Ti1V1Zr1 [72]	5.5	-21.55	13.25	1891.31	1.16	5.32	0.11	4.09	2.23	5.32	1.33	1.26	0.27	9.70
Al1Nb1Ti1V1Zr1 [72]	5.76	-17.44	13.38	1987.09	1.52	5.53	0.11	4.2	5.15	5.53	1.3	1.34	0.28	10.70
Al1Ti1V1Y1Zr1 [73]	4.87	-14.88	13.38	1796.89	1.62	10.35	0.16	3.8	1.63	10.4	1.46	1.36	0.25	37.50
Co1Cr1Cu1Fe1Mn1 [74]	8.04	4.16	13.38	1727.15	5.56	0.92	0.14	8.2	446.36	0.92	0.271	2.22	1.20	0.30
Co1Cr1Cu0.5Fe1Ni1 [75]	8.26	0.494	13.15	1814.64	48.31	1.06	0.09	8.56	392.23	1.06	-3.88	11.63	1.26	0.40
Co1Cr1Cu1Fe1Ni1 [75]	8.33	3.2	13.38	1768.95	7.4	1.07	0.09	8.8	346.67	1.07	0.0482	2.63	1.25	0.40
Co1Cr1Fe1Hf1Ni1 [51]	9.85	-19.52	13.38	1998.6	1.37	9.62	0.23	7.4	1.28	9.52	1.48	1.3	0.28	32.37

Co0.5Cr1Fe1Mn1.5Ni1 [20]	7.89	-4.04	12.95	1776.3	5.69	0.87	0.15	7.8	482.39	0.87	1.95	2.25	1.14	0.26
Co1Cr1Fe1Mo0.3Ni1 [76]	8.37	-4.15	12.83	1943.21	6	2.92	0.13	8.09	41.07	2.89	1.96	2.32	0.29	2.56
Co1Cr1Fe1Mo1Ni1 [51, 76]	8.71	-4.64	13.38	2076.6	5.99	4.36	0.16	7.8	19.61	4.33	2.68	2.32	0.33	6.65
Co1Cr1Fe1Nb1Ni1 [51]	8.29	-14.88	13.38	2047.4	1.84	6.43	0.12	7.6	4.89	6.37	3.38	1.41	0.06	14.46
Co1Cr1Fe1Ni1Ta1 [51]	10.57	-14.4	13.38	2155.4	2	6.43	0.15	7.6	5.36	6.37	5.15	1.44	0.05	14.46
Co1.5Cr1Fe1Ni1.5Ti0.5 [77]	7.8	-10.74	12.86	1855.55	2.22	4.6	0.12	8.09	10.8	4.53	1.59	1.49	0.31	6.49
Co1.5Cr1Fe1Ni1.5Ti1 [78]	7.41	-15.61	13.21	1862.67	1.58	5.83	0.14	7.75	4.66	5.77	1.61	1.35	0.32	11.57
Co1Cr1Fe1Ni1Ti0.3 [76]	7.79	-8.89	12.83	1876.58	2.71	4.06	0.12	7.95	15.76	4	1.63	1.6	0.32	4.87
Co1Cr1Fe1Ni1Ti0.5 [79]	7.58	-11.56	13.15	1879.44	2.14	4.93	0.13	7.78	9.36	4.86	1.68	1.47	0.32	7.61
Co1Cr1Fe1Ni1Ti1 [51, 80]	7.15	-16.32	13.38	1885.6	1.55	6.13	0.14	7.4	4.16	6.08	1.72	1.34	0.33	13.16
Co1Cr1Fe1Ni1V1 [51]	7.69	-8.96	13.38	1934	2.89	2.88	0.12	7.6	35.59	2.87	1.59	1.64	0.59	2.91
Co1Cr1Fe1Ni1W1 [51]	11.02	-2.88	13.38	2236.4	10.39	4.65	0.23	7.8	18.61	4.62	5.03	3.29	0.31	7.58
Co1Cr1Fe1Ni1Y1 [51]	6.62	-9.28	13.38	1857.2	2.68	15.72	0.26	7.2	1.12	15.6	1.28	1.59	0.32	86.45
Co1Cr1Fe1Ni1Zr1 [51]	7.61	-22.72	13.38	1923	1.13	10.19	0.21	7.4	0.494	10.1	0.977	1.25	0.32	36.33
Co1Cr1Mn1Ni1V1 [74]	7.61	-9.12	13.38	1875.6	2.75	2.94	0.14	7.4	33.13	2.93	1.88	1.61	0.50	3.03
Co1Cu1Fe1Ni1V1 [73]	8.05	-2.24	13.38	1769.55	10.57	2.88	0.10	8.6	49.28	2.87	4.67	3.33	0.54	2.91
Co1Cu1Hf1Ti1Zr1 [81]	8.5	-23.52	13.38	1940.15	1.1	10.21	0.26	6.4	0.434	10.4	1.03	1.24	0.37	36.46
Co1Fe1Ga1Mn1Ni1 [60]	7.55	-9.12	13.38	1425.78	2.09	4.77	0.13	7.4	10.2	4.73	2.63	1.46	0.26	7.97
Co1Fe1Mn1Mo1Ni1 [74]	8.77	-4	13.38	1944.4	6.5	4.47	0.20	8	18.88	4.44	4.16	2.43	0.31	6.99
Co1Fe1Mn1Ni1Sn1 [60]	7.91	-2.56	13.38	1466.22	7.66	8.91	0.14	7.6	4.81	8.82	4.62	2.69	0.40	27.78
Co1Fe1Mn1Ni1V1 [74]	7.76	-8.96	13.38	1801.8	2.69	2.96	0.14	7.8	32.33	2.94	2.09	1.59	0.48	3.06
Cr1Cu1Fe1Mn1Ni1 [58]	8.04	2.72	13.38	1719.15	8.46	0.92	0.14	8.4	479.98	0.92	-0.88	2.86	1.14	0.30
Cr1Cu1Fe1Mn2Ni2 [82]	8.07	-0.49	12.89	1691.82	44.51	0.93	0.16	8.43	497.76	0.93	11.34	10.79	1.08	0.31
Cr1Cu2Fe2Mn1Ni2 [82]	8.23	3.88	12.97	1686.57	5.64	0.95	0.13	8.88	410.36	0.95	-0.43	2.24	1.08	0.33
Cr1Cu2Fe2Mn2Ni1 [82]	8.06	4.69	12.97	1660.44	4.59	0.83	0.15	8.5	506.4	0.83	-0.0952	2.01	1.07	0.24
Cr2Cu1Fe2Mn1Ni1 [82]	7.89	2.61	12.89	1798.11	8.87	0.84	0.13	8	556.03	0.84	-0.706	2.95	1.15	0.24
Cr2Cu1Fe2Mn2Ni2 [82]	7.94	0.0988	13.15	1759.31	234.17	0.91	0.14	8.11	541.47	0.91	-48.82	52.52	1.15	0.29
Cr2Cu2Fe1Mn2Ni2 [82]	8.06	2.37	13.15	1708.95	9.48	0.97	0.15	8.44	431.65	0.97	-1.12	3.09	1.11	0.34
Cr2Cu2Fe2Mn1Ni2 [82]	8.11	3.56	13.15	1741.39	6.44	0.94	0.13	8.56	430.07	0.94	-0.33	2.42	1.13	0.32
Cr1Cu1Fe1Mo1Ni1 [58]	8.71	4.64	13.38	1994.55	5.75	4.1	0.16	8.2	21.99	4.07	-1.42	2.27	0.31	5.88

Cr1Cu1Fe1Ni1Zr1 [58]	7.63	-14.4	13.38	1840.95	1.71	9.91	0.22	7.8	1.85	9.82	1.11	1.38	0.30	34.40
Cr1Fe1Mn1Ni1Ti1 [74]	6.92	-13.28	13.38	1835.8	1.85	6.03	0.15	7	5.59	5.98	2.15	1.41	0.32	12.73
Cr1Nb1Ti1V1Zr1 [53]	6.56	-4.64	13.38	2236.4	6.45	7.67	0.12	4.8	6.71	7.72	1.98	2.42	0.46	20.58
Cu1Fe1Hf1Ti1Zr1 [81]	8.36	-15.84	13.38	1948.75	1.65	9.84	0.25	6.2	1.94	9.97	1.47	1.36	0.36	33.88
Al1Au1Co1Cr1Cu1Ni1 [83]	9.56	-6.44	14.9	1550.76	3.58	6.14	0.30	8.33	9.7	6.12	3.19	1.79	0.20	12.56
Al0.25Co1Cr1Cu0.75Fe1Ni1	7.9	-0.71	14.32	1747.74	35.24	3	0.10	8.4	50.12	2.96	11.75	8.75	0.21	2.59
Al0.3Co1Cr1Cu1Fe1Ni1 [84]	7.88	0.157	14.43	1721.66	158.63	3.15	0.10	8.47	47.13	3.11	-52.72	35.9	0.21	2.86
Al0.5Co1Cr1Cu0.5Fe1Ni1 [85]	7.49	-4.6	14.53	1726.52	5.46	4	0.11	8	24.22	3.96	3.57	2.2	0.21	4.93
Al0.5Co1Cr1Cu1Fe1Ni1 [84, 86]	7.62	-1.52	14.7	1693	16.36	3.82	0.11	8.27	30.94	3.77	8.46	4.6	0.21	4.41
Al0.75Co1Cr1Cu0.25Fe1Ni1 [85]	7.1	-8.47	14.32	1705.31	2.88	4.71	0.12	7.6	13.89	4.66	2.84	1.63	0.21	7.31
Al0.8Co1Cr1Cu1Fe1Ni1 [84, 86]	7.27	-3.61	14.87	1653.71	6.8	4.5	0.12	8	20.65	4.45	5.14	2.5	0.21	6.51
Al1.3Co1Cr1Cu1Fe1Ni1 [84, 86]	6.79	-6.24	14.85	1596.55	3.8	5.19	0.12	7.6	13.53	5.15	4.11	1.84	0.20	9.36
Al1.5Co1Cr1Cu1Fe1Ni1 [84, 86]	6.63	-7.05	14.79	1576.15	3.3	5.38	0.13	7.46	11.92	5.34	3.94	1.73	0.20	10.28
Al1.8Co1Cr1Cu1Fe1Ni1 [84, 86]	6.41	-8.08	14.64	1547.8	2.81	5.6	0.13	7.26	10.12	5.57	3.78	1.62	0.19	11.45
Al1Co0.5Cr1Cu1Fe1Ni1 [87]	6.92	-4.5	14.7	1617.13	5.29	4.91	0.12	7.73	16.4	4.87	4.83	2.16	0.20	8.16
Al1Co1Cr0.5Cu1Fe1Ni1 [87]	7.06	-5.02	14.7	1579.68	4.62	5.02	0.12	8	15.14	4.98	5.07	2.02	0.20	8.59
Al1Co1Cr1Cu0.25Fe1Ni1 [73]	6.82	-9.94	14.34	1668.55	2.41	5.13	0.12	7.38	10.56	5.09	2.85	1.53	0.20	9.08
Al1Co1Cr1Cu0.5Fe1Ni1 [87]	6.91	-7.93	14.7	1654.43	3.06	5.02	0.12	7.55	13.02	4.98	3.26	1.67	0.21	8.59
Al1Co1Cr1Cu1Fe0.5Ni1 [87]	7	-5.55	14.7	1613.23	4.27	5	0.12	7.82	14.96	4.95	4.12	1.94	0.20	8.49
Al1Co1Cr1Cu1Fe1Ni0.5 [87]	6.92	-3.9	14.7	1620.77	6.11	4.91	0.12	7.64	16.91	4.87	5.27	2.34	0.20	8.16
Al1Co1Cr1Cu1Fe1Ni1[86]	7.07	-4.78	14.9	1629.71	5.08	4.82	0.12	7.83	17.02	4.78	4.55	2.12	0.20	7.75
Al2.3Co1Cr1Cu1Fe1Ni1 [84, 86]	6.09	-9.38	14.35	1505.72	2.3	5.84	0.13	6.97	8.06	5.83	3.61	1.51	0.18	12.92
Al2.5Co1Cr1Cu1Fe1Ni1 [84, 86]	5.97	-9.78	14.21	1490.46	2.17	5.91	0.13	6.87	7.44	5.9	3.57	1.48	0.18	13.36
Al2.8Co1Cr1Cu1Fe1Ni1 [84, 86]	5.82	-10.28	14.01	1469.04	2	5.99	0.13	6.72	6.66	5.99	3.51	1.44	0.17	13.89
Al2Co1Cr1Cu1Fe1Ni1 [84, 86]	6.27	-8.65	14.53	1530.24	2.57	5.71	0.13	7.14	9.19	5.69	3.7	1.57	0.19	12.11
Al3Co1Cr1Cu1Fe1Ni1 [84, 86]	5.72	-10.56	13.86	1455.65	1.91	6.04	0.13	6.62	6.21	6.03	3.48	1.42	0.17	14.18
Al0.3Co1Cr1Fe1Mo0.1Ni1 [76]	7.72	-7.26	13.44	1831.05	3.39	3.74	0.12	7.84	22.08	3.7	2.25	1.75	0.21	4.10
Al1Co0.5Cr1Fe1Mo0.5Ni1 [88]	6.96	-11.72	14.53	1796.89	2.23	5.54	0.17	6.9	8.83	5.52	2.69	1.49	0.22	10.39
Al1Co1.5Cr1Fe1Mo0.5Ni1 [88]	7.24	-11.08	14.53	1792.08	2.35	5.39	0.15	7.25	9.65	5.35	2.68	1.52	0.22	9.62
Al1Co1Cr0.5Fe1Mo0.5Ni1 [61]	7.11	-12.08	14.53	1755.69	2.11	5.69	0.16	7.2	7.99	5.67	2.98	1.46	0.22	11.06

Al1Co1Cr1.5Fe1Mo0.5Ni1 [61]	7.11	-10.83	14.53	1826.41	2.45	5.27	0.16	7	10.38	5.24	2.45	1.54	0.22	9.11
Al1Co1Cr1Fe0.6Mo0.5Ni1 [89]	7.06	-12.32	14.61	1792.95	2.13	5.61	0.17	7.02	8.29	5.59	2.52	1.47	0.22	10.69
Al1Co1Cr1Fe1.5Mo0.5Ni1 [89]	7.17	-10.5	14.53	1795.66	2.49	5.3	0.15	7.17	10.36	5.27	2.85	1.55	0.22	9.24
Al1Co1Cr1Fe1Mo0.1Ni1 [90]	6.8	-12.13	13.92	1707.86	1.96	5.3	0.13	7.18	8.07	5.27	2.57	1.43	0.20	9.69
Al1Co1Cr1Fe1Mo0.2Ni1 [91]	6.89	-11.95	14.22	1730.71	2.06	5.35	0.14	7.15	8.52	5.32	2.6	1.45	0.21	9.75
Al1Co1Cr1Fe1Mo0.3Ni1 [91]	6.96	-11.78	14.43	1752.69	2.15	5.4	0.15	7.13	8.86	5.37	2.63	1.47	0.21	9.82
Al1Co1Cr1Fe1Mo0.4Ni1 [91]	7.04	-11.6	14.59	1773.86	2.23	5.44	0.15	7.11	9.13	5.41	2.66	1.49	0.22	9.90
Al1Co1Cr1Fe1Mo0.5Ni1 [61, 89]	7.11	-11.44	14.7	1794.27	2.31	5.47	0.16	7.09	9.36	5.44	2.68	1.51	0.22	9.98
Al1Co1Cr1Fe2Mo0.5Ni1 [89]	7.22	-9.7	14.23	1796.84	2.64	5.15	0.15	7.23	11.14	5.11	2.99	1.58	0.22	8.61
Al1Co1Cr2Fe1Mo0.5Ni1 [61]	7.12	-10.27	14.23	1853.61	2.57	5.1	0.16	6.92	11.2	5.06	2.27	1.57	0.22	8.38
Al1Co2Cr1Fe1Mo0.5Ni1 [88]	7.35	-10.7	14.23	1790.23	2.38	5.29	0.15	7.38	9.84	5.26	2.68	1.52	0.22	9.28
Al1Co1Cr1Fe1Nb0.1Ni1 [92]	6.77	-13.32	13.92	1704.99	1.78	5.5	0.12	7.16	6.71	5.46	2.63	1.39	0.05	10.25
Al1Co1Cr1Fe1Nb0.25Ni1 [92]	6.84	-14.66	14.34	1734.85	1.7	5.83	0.12	7.1	5.79	5.79	2.73	1.37	0.06	11.17
Al1Co1Cr1Fe1Nb0.5Ni1 [92]	6.95	-16.53	14.7	1780.99	1.58	6.24	0.13	7	4.67	6.21	2.85	1.35	0.06	12.68
Al1Co1Cr1Fe1Nb0.75Ni1 [92]	7.05	-18.03	14.86	1823.13	1.5	6.55	0.13	6.91	3.91	6.52	2.93	1.33	0.06	14.07
Al1Co1Cr1Fe1Ni1Si0.2 [93]	6.45	-16.39	14.22	1684.21	1.46	5.49	0.12	7.08	4.97	5.46	2.11	1.32	0.20	10.19
Al1Co1Cr1Fe1Ni1Si0.4 [93]	6.22	-19.84	14.59	1684.31	1.24	5.7	0.12	6.96	2.9	5.67	1.89	1.27	0.21	10.78
Al1Co1Cr1Fe1Ni1Si0.6 [93]	6.01	-22.76	14.78	1684.41	1.09	5.86	0.12	6.86	1.24	5.84	1.75	1.24	0.21	11.35
Al1Co1Cr1Fe1Ni1Si0.8 [93]	5.82	-25.23	14.87	1684.49	0.993	5.99	0.12	6.76	-0.103	5.97	1.65	1.22	0.21	11.91
Al1Co1Cr1Fe1Ni1Si1 [50, 93]	5.65	-27.33	14.9	1684.58	0.918	6.1	0.12	6.67	-1.2	6.09	1.58	1.2	0.21	12.42
Al0.2Co1.5Cr1Fe1Ni1.5Ti0.5 [78]	7.56	-12.4	13.67	1823.19	2.01	5	0.13	7.91	8.96	4.93	1.8	1.44	0.21	7.54
Al0.2Co1.5Cr1Fe1Ni1.5Ti1 [78]	7.21	-16.96	13.97	1832.69	1.51	6.01	0.14	7.6	4.31	5.96	1.73	1.33	0.22	12.00
Al0.3Co1Cr1Fe1Ni1Ti0.1 [94]	7.53	-8.93	13.44	1809.35	2.72	4.06	0.11	7.8	16.73	4.01	2.07	1.6	0.21	4.78
Al0.5Co1Cr1Fe1Ni1Ti1 [80]	6.64	-19.57	14.7	1799.04	1.35	6.44	0.14	7	3.09	6.4	1.92	1.3	0.22	13.80
Al1.5Co1Cr1Fe1Ni1Ti1 [80]	5.9	-22.72	14.79	1665.88	1.08	6.64	0.14	6.38	0.889	6.64	2.08	1.24	0.21	14.89
Al1Co1.5Cr1Fe1Ni1Ti0.5 [95]	6.62	-17.17	14.53	1712.49	1.45	6.02	0.13	7.08	4.17	5.98	2.18	1.32	0.21	11.78
Al1Co1Cr1Fe1Ni1Ti0.5 [57]	6.44	-17.92	14.7	1707.45	1.4	6.12	0.13	6.91	3.78	6.08	2.17	1.31	0.21	12.21
Al1Co1Cr1Fe1Ni1Ti1 [57]	6.23	-21.56	14.9	1726.91	1.19	6.58	0.14	6.67	1.89	6.57	2.02	1.26	0.22	14.45
Al1Co1Cr1Fe1Ni1Ti1.5 [57]	6.06	-23.91	14.79	1743.38	1.08	6.84	0.15	6.46	0.784	6.84	1.94	1.24	0.22	16.10
Al1Co2Cr1Fe1Ni1Ti0.5 [95]	6.77	-16.43	14.23	1716.76	1.49	5.91	0.13	7.23	4.45	5.87	2.19	1.33	0.21	11.36

Al1Co3Cr1Fe1Ni1Ti0.5 [95]	7.02	-15.04	13.48	1723.6	1.55	5.7	0.13	7.47	4.85	5.65	2.21	1.34	0.20	10.55
Al2Co1Cr1Fe1Ni1Ti1 [80]	5.62	-23.35	14.53	1613.56	1	6.64	0.14	6.14	0.0479	6.65	2.13	1.22	0.20	15.12
Al1Co1Cu1Fe1Ni1Ti1 [59]	6.49	-16.89	14.9	1589.87	1.4	6.58	0.15	7.5	3.35	6.57	2.4	1.31	0.20	14.45
Al1Co1Cu1Ni1Ti1Zn1 [96]	6.41	-17.89	14.9	1403.49	1.17	6.43	0.15	8.17	1.81	6.45	2.41	1.26	0.18	13.77
Al1Cr1Cu1Fe1Mn1Ni1 [97]	6.87	-5.11	14.9	1588.21	4.63	4.73	0.14	7.5	17.23	4.69	3.86	2.02	0.20	7.47
Al1Cr0.5Cu1Fe1Ni1Ti1 [98]	6.19	-15.4	14.7	1611.13	1.54	6.45	0.15	7.09	4.22	6.44	2.45	1.34	0.20	14.11
Al1Cr1.5Cu1Fe1Ni1Ti1 [98]	6.32	-12.26	14.79	1698.65	2.05	6.14	0.14	6.92	6.79	6.11	2.53	1.45	0.21	12.42
Al1Cr1Cu1Fe1Ni1Ti1 [98]	6.26	-13.67	14.9	1658.54	1.81	6.[57]	0.15	7	5.71	6.27	2.49	1.4	0.21	13.19
Al1Cr2Cu1Fe1Ni1Ti1 [98]	6.38	-11.1	14.53	1733.03	2.27	5.99	0.14	6.86	7.62	5.96	2.57	1.5	0.21	11.74
Al1Cr3Cu1Fe1Ni1Ti1 [98]	6.46	-9.31	13.86	1788.91	2.66	5.72	0.13	6.75	8.85	5.69	2.63	1.59	0.21	10.59
Al0.5Cr1Fe1Ni1Ti1V1 [20]	6.21	-18.84	14.7	1874.5	1.46	5.97	0.13	6.27	4.44	5.96	1.89	1.32	0.23	11.93
Al1Mo0.5Nb1Ta0.5Ti1Zr1 [99]	7.15	-16.84	14.53	2169.09	1.87	4.34	0.22	4.3	12.07	4.32	1.54	1.41	0.33	6.46
Al0.5Nb1Ta0.8Ti1.5V0.2Zr1 [34]	7.56	-8.62	13.78	2264.97	3.62	4.23	0.10	4.3	18.88	4.22	1.39	1.8	0.33	5.98
Be1Cu1Ni1Ti1V1Zr1 [73]	6.23	-24.89	14.9	1816.3	1.09	11.27	0.21	6	0.33	11.4	1.13	1.24	0.33	42.30
Co1Cr1Cu1Fe1Mn1Ni1 [100]	8.18	1.44	14.9	1727.3	17.81	1.00	0.14	8.5	488.04	1.00	-1.45	4.92	1.28	0.33
Co1Cr1Cu1Fe1Ni1Ti0.5 [101]	7.82	-3.7	14.7	1784.59	7.08	4.46	0.12	8.36	20.53	4.4	2.99	2.56	0.34	6.00
Co1Cr1Cu1Fe1Ni1Ti0.8 [101]	7.58	-6.75	14.87	1792.68	3.95	5.27	0.13	8.14	13.09	5.2	2.37	1.87	0.35	8.92
Co1Cr1Cu1Fe1Ni1Ti1 [101]	7.43	-8.44	14.9	1797.63	3.17	5.65	0.14	8	10.51	5.59	2.22	1.7	0.35	10.64
Co1Cr1Cu1Fe1Ni1Ti2 [73]	6.88	-14.04	14.53	1818.11	1.88	6.69	0.16	7.43	5.13	6.66	1.97	1.41	0.35	16.62
Co1Cr1Fe1Ge1Mn1Ni1 [100]	7.27	-15.17	14.9	1702.9	1.67	3.25	0.16	7.33	18.95	3.23	0.942	1.37	0.47	3.53
Co1.5Cr1Fe1Mo0.1Ni1.5Ti0.5 [77]	7.86	-10.64	13.37	1874.13	2.35	4.72	0.13	8.05	11.2	4.66	1.64	1.52	0.30	6.78
Co1.5Cr1Fe1Mo0.5Ni1.5Ti0.5 [77]	8.06	-10.25	14.17	1942.25	2.69	5.09	0.15	7.92	11.29	5.04	1.79	1.59	0.32	7.94
Co1.5Cr1Fe1Mo0.8Ni1.5Ti0.5 [77]	8.2	-9.96	14.39	1987.67	2.87	5.28	0.16	7.83	11.16	5.23	1.9	1.63	0.34	8.73
Cr1Mo0.5Nb1Ta0.5Ti1Zr1 [102]	7.99	-4.92	14.53	2418.4	7.14	7.13	0.22	4.9	8.7	7.2	2.5	2.57	0.54	17.72
Al0.5B0.2Co1Cr1Cu1Fe1Ni1 [103]	7.51	-4	15.45	1716.02	6.62	6.95	0.12	8.09	10.54	7.36	N/A	2.46	0.22	13.37
Al0.5B0.6Co1Cr1Cu1Fe1Ni1 [103]	7.3	-8.01	15.93	1757.53	3.49	10.32	0.12	7.75	4.32	11	N/A	1.77	0.24	31.83
Al0.5B1Co1Cr1Cu1Fe1Ni1 [103]	7.1	-11.03	16.01	1793.92	2.6	12.42	0.13	7.46	2.6	13.3	N/A	1.57	0.24	49.58
Al0.5Ce1Co1Cu0.5Fe1Ni1Ti0.5 [104]	6.94	-17.32	15.75	1543.84	1.4	15.45	0.29	7.09	0.636	15.4	N/A	1.31	0.21	80.94
Al1Co1Cr1Cu1Fe1Mn1Ni1 [105]	7.13	-5.63	16.18	1613.89	4.64	4.57	0.14	7.71	19.99	4.52	3.51	2.02	0.22	6.72
Al1Co1Cr1Cu1Fe1Mo0.2Ni1 [106]	7.2	-4.47	15.6	1670.55	5.82	4.95	0.13	7.77	17.54	4.91	4.85	2.28	0.22	7.97

Al1Co1Cr1Cu1Fe1Mo0.4Ni1 [106]	7.32	-4.2	15.91	1708.85	6.47	5.05	0.15	7.72	17.6	5.02	5.16	2.42	0.23	8.20
Al1Co1Cr1Cu1Fe1Mo0.6Ni1 [106]	7.43	-3.95	16.08	1744.82	7.1	5.13	0.15	7.67	17.56	5.1	5.46	2.56	0.24	8.43
Al1Co1Cr1Cu1Fe1Mo0.8Ni1 [106]	7.53	-3.72	16.16	1778.68	7.73	5.2	0.16	7.62	17.48	5.17	5.77	2.7	0.24	8.66
Al1Co1Cr1Cu1Fe1Mo1Ni1 [106]	7.62	-3.51	16.18	1810.61	8.35	5.25	0.17	7.57	17.4	5.23	6.07	2.84	0.25	8.87
Al1Co1Cr1Cu1Fe1Ni1Si1 [107]	6.06	-18.86	16.18	1637.89	1.41	5.65	0.12	7.29	4.92	5.63	1.72	1.31	0.22	10.26
Al0.25Co1Cr1Cu0.75Fe1Ni1Ti0.5 [104]	7.46	-7.28	15.55	1765.31	3.77	5.02	0.13	8	14.8	4.97	2.55	1.83	0.23	7.53
Al0.5Co1Cr1Cu1Fe1Ni1Ti0.8 [108]	7.07	-10.11	16	1724.49	2.73	5.76	0.14	7.73	10.13	5.71	2.49	1.6	0.23	10.35
Al0.75Co1Cr1Cu0.25Fe1Ni1Ti0.5 [104]	6.77	-14.39	15.55	1726.74	1.87	5.83	0.13	7.27	7.07	5.79	2.25	1.41	0.23	10.69
Al1Co1Cr1Cu0.25Fe1Ni1Ti0.5 [109]	6.54	-15.5	15.55	1692.25	1.7	6.01	0.13	7.09	5.93	5.97	2.31	1.37	0.22	11.64
Al1Co1Cr1Cu0.5Fe1Ni1Ti0.5 [109]	6.63	-13.42	15.86	1678.31	1.98	5.9	0.13	7.25	7.55	5.87	2.46	1.44	0.22	11.13
Al1Co1Cr1Cu1Fe1Ni1Ti1 [59, 105]	6.58	-13.8	16.18	1674.18	1.96	6.23	0.14	7.29	6.89	6.2	2.41	1.43	0.23	12.48
Al0.5Co1Cr1Cu1Fe1Ni1V0.2 [110]	7.56	-2.5	15.45	1710.19	10.57	3.87	0.11	8.16	30.64	3.83	5.59	3.33	0.22	4.49
Al0.5Co1Cr1Cu1Fe1Ni1V0.4 [110]	7.5	-3.34	15.76	1726.22	8.14	3.91	0.12	8.05	29.78	3.87	4.46	2.79	0.23	4.58
Al0.5Co1Cr1Cu1Fe1Ni1V0.6 [110]	7.45	-4.07	15.93	1741.2	6.81	3.94	0.12	7.95	28.91	3.91	3.85	2.5	0.23	4.68
Al0.5Co1Cr1Cu1Fe1Ni1V0.8 [110]	7.4	-4.71	16	1755.22	5.97	3.97	0.12	7.86	28.11	3.93	3.47	2.31	0.24	4.76
Al0.5Co1Cr1Cu1Fe1Ni1V1 [110]	7.36	-5.25	16.01	1768.39	5.39	3.98	0.12	7.77	27.39	3.95	3.22	2.19	0.24	4.84
Al0.5Co1Cr1Cu1Fe1Ni1V1.2 [110]	7.32	-5.73	15.97	1780.76	4.96	3.99	0.12	7.69	26.75	3.96	3.03	2.09	0.24	4.91
Al0.5Co1Cr1Cu1Fe1Ni1V1.4 [110]	7.28	-6.14	15.91	1792.42	4.64	4	0.12	7.61	26.17	3.97	2.89	2.02	0.24	4.97
Al0.5Co1Cr1Cu1Fe1Ni1V1.6 [110]	7.24	-6.5	15.82	1803.42	4.39	4	0.12	7.54	25.67	3.97	2.77	1.97	0.24	5.02
Al0.5Co1Cr1Cu1Fe1Ni1V1.8 [110]	7.2	-6.81	15.72	1813.82	4.19	3.99	0.12	7.47	25.22	3.97	2.68	1.92	0.24	5.06
Al0.5Co1Cr1Cu1Fe1Ni1V2 [110]	7.17	-7.08	15.6	1823.67	4.02	3.99	0.12	7.4	24.81	3.97	2.61	1.88	0.24	5.08
Al1Co1Cr1Cu1Fe1Ni1V1 [105]	6.92	-7.76	16.18	1708.75	3.56	4.69	0.13	7.43	17.71	4.66	3.06	1.78	0.23	7.07
Al1Co1Cr1Cu1Ni1Ti1Y0.5 [111]	6.06	-18.32	16.01	1662.73	1.45	11.11	0.20	6.85	1.3	11	1.95	1.32	0.22	37.27
Al1Co1Cr1Cu1Ni1Ti1Y0.8 [111]	5.91	-19	16.16	1668.74	1.42	12.54	0.22	6.68	0.994	12.5	1.87	1.31	0.23	49.26
Al1Co1Cr1Cu1Ni1Ti1Y1 [111]	5.83	-19.35	16.18	1672.46	1.4	13.24	0.23	6.57	0.872	13.2	1.83	1.31	0.23	56.32
Al0.4Co1Cr1Fe1Mn1Ni1V1 [20]	7.24	-10.43	15.91	1806.62	2.76	3.88	0.14	7.22	22.36	3.85	2.16	1.61	0.24	4.58
Al1Co0.5Cr0.5Fe0.5Mn1Ni1V0.5 [20]	6.46	-15.96	15.69	1630.29	1.6	5.33	0.14	6.8	6.97	5.3	2.24	1.35	0.22	9.74
Al1Co0.5Cr0.5Fe0.5Mn1Ni1V1 [20]	6.43	-16.26	15.75	1680.54	1.63	5.17	0.14	6.64	7.66	5.15	2.23	1.36	0.22	8.98
Al1Co1.5Cr2Fe1.5Mn2Ni1V1 [20]	6.99	-10.15	15.83	1761.1	2.75	4.23	0.13	6.95	18.58	4.2	2.25	1.6	0.24	5.48
Al1Co1Cr1Cu1Fe1Ni1Ti1V1 [54]	6.52	-13.94	17.29	1737.78	2.16	5.87	0.14	7	9.1	5.85	2.23	1.47	0.25	10.76

Co1Cr1Cu1Fe1Mn1Ni1Ti1V1 [112]	7.26	-8.12	17.29	1810.97	3.85	5.19	0.15	7.5	15.72	5.14	2.36	1.85	0.41	8.41
Al1Co1Cr1Cu1Fe1Mn1Ni1Ti1V1 [112]	6.61	-12.74	18.27	1713.47	2.46	5.75	0.15	7	11.01	5.72	2.32	1.54	0.26	10.10
Al20Co10Cr10Cu10Fe10Mn10Ni10Ti10V10 [112]	6.13	-15.44	17.99	1635.47	1.91	6.01	0.14	6.6	8.06	6	2.31	1.42	0.25	11.44
Al40Co7.5Cr7.5Cu7.5Fe7.5Mn7.5Ni7.5Ti7.5V7.5 [112]	5.13	-18.29	15.97	1459.97	1.28	6.09	0.13	5.7	3.23	6.12	2.29	1.28	0.20	12.84
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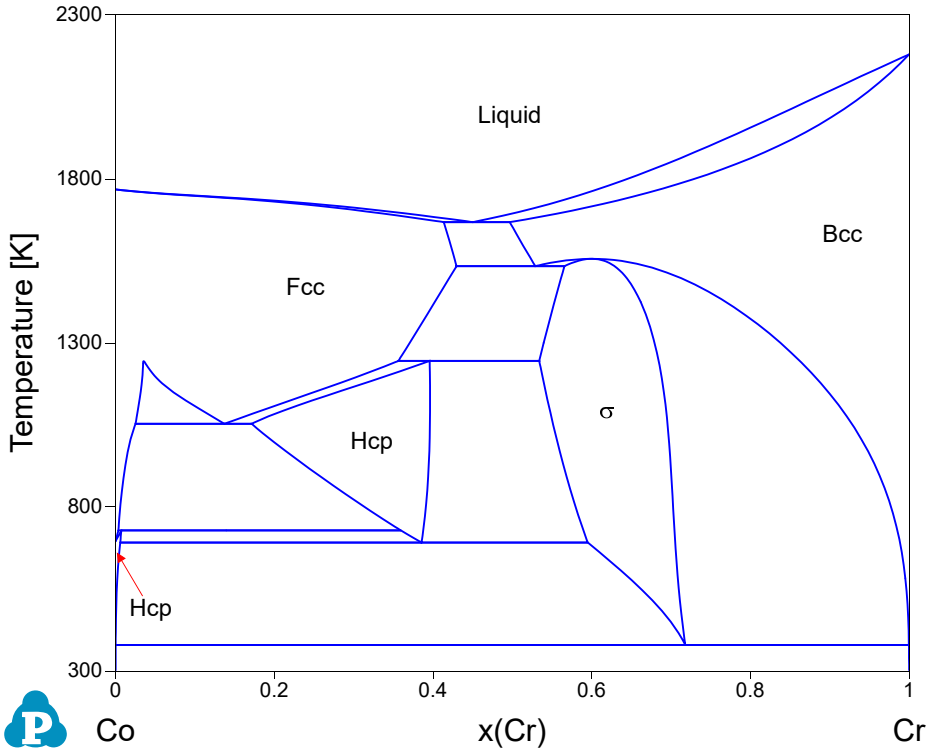
Ce16.25La16.25Pr16.25Pd16.25Co25Al10 [113]	7.08	-47.59	14.62	1396.12	0.429	16.85	0.433	5.64	-2.62	17.4	N/A	1.09	0.133	98.58
Ce57Al10Ni12.5Cu15.5Nb5 [114]	6.77	-22.06	10.39	1266.06	0.596	15.78	0.35	5.21	-1.1	16.4	N/A	1.13	0.111	101.13
Ce60Al15Ni15Cu10 [114]	6.55	-30.6	9.19	1175.8	0.353	15.53	0.343	4.85	-2.74	16.2	N/A	1.08	0.091	98.01
Ce65Al10Ni10Cu10Nb5 [114]	6.69	-19.86	9.32	1233.62	0.579	14.41	0.325	4.6	-1.29	15.1	N/A	1.13	0.0968	81.10
Co43Fe5Cr15Mo14C15B6Er2 [115]	7.85	-33.46	13.34	2330.21	0.929	18.37	0.292	6.85	-0.127	20.1	N/A	1.2	0.366	105.93
Co43.2Fe28.8B19.2Si4.8Nb4 [116]	7.2	-24.37	10.91	1927.33	0.863	13.29	0.0936	7.16	-0.394	14.1	N/A	1.19	0.0479	61.39
Co45.5Fe2.5Cr15Mo14C15B6Er2 [115]	7.87	-33.41	12.82	2329.14	0.894	18.36	0.291	6.87	-0.19	20.1	N/A	1.2	0.352	106.14
Co50.4Fe21.6B19.2Si4.8Nb4 [116]	7.27	-24.34	10.54	1924.23	0.833	13.25	0.0923	7.23	-0.482	14.1	N/A	1.18	0.0462	61.30
Co57.6Fe14.4B19.2Si4.8Nb4 [116]	7.34	-24.27	9.88	1921.14	0.782	13.21	0.0909	7.3	-0.632	14	N/A	1.17	0.0432	61.64
Co64.8Fe7.2B19.2Si4.8Nb4 [116]	7.41	-24.16	8.83	1918.04	0.701	13.17	0.0892	7.38	-0.869	14	N/A	1.15	0.0385	62.45
CuNiHfTiZr [81]	8.5	-27.36	13.38	1932.15	0.945	10.21	0.266	6.6	-0.269	10.4	1.1	1.21	0.271	36.46
Cu47Ti33Zr11Si1Ni6Sn2 [117]	6.7	-16.35	10.45	1643.41	1.05	8.64	0.215	7.65	0.23	8.66	1.21	1.23	0.105	27.91
Cu47Ti33Zr11Si1Ni8 [117]	6.71	-16.89	10.07	1667.87	0.995	8.58	0.214	7.77	-0.0238	8.59	1.16	1.22	0.103	27.53
Dy46Al24Co18Fe2Y10 [118]	7.04	-33.26	10.95	1531.19	0.504	13.84	0.268	4.18	-2.14	14.3	N/A	1.11	0.152	72.99
Er20Tb20Dy20Ni20Al20 [119]	7.83	-37.6	13.38	1554.49	0.553	13.66	0.281	4.4	-2.23	14.2	N/A	1.12	0.175	65.32
Fe61B15Mo7Zr8Co5Y2Cr2 [120-122]	7.27	-22.32	10.65	1998	0.953	15.55	0.206	6.7	-0.0825	16.4	N/A	1.21	0.251	73.82
Fe61B15Mo7Zr8Co6Y2Al1 [120]	7.22	-22.65	10.54	1981.41	0.922	15.59	0.206	6.7	-0.14	16.4	N/A	1.2	0.189	74.15
Fe61B15Mo7Zr8Co7Y2 [120]	7.3	-22.48	10.3	1989.76	0.911	15.55	0.204	6.76	-0.157	16.4	N/A	1.2	0.241	73.87
Gd36Y20Al24Co20 [123]	6.23	-34.28	11.26	1508.39	0.495	14.49	0.276	4.2	-2.1	15	N/A	1.11	0.154	78.48
La32Ce32Al16Ni5Cu3Co12 [124]	6.25	-28.15	12.74	1212.17	0.549	15.42	0.326	4.31	-1.75	16.2	N/A	1.12	0.13	80.82
La32Ce32Al16Ni5Cu10Co5 [124]	6.26	-27.88	12.91	1183.45	0.548	15.2	0.328	4.45	-1.83	16	N/A	1.12	0.129	77.63

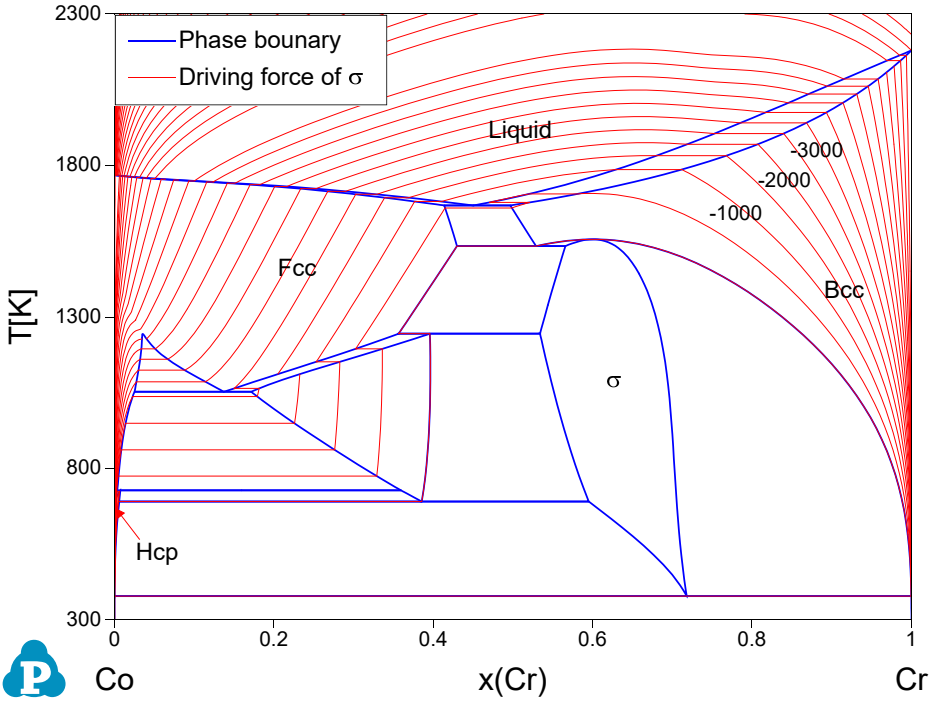
La32Ce32Al16Ni5Cu12Co3 [124]	6.26	-27.84	12.74	1175.25	0.538	15.14	0.329	4.49	-1.89	15.9	N/A	1.12	0.126	77.78
La32Ce32Al16Ni5Cu15 [124]	6.26	-27.83	12.11	1162.94	0.506	15.04	0.33	4.55	-2.06	15.8	N/A	1.11	0.119	78.89
La55Al25Ni5Cu10Co5 [125]	5.85	-32.31	10.02	1200.09	0.372	16.19	0.331	4.45	-2.51	16.9	1.15	1.08	0.101	105.73
La62Al14Cu16.67Ag3.33Ni2Co2 [126]	6.19	-26.89	9.48	1207.73	0.426	15.7	0.349	4.86	-2.05	16.5	1.1	1.09	0.0964	99.95
La62Al14Cu20Ag4 [126]	6.2	-26.72	8.5	1191.3	0.379	15.49	0.349	4.92	-2.29	16.2	1.08	1.08	0.16	100.90
La62Al14Cu11.67Ag2.33Ni5Co5 [127]	6.17	-27.31	10.06	1232.37	0.454	16.02	0.348	4.77	-1.88	16.8	1.13	1.1	0.104	100.78
La64Al14Cu10Ag2Ni5Co5 [127]	6.14	-27.06	9.72	1229.48	0.442	15.68	0.341	4.61	-2	16.5	1.12	1.1	0.101	95.65
La65Al14Cu9.17Ag1.83Ni5Co5 [127]	6.12	-26.91	9.54	1228.04	0.435	15.51	0.337	4.53	-2.06	16.3	1.11	1.1	0.0986	93.02
La66Al14Cu2.5Ag1.67Ni5Co5 [127]	6.04	-26.61	8.41	1218.47	0.385	14.26	0.311	4.04	-2.66	15.1	1.08	1.08	0.0863	76.90
Mg65Cu15Ag5Pd5Y10 [128]	3.43	-13.24	9.1	1136.66	0.781	9.27	0.296	4.3	-1.09	9.5	1.67	1.17	0.0639	28.34
Mg65Cu15Ag5Pd5Gd10 [129]	3.95	-13.24	9.1	1115.36	0.767	9.27	0.298	4.3	-1.18	9.5	N/A	1.17	0.078	28.34
Mg65Cu7.5Ni7.5Zn5Ag5Y10 [130]	3.25	-7.35	9.96	1107.66	1.5	9.53	0.25	4.33	1.35	9.79	3.41	1.33	0.087	28.14
Mg65Cu20Zn5Y10 [131]	3.14	-5.98	8.16	1086.04	1.48	9.96	0.246	4.4	0.987	10.2	2.03	1.33	0.125	34.83
Nd60Al10Ni10Cu20 [123]	6.99	-27.52	9.05	1315.9	0.433	15.7	0.347	5.3	-1.89	16.4	N/A	1.1	0.1	102.21
Nd60Al15Ni10Cu10Fe5 [125]	6.78	-27.37	9.99	1317.35	0.481	15.19	0.328	4.75	-1.83	15.8	N/A	1.11	0.111	91.26
Nd61Al11Ni8Co5Cu15 [125]	6.94	-27.43	9.82	1324.16	0.474	15.54	0.34	5.06	-1.78	16.2	N/A	1.1	0.109	96.26
Ni39.8Cu5.97Ti15.92Zr27.86Al9.95Si0.5 [132]	6.5	-43.44	11.97	1771.99	0.488	10.57	0.248	6.71	-3.96	10.7	1.2	1.11	0.129	45.31
Ni40Cu5Ti17Zr28Al10 [132]	6.49	-43.25	11.68	1778.25	0.48	10.48	0.247	6.65	-4.07	10.6	1.2	1.11	0.175	45.04
Ni40Cu6Ti16Zr28Al10 [132]	6.52	-42.81	11.77	1772.41	0.487	10.52	0.248	6.72	-3.95	10.6	1.2	1.11	0.176	45.25
Ni40Cu5Ti16.5Zr28.5Al10 [132]	6.5	-43.41	11.65	1779.18	0.478	10.51	0.248	6.65	-4.07	10.6	1.2	1.11	0.175	45.51
Ni45Ti20Zr25Al10 [132]	6.41	-45.41	10.46	1791.15	0.413	10.35	0.242	6.6	-4.89	10.4	1.21	1.09	0.158	45.06
Pr60Al10Ni10Cu20 [123]	6.8	-27.52	9.05	1262.5	0.415	15.94	0.352	5.3	-1.97	16.7	N/A	1.09	0.0962	105.37
Sr20Ca20Yb20Li11Mg9Zn20 [119]	3.57	-12.15	14.53	923.91	1.1	15.79	0.261	4.09	0.213	16.4	N/A	1.24	0.253	85.44
Sr20Ca20Yb20Mg20Zn10Cu10 [119]	3.66	-10.6	14.53	1042.05	1.43	16.39	0.306	4.1	0.643	17.3	N/A	1.31	0.286	87.18
Sr20Ca20Yb20Mg20Zn20 [119]	3.64	-13.12	13.38	975.54	0.995	15.29	0.256	4.2	-0.0115	15.9	N/A	1.22	0.246	81.80

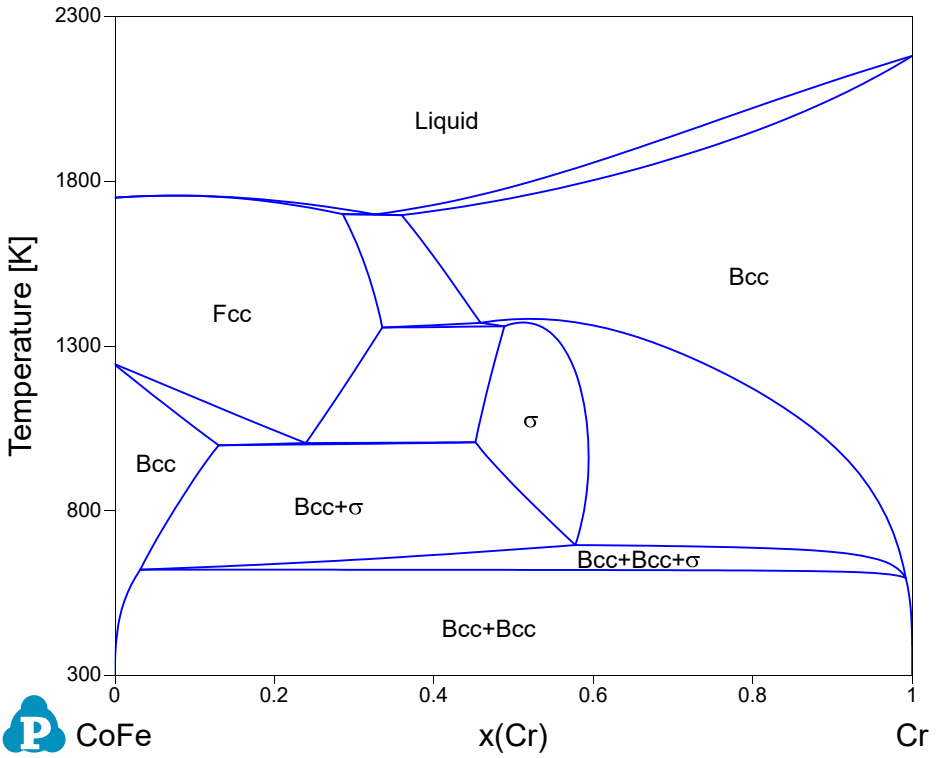
Ti45Cu25Ni15Sn3Be7Zr5 [133]	6.06	-21.2	11.9	1702.84	0.956	9.08	0.195	6.51	-0.237	9.21	1.33	1.21	0.192	28.37
Ti50Zr15Cu9Ni8Be18 [134]	5.25	-26.37	11.3	1830.94	0.784	11.13	0.168	4.75	-0.932	11.4	0.931	1.17	0.253	43.07
Ti55Zr10Cu9Ni8Be18 [134]	5.11	-25.43	10.7	1821.59	0.766	10.7	0.158	4.75	-1.06	11	0.965	1.17	0.238	40.63
Zr38.5Ti16.5Cu15.25Ni9.75Be20 [135]	6.11	-33.2	12.48	1827.08	0.687	13.36	0.224	5.25	-1.19	13.7	0.871	1.15	0.279	68.81
Zr39.88Ti15.12Cu13.77Ni9.98Be21.25 [135]	6.09	-34.27	12.34	1833.04	0.66	13.59	0.222	5.14	-1.28	14	0.863	1.15	0.277	72.31
Ti40Zr25Ni3Cu12Be20 [136]	5.43	-25.88	11.6	1835.17	0.822	12.03	0.176	4.62	-0.648	12.4	0.785	1.18	0.26	51.98
Ti40Zr25Cu9Ni8Be18 [55]	5.51	-28.26	11.98	1849.64	0.784	11.86	0.183	4.75	-0.877	12.2	0.876	1.17	0.271	49.48
Zr41.2Ti13.8Cu12.5Ni10Be22.5 [135, 137]	6.07	-35.2	12.18	1838.12	0.636	13.82	0.22	5.03	-1.37	14.2	0.853	1.14	0.274	75.81
Zr42.63Ti12.37Cu11.25Ni10Be23.75 [135]	6.05	-36.14	11.97	1843.32	0.61	14.05	0.217	4.91	-1.45	14.5	0.843	1.13	0.27	79.54
Zr44Ti11Cu10Ni10Be25 [135]	6.03	-37.07	11.73	1848.41	0.585	14.27	0.215	4.8	-1.54	14.7	0.833	1.13	0.265	83.32
Zr45.38Ti9.62Cu8.75Ni10Be26.25 [135]	6.01	-38	11.46	1853.52	0.559	14.49	0.212	4.69	-1.63	14.9	0.823	1.12	0.26	87.21
Zr46.75Ti8.25Cu7.5Ni10Be27.5 [135, 138]	5.99	-38.92	11.15	1858.61	0.532	14.7	0.209	4.58	-1.72	15.2	0.814	1.12	0.253	91.21
Zr57Ti5Al10Cu20Ni8 [125, 139]	6.5	-31.51	10.18	1813.15	0.586	9.69	0.25	5.78	-2.82	9.91	1.05	1.13	0.155	38.06

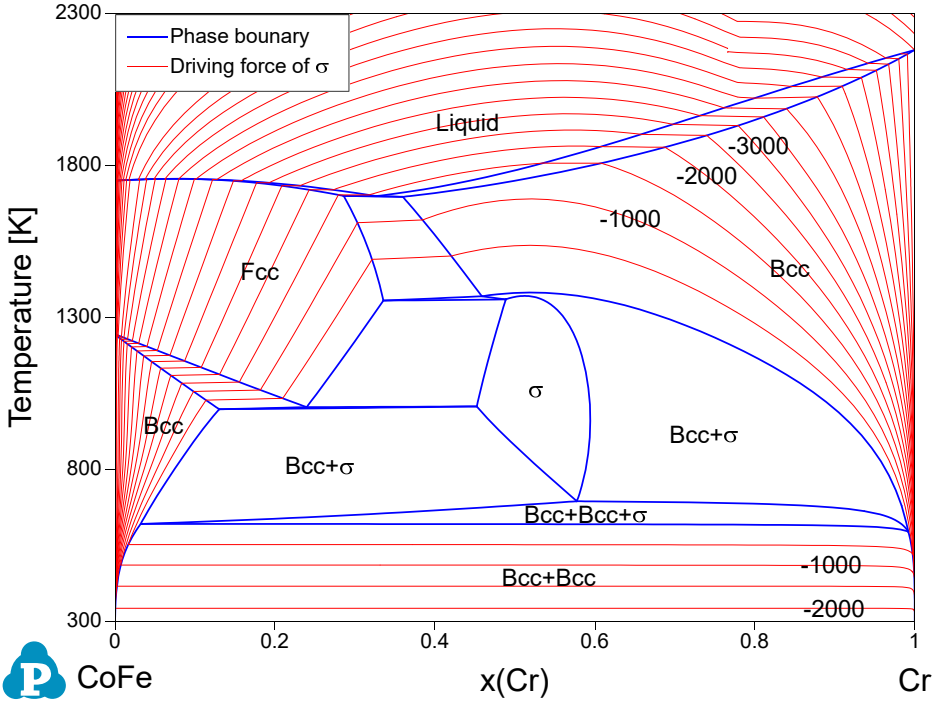
**Since the enthalpy of mixing is zero for these alloys, the Ω–parameter will be infinity. In order to show these compositions in Figure 1(b), the Ω-parameter is set as 200 arbitrarily to demonstrate that they have an extremely large Ω-parameter.

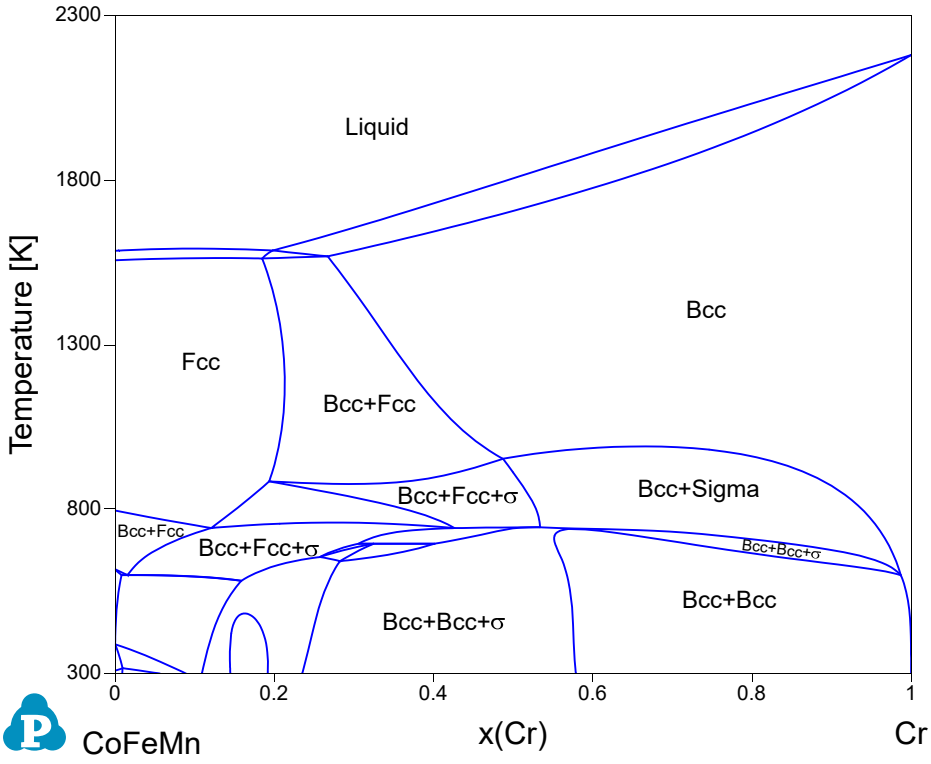
Figure S1. Calculated Co-Cr binary phase diagram and the vertical isopleths of CoFe-Cr, CoFeMn-Cr, and CoFeMnNi-Cr systems, and their corresponding nucleating driving force contour plots for s phase overlaid in the phase diagrams.

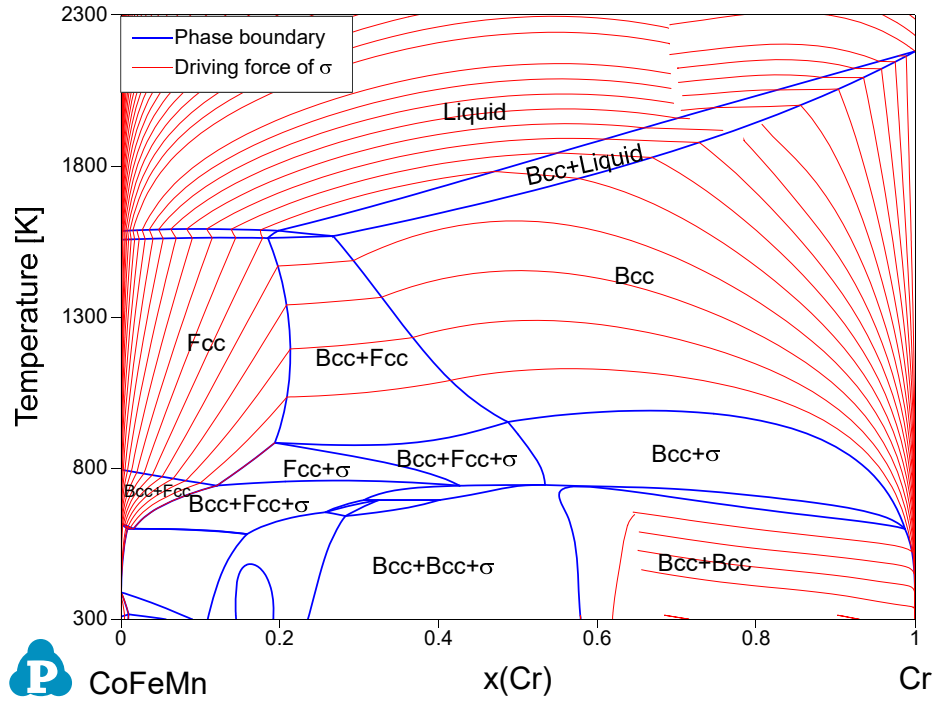


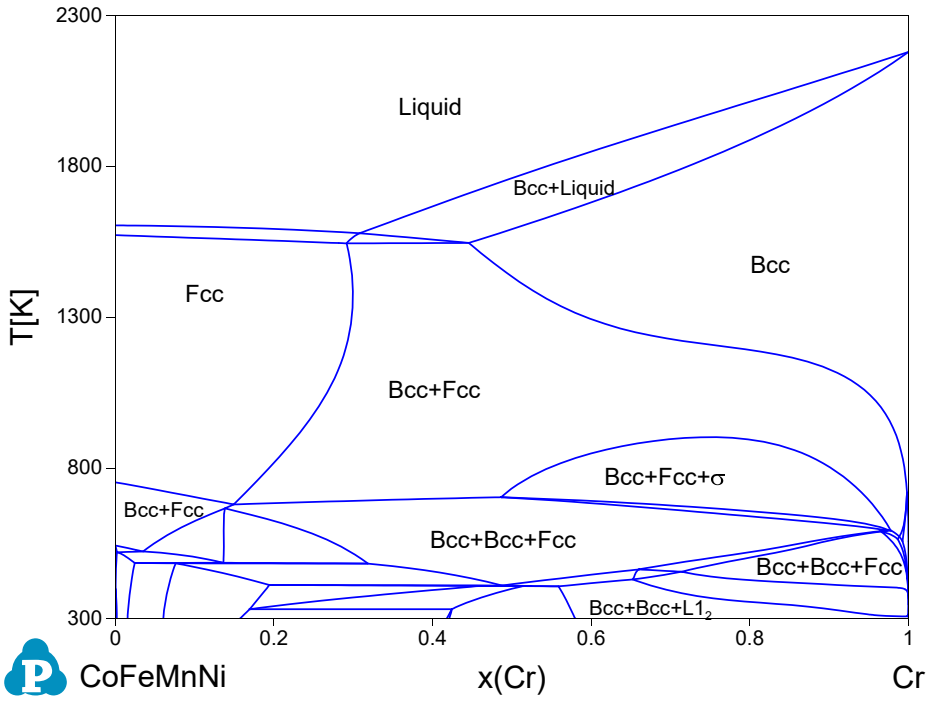


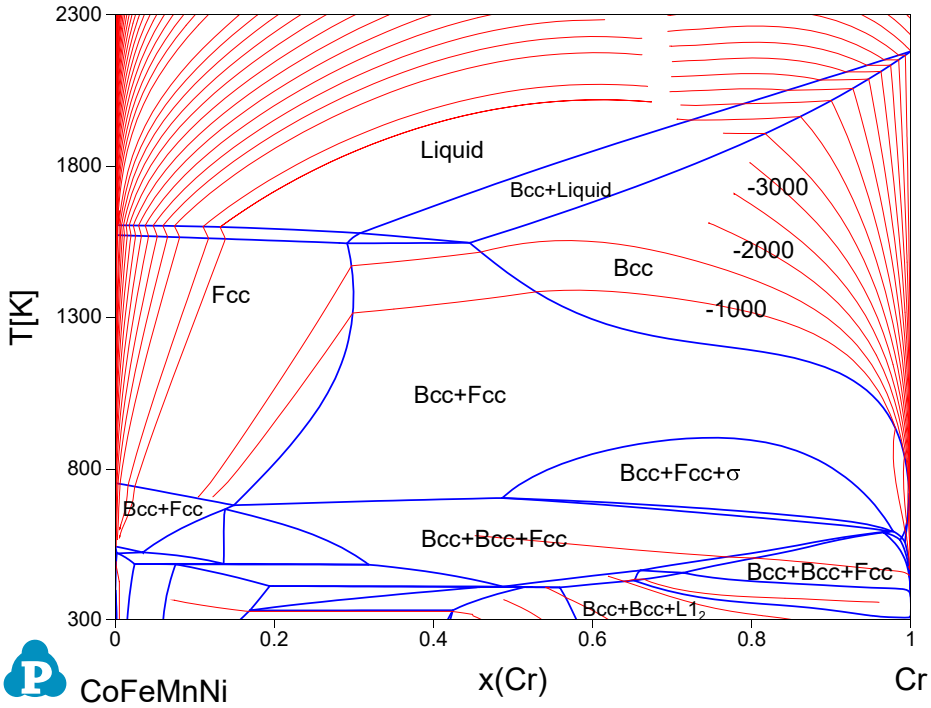

2300
1800
1300
800
300
Temperature [K]
Liquid
Fcc
Bcc
σ
Bcc
Bcc+σ
Bcc+Bcc+σ
Bcc+Bcc
0
0.2
0.4
0.6
0.8
1
CoFe
x(Cr)
Cr


Phase bounary
Driving force of σ
2300
1800
1300
800
300
Temperature [K]
Liquid
-3000
-2000
-1000
Fcc
Bcc
σ
Bcc
Bcc+σ
Bcc+σ
Bcc+Bcc+σ
-1000
Bcc+Bcc
-2000
0
0.2
0.4
0.6
0.8
1
CoFe
x(Cr)
Cr


2300
1800
1300
800
300
Temperature [K]
Liquid
Bcc
Fcc
Bcc+Fcc
Bcc+Fcc+σ
Bcc+Sigma
Bcc+Fcc
Bcc+Fcc+σ
Bcc+Bcc+σ
Bcc+Bcc
0
0.2
0.4
0.6
0.8
1
x(Cr)
CoFeMn
Cr


Phase boundary
Driving force of σ
2300
1800
1300
800
300
Temperature [K]
Liquid
Bcc+Liquid
Bcc
Fcc
Bcc+Fcc
Fcc+σ
Bcc+Fcc+σ
Bcc+σ
Bcc+Fcc
Bcc+Fcc+σ
Bcc+Bcc+σ
Bcc+Bcc
0
0.2
0.4
0.6
0.8
1
x(Cr)
CoFeMn
Cr


2300
1800
1300
800
300
T[K]
Liquid
Bcc+Liquid
Bcc
Fcc
Bcc+Fcc
Bcc+Fcc+σ
Bcc+Fcc
Bcc+Bcc+Fcc
Bcc+Bcc+Fcc
Bcc+Bcc+L1$_2$
0
0.2
0.4
0.6
0.8
1
CoFeMnNi
x(Cr)
Cr


2300
1800
1300
800
300
T[K]
Liquid
Bcc+Liquid
-3000
-2000
Bcc
Fcc
-1000
Bcc+Fcc
Bcc+Fcc+σ
Bcc+Fcc
Bcc+Bcc+Fcc
Bcc+Bcc+Fcc
Bcc+Bcc+L1$_2$
0
0.2
0.4
0.6
0.8
1
CoFeMnNi
x(Cr)
Cr

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