Supplementary Material:

Unified Generalized Universal ·Equation of States for Magnetic Co, Cr, Fe, Mn and Ni: an approach for non-collinear atomistic modelling

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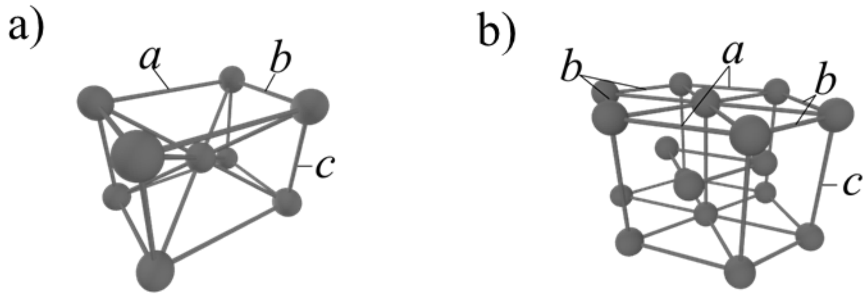
Fitted values of the Ω_0, Ω_M and Ω_{nC} for cubic and hexagonal system for Co, Cr, Fe, Mn and Ni

In this supplementary material the values of the Ω_0, Ω_M and Ω_{nC} for all elements considered in this work is presented. First, an illustration to remind the cubic and hexagonal lattices is depicted in Supplementary Figure 1. The parameters a, b and c are used in both cubic and hexagonal lattices, although they represent different lattice parameters. The reader is referred to this figure identify properly the *b/a* and *c/a* relationship.



Supplementary Figure 1: Illustration of the a) cubic-based and b) hexagonal-based structures and their respective cell parameters.

Note that the *c/a* and *b/a* values may vary be different for the elements, due to inaccuracies and lack of convergence in the some DFT computations for extreme *c/a* and *b/a* values.

Ω_0 for cubic and hexagonal systems

Co - Ω_0

Supplementary Table 1: Values of Ω_0 cubic-base lattices of Co as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a												
c/a	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
0.8	$2.6719\cdot10^{-1}$												
0.9	$6.5477\cdot10^{-1}$	$7.8581\cdot10^{-1}$											
0.95	$8.3106\cdot10^{-1}$	$8.7066\cdot10^{-1}$	$9.4924\cdot10^{-1}$										
1	$9.4910\cdot10^{-1}$	$8.7931\cdot10^{-1}$	$9.6154\cdot10^{-1}$	1									
1.05	1.0196	$8.0371\cdot10^{-1}$	$8.8196\cdot10^{-1}$	$9.5356\cdot10^{-1}$	$9.6705\cdot10^{-1}$								
1.1	1.0773	$6.7870\cdot10^{-1}$	$7.2721\cdot10^{-1}$	$8.2218\cdot10^{-1}$	$8.9961\cdot10^{-1}$	$8.9401\cdot10^{-1}$							
1.207	1.2507	$4.1847\cdot10^{-1}$	$3.4795\cdot10^{-1}$	$4.1834\cdot10^{-1}$	$5.4949\cdot10^{-1}$	$6.8670\cdot10^{-1}$	$8.5888\cdot10^{-1}$						
1.314	1.5404	$3.1591\cdot10^{-1}$	$1.1078\cdot10^{-1}$	$9.8205\cdot10^{-2}$	$2.2270\cdot10^{-1}$	$4.2039\cdot10^{-1}$	$8.6869\cdot10^{-1}$	1.2074					
1.364	1.7221	$3.5886\cdot10^{-1}$	$7.9797\cdot10^{-2}$	$2.3565\cdot10^{-2}$	$1.2801\cdot10^{-1}$	$3.3011\cdot10^{-1}$	$8.6588\cdot10^{-1}$	1.3282	1.5099				
$\sqrt{2}$	1.9276	$4.4724\cdot10^{-1}$	$1.0281\cdot10^{-1}$	0	$7.7138\cdot10^{-2}$	$2.7664\cdot10^{-1}$	$8.7236\cdot10^{-1}$	1.4463	1.6759	1.8924			
1.464	2.1490	$5.7923\cdot10^{-1}$	$1.6738\cdot10^{-1}$	$2.8398\cdot10^{-2}$	$7.7774\cdot10^{-2}$	$2.6989\cdot10^{-1}$	$9.0325\cdot10^{-1}$	1.5613	1.8378	2.0980	2.3372		
1.514	2.3947	$7.4649\cdot10^{-1}$	$3.0559\cdot10^{-1}$	$1.0852\cdot10^{-1}$	$1.2609\cdot10^{-1}$	$3.0322\cdot10^{-1}$	$9.5846\cdot10^{-1}$	1.6843	1.9995	2.2922	2.5669	2.8209	
1.6	2.8449	1.1087	$6.1621\cdot10^{-1}$	$3.5778\cdot10^{-1}$	$3.2036\cdot10^{-1}$	$4.6134\cdot10^{-1}$	1.1096	1.9207	2.2877	2.6298	2.9452	3.2426	3.7183

Supplementary Table 2: Values of Ω_0 hexagonal-base lattices of Co as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a						
c/a	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$5.5970\cdot10^{-1}$	$-8.2705\cdot10^{-1}$	-1.1595	$-8.6014\cdot10^{-1}$	$-8.0468\cdot10^{-1}$	-1.1061	-1.3322
1.45	$8.0651\cdot10^{-1}$	$-7.2322\cdot10^{-1}$	-1.2574	$-9.2081\cdot10^{-1}$	$-7.5222\cdot10^{-1}$	$-9.5971\cdot10^{-1}$	-1.1864
1.5	$9.5052\cdot10^{-1}$	$-6.6212\cdot10^{-1}$	-1.3077	$-9.6267\cdot10^{-1}$	$-6.6279\cdot10^{-1}$	$-7.6927\cdot10^{-1}$	$-9.8401\cdot10^{-1}$
1.55	1.1553	$-4.9754\cdot10^{-1}$	-1.3057	$-9.8345\cdot10^{-1}$	$-6.0169\cdot10^{-1}$	$-5.9814\cdot10^{-1}$	$-7.8639\cdot10^{-1}$
1.6	1.3341	$-3.2095\cdot10^{-1}$	-1.2356	$-9.8500\cdot10^{-1}$	$-5.6524\cdot10^{-1}$	$-4.6351\cdot10^{-1}$	$-5.9947\cdot10^{-1}$
$\sqrt{8/3}$	1.4281	$-2.0483\cdot10^{-1}$	-1.1703	$-9.0226\cdot10^{-1}$	$-5.0358\cdot10^{-1}$	$-3.4081\cdot10^{-1}$	$-4.4633\cdot10^{-1}$
1.65	1.4728	$-1.4490\cdot10^{-1}$	-1.1316	$-8.7577\cdot10^{-1}$	$-4.6778\cdot10^{-1}$	$-2.8070\cdot10^{-1}$	$-3.6531\cdot10^{-1}$
1.7	1.5767	$1.6472\cdot10^{-2}$	-1.0043	$-8.1936\cdot10^{-1}$	$-3.1045\cdot10^{-1}$	$-5.8852\cdot10^{-2}$	$-7.8522\cdot10^{-2}$
1.75	1.6887	$1.7654\cdot10^{-1}$	$-8.6476\cdot10^{-1}$	$-6.7833\cdot10^{-1}$	$-1.6516\cdot10^{-1}$	$1.2569\cdot10^{-1}$	$1.6173\cdot10^{-1}$
1.8	1.7421	$3.1825\cdot10^{-1}$	$-7.1860\cdot10^{-1}$	$-5.3890\cdot10^{-1}$	$-8.1386\cdot10^{-3}$	$3.0646\cdot10^{-1}$	$3.9169\cdot10^{-1}$
1.85	1.7846	$4.3865\cdot10^{-1}$	$-5.7342\cdot10^{-1}$	$-3.7459\cdot10^{-1}$	$1.0843\cdot10^{-1}$	$4.2006\cdot10^{-1}$	$5.3772\cdot10^{-1}$

Cr - Ω_0

Supplementary Table 3: Values of Ω_0 cubic-base lattices of Cr as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a													
c/a	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6	1.7
0.8	$2.6011\cdot10^{-1}$													
0.9	$3.5168\cdot10^{-1}$	$7.7027\cdot10^{-1}$												
0.95	$2.8292\cdot10^{-1}$	$8.1885\cdot10^{-1}$	$9.4150\cdot10^{-1}$											
1	$1.8087\cdot10^{-1}$	$7.5499\cdot10^{-1}$	$9.3905\cdot10^{-1}$	1										
1.05	$7.4474\cdot10^{-2}$	$6.1385\cdot10^{-1}$	$8.3557\cdot10^{-1}$	$9.4680\cdot10^{-1}$	$9.4466\cdot10^{-1}$									
1.1	$-1.3288\cdot10^{-2}$	$4.4054\cdot10^{-1}$	$6.6436\cdot10^{-1}$	$8.0964\cdot10^{-1}$	$8.5068\cdot10^{-1}$	$7.9775\cdot10^{-1}$								
1.207	$-7.1519\cdot10^{-2}$	$1.3910\cdot10^{-1}$	$2.7569\cdot10^{-1}$	$4.0253\cdot10^{-1}$	$4.8080\cdot10^{-1}$	$4.9394\cdot10^{-1}$	$3.4233\cdot10^{-1}$							
1.314	$-1.4267\cdot10^{-2}$	$2.9415\cdot10^{-2}$	$4.6651\cdot10^{-2}$	$1.0011\cdot10^{-1}$	$1.6126\cdot10^{-1}$	$1.9318\cdot10^{-1}$	$1.2977\cdot10^{-1}$	$-2.3176\cdot10^{-2}$						
1.364	$1.7491\cdot10^{-2}$	$4.8118\cdot10^{-2}$	$1.4018\cdot10^{-2}$	$2.4446\cdot10^{-2}$	$6.8754\cdot10^{-2}$	$9.8662\cdot10^{-2}$	$5.1376\cdot10^{-2}$	$-9.2662\cdot10^{-2}$	$-1.6565\cdot10^{-1}$					
$\sqrt{2}$	$4.1312\cdot10^{-2}$	$9.2003\cdot10^{-2}$	$2.8604\cdot10^{-2}$	0	$2.0325\cdot10^{-2}$	$4.3712\cdot10^{-2}$	$1.0910\cdot10^{-3}$	$-1.4825\cdot10^{-1}$	$-2.2998\cdot10^{-1}$	$-3.0804\cdot10^{-1}$				
1.464	$5.3790\cdot10^{-2}$	$1.4469\cdot10^{-1}$	$7.5817\cdot10^{-2}$	$2.2412\cdot10^{-2}$	$1.6288\cdot10^{-2}$	$2.8523\cdot10^{-2}$	$-1.7046\cdot10^{-2}$	$-1.8248\cdot10^{-1}$	$-2.7944\cdot10^{-1}$	$-3.7586\cdot10^{-1}$	$-4.6374\cdot10^{-1}$			
1.514	$4.7943\cdot10^{-2}$	$1.9437\cdot10^{-1}$	$1.3698\cdot10^{-1}$	$7.3519\cdot10^{-2}$	$4.9286\cdot10^{-2}$	$4.7625\cdot10^{-2}$	$-8.2692\cdot10^{-3}$	$-1.9542\cdot10^{-1}$	$-3.0873\cdot10^{-1}$	$-4.2554\cdot10^{-1}$	$-5.3713\cdot10^{-1}$	$-6.3215\cdot10^{-1}$		
1.6	$2.9011\cdot10^{-3}$	$2.5066\cdot10^{-1}$	$2.3291\cdot10^{-1}$	$1.7908\cdot10^{-1}$	$1.4559\cdot10^{-1}$	$1.2410\cdot10^{-1}$	$3.8037\cdot10^{-2}$	$-1.8186\cdot10^{-1}$	$-3.1889\cdot10^{-1}$	$-4.6521\cdot10^{-1}$	$-6.1155\cdot10^{-1}$	$-7.5006\cdot10^{-1}$	$-9.4568\cdot10^{-1}$	
1.7	$-1.1251\cdot10^{-1}$	$2.6720\cdot10^{-1}$	$3.0703\cdot10^{-1}$	$2.8230\cdot10^{-1}$	$2.4837\cdot10^{-1}$	$2.1600\cdot10^{-1}$	$9.5823\cdot10^{-2}$	$-1.4514\cdot10^{-1}$	$-2.9501\cdot10^{-1}$	$-4.6239\cdot10^{-1}$	$-6.3854\cdot10^{-1}$	$-8.1276\cdot10^{-1}$	-1.0884	-1.3336

Supplementary Table 4: Values of Ω_0 hexagonal-base lattices of Cr as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a						
c/a	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$5.0824\cdot10^{-1}$	$-5.3076\cdot10^{-2}$	$-2.0389\cdot10^{-2}$	$8.2573\cdot10^{-2}$	$9.2548\cdot10^{-2}$	$4.7538\cdot10^{-2}$	$-5.6119\cdot10^{-2}$
1.45	$6.1718\cdot10^{-1}$	$-1.0707\cdot10^{-2}$	$-9.3509\cdot10^{-2}$	$2.0891\cdot10^{-2}$	$6.6504\cdot10^{-2}$	$6.1336\cdot10^{-2}$	$2.6506\cdot10^{-3}$
1.5	$7.0436\cdot10^{-1}$	$6.8543\cdot10^{-2}$	$-1.4994\cdot10^{-1}$	$-2.7401\cdot10^{-2}$	$6.0339\cdot10^{-2}$	$9.2604\cdot10^{-2}$	$9.0945\cdot10^{-2}$
1.55	$7.6499\cdot10^{-1}$	$1.6276\cdot10^{-1}$	$-1.8137\cdot10^{-1}$	$-5.7881\cdot10^{-2}$	$6.8512\cdot10^{-2}$	$1.4578\cdot10^{-1}$	$2.0159\cdot10^{-1}$
1.6	$7.9744\cdot10^{-1}$	$2.5293\cdot10^{-1}$	$-1.7836\cdot10^{-1}$	$-6.0544\cdot10^{-2}$	$1.0330\cdot10^{-1}$	$2.1603\cdot10^{-1}$	$3.0023\cdot10^{-1}$
$\sqrt{8/3}$	$8.0046\cdot10^{-1}$	$3.1317\cdot10^{-1}$	$-1.5574\cdot10^{-1}$	$-4.5728\cdot10^{-2}$	$1.3369\cdot10^{-1}$	$2.6508\cdot10^{-1}$	$3.5491\cdot10^{-1}$
1.65	$7.9987\cdot10^{-1}$	$3.4017\cdot10^{-1}$	$-1.3873\cdot10^{-1}$	$-3.3697\cdot10^{-2}$	$1.5133\cdot10^{-1}$	$2.8713\cdot10^{-1}$	$3.7943\cdot10^{-1}$
1.7	$7.8149\cdot10^{-1}$	$4.0588\cdot10^{-1}$	$-7.2057\cdot10^{-2}$	$1.7175\cdot10^{-2}$	$2.1327\cdot10^{-1}$	$3.4954\cdot10^{-1}$	$4.3955\cdot10^{-1}$
1.75	$7.5243\cdot10^{-1}$	$4.5620\cdot10^{-1}$	$3.4983\cdot10^{-3}$	$7.1885\cdot10^{-2}$	$2.6566\cdot10^{-1}$	$4.0190\cdot10^{-1}$	$4.8285\cdot10^{-1}$
1.8	$7.1387\cdot10^{-1}$	$4.9675\cdot10^{-1}$	$7.7321\cdot10^{-2}$	$1.3827\cdot10^{-1}$	$3.1803\cdot10^{-1}$	$4.4904\cdot10^{-1}$	$5.2189\cdot10^{-1}$
1.85	$6.7271\cdot10^{-1}$	$5.0544\cdot10^{-1}$	$1.3931\cdot10^{-1}$	$1.9716\cdot10^{-1}$	$3.6156\cdot10^{-1}$	$4.7315\cdot10^{-1}$	$5.2828\cdot10^{-1}$

Fe - Ω_0

Supplementary Table 5: Values of Ω_0 cubic-base lattices of Fe as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

c/a \ ***b/a***	0.7	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
0.7	$-2.6393\cdot10^{-3}$													
0.8	$4.3157\cdot10^{-1}$	$2.7760\cdot10^{-1}$												
0.9	1.1303	$6.2128\cdot10^{-1}$	$7.4759\cdot10^{-1}$											
0.95	1.4135	$7.7526\cdot10^{-1}$	$8.2657\cdot10^{-1}$	$9.1701\cdot10^{-1}$										
1	1.6487	$8.7126\cdot10^{-1}$	$8.3641\cdot10^{-1}$	$9.3620\cdot10^{-1}$	1									
1.05	1.8386	$9.1908\cdot10^{-1}$	$7.5916\cdot10^{-1}$	$8.3870\cdot10^{-1}$	$9.2158\cdot10^{-1}$	$9.3903\cdot10^{-1}$								
1.1	1.9968	$9.4585\cdot10^{-1}$	$6.4420\cdot10^{-1}$	$6.9238\cdot10^{-1}$	$7.8445\cdot10^{-1}$	$8.4835\cdot10^{-1}$	$8.5278\cdot10^{-1}$							
1.207	2.2963	1.0151	$3.9093\cdot10^{-1}$	$3.4750\cdot10^{-1}$	$4.1390\cdot10^{-1}$	$5.3028\cdot10^{-1}$	$6.5332\cdot10^{-1}$	$8.0607\cdot10^{-1}$						
1.314	2.5631	1.1503	$2.6959\cdot10^{-1}$	$1.1354\cdot10^{-1}$	$1.1852\cdot10^{-1}$	$2.2975\cdot10^{-1}$	$3.9980\cdot10^{-1}$	$7.9142\cdot10^{-1}$	1.0663					
1.364	2.6859	1.2406	$2.7366\cdot10^{-1}$	$6.8477\cdot10^{-2}$	$3.8436\cdot10^{-2}$	$1.3330\cdot10^{-1}$	$3.0807\cdot10^{-1}$	$7.7246\cdot10^{-1}$	1.1552	1.2910				
$\sqrt{2}$	2.8165	1.3480	$3.1552\cdot10^{-1}$	$6.7836\cdot10^{-2}$	0	$7.4305\cdot10^{-2}$	$2.4711\cdot10^{-1}$	$7.5834\cdot10^{-1}$	1.2332	1.4087	1.5647			
1.464	2.9567	1.4732	$3.9669\cdot10^{-1}$	$1.1355\cdot10^{-1}$	$8.2858\cdot10^{-3}$	$5.6235\cdot10^{-2}$	$2.2150\cdot10^{-1}$	$7.5723\cdot10^{-1}$	1.2945	1.5087	1.6983	1.8638		
1.514	3.1069	1.6027	$5.1567\cdot10^{-1}$	$2.0061\cdot10^{-1}$	$6.3018\cdot10^{-2}$	$7.9609\cdot10^{-2}$	$2.2724\cdot10^{-1}$	$7.7347\cdot10^{-1}$	1.3587	1.5983	1.8145	2.0057	2.1730	
1.6	3.3872	1.8409	$7.7958\cdot10^{-1}$	$4.3190\cdot10^{-1}$	$2.4430\cdot10^{-1}$	$2.1090\cdot10^{-1}$	$3.1367\cdot10^{-1}$	$8.3972\cdot10^{-1}$	1.4756	1.7445	1.9898	2.2129	2.4060	2.6853

Supplementary Table 6: Values of Ω_0 hexagonal-base lattices of Fe as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

c/a \ ***b/a***	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$5.9971\cdot10^{-1}$	$-2.3653\cdot10^{-1}$	-1.9776	-2.0799	-1.4183	-1.0346	-1.1030	-1.4337
1.45	$5.9145\cdot10^{-1}$	$7.7691\cdot10^{-2}$	-1.8468	-2.3525	-1.6757	-1.1249	$-9.8154\cdot10^{-1}$	-1.1581
1.5	$5.2814\cdot10^{-1}$	$3.4674\cdot10^{-1}$	-1.6353	-2.5225	-1.8756	-1.1905	$-8.5147\cdot10^{-1}$	$-8.9016\cdot10^{-1}$
1.55	$4.2641\cdot10^{-1}$	$5.5663\cdot10^{-1}$	-1.3763	-2.5747	-1.9952	-1.2036	$-7.2803\cdot10^{-1}$	$-6.5914\cdot10^{-1}$
1.6	$3.0456\cdot10^{-1}$	$6.9178\cdot10^{-1}$	-1.0943	-2.4780	-2.0223	-1.1826	$-6.1726\cdot10^{-1}$	$-4.4785\cdot10^{-1}$
$\sqrt{8/3}$	$2.1631\cdot10^{-1}$	$7.4204\cdot10^{-1}$	$-9.0541\cdot10^{-1}$	-2.3542	-1.9971	-1.1521	$-5.4139\cdot10^{-1}$	$-3.2368\cdot10^{-1}$
1.65	$1.6959\cdot10^{-1}$	$7.5678\cdot10^{-1}$	$-8.0895\cdot10^{-1}$	-2.2772	-1.9708	-1.1320	$-5.0660\cdot10^{-1}$	$-2.6470\cdot10^{-1}$
1.7	$3.0492\cdot10^{-2}$	$7.6377\cdot10^{-1}$	$-5.3302\cdot10^{-1}$	-2.0168	-1.8454	-1.0555	$-4.0779\cdot10^{-1}$	$-1.1022\cdot10^{-1}$
1.75	$-1.0807\cdot10^{-1}$	$7.3029\cdot10^{-1}$	$-2.8461\cdot10^{-1}$	-1.7269	-1.6637	$-9.5519\cdot10^{-1}$	$-3.1385\cdot10^{-1}$	$2.8590\cdot10^{-2}$

Mn - Ω_0

Supplementary Table 7: Values of Ω_0 cubic-base lattices of Mn as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a												
		0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
	0.8	$2.7627\cdot10^{-1}$												
	0.9	1.1757	$7.9438\cdot10^{-1}$											
	0.95	1.8121	$9.4387\cdot10^{-1}$	$9.5182\cdot10^{-1}$										
	1	2.3382	1.0906	$9.8770\cdot10^{-1}$	1									
	1.05	2.6278	1.1193	$9.4536\cdot10^{-1}$	$9.5678\cdot10^{-1}$	$9.8895\cdot10^{-1}$								
	1.1	2.7716	1.0756	$8.2078\cdot10^{-1}$	$8.3397\cdot10^{-1}$	$9.4056\cdot10^{-1}$	1.0531							
c/a	1.207	2.8224	$8.6796\cdot10^{-1}$	$4.6649\cdot10^{-1}$	$4.1838\cdot10^{-1}$	$6.4614\cdot10^{-1}$	1.0049	1.8144						
	1.314	2.8238	$6.7434\cdot10^{-1}$	$2.0754\cdot10^{-1}$	$1.0794\cdot10^{-1}$	$3.2473\cdot10^{-1}$	$7.9502\cdot10^{-1}$	2.1261	3.2192					
	1.364	2.8670	$6.7676\cdot10^{-1}$	$1.5550\cdot10^{-1}$	$2.2456\cdot10^{-2}$	$2.2221\cdot10^{-1}$	$6.8871\cdot10^{-1}$	2.1597	3.5156	3.9497				
	$\sqrt{2}$	2.9593	$7.6675\cdot10^{-1}$	$1.8284\cdot10^{-1}$	0	$1.5201\cdot10^{-1}$	$5.9567\cdot10^{-1}$	2.1434	3.7081	4.2601	4.6652			
	1.464	3.0817	$9.3410\cdot10^{-1}$	$3.0284\cdot10^{-1}$	$5.3342\cdot10^{-2}$	$1.4447\cdot10^{-1}$	$5.4633\cdot10^{-1}$	2.1074	3.8263	4.4620	4.9586	5.3340		
	1.514	3.2726	1.1357	$5.0269\cdot10^{-1}$	$1.9735\cdot10^{-1}$	$2.1815\cdot10^{-1}$	$5.5997\cdot10^{-1}$	2.0804	3.8893	4.5918	5.1630	5.6229	5.9845	
	1.6	3.7605	1.5706	$9.6176\cdot10^{-1}$	$5.9743\cdot10^{-1}$	$5.2584\cdot10^{-1}$	$7.5663\cdot10^{-1}$	2.0899	3.9149	4.7065	5.4005	5.9859	6.5039	7.2804

Supplementary Table 8: Values of Ω_0 hexagonal-base lattices of Mn as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a							
		0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
	1.4	1.1322	1.1084	1.6483	1.6211	1.0777	$4.6304\cdot10^{-1}$	$4.6053\cdot10^{-2}$	$1.5709\cdot10^{-2}$
	1.45	1.1569	1.0866	1.7025	1.8206	1.2727	$6.2123\cdot10^{-1}$	$1.2754\cdot10^{-1}$	$-2.2525\cdot10^{-2}$
	1.5	1.2125	1.0664	1.7042	1.9848	1.4557	$7.7827\cdot10^{-1}$	$2.2706\cdot10^{-1}$	$-1.9706\cdot10^{-2}$
	1.55	1.2965	1.0409	1.6372	2.0806	1.6060	$9.3025\cdot10^{-1}$	$3.4009\cdot10^{-1}$	$-9.9816\cdot10^{-4}$
	1.6	1.3772	1.0256	1.5093	2.0899	1.7132	1.0671	$4.6649\cdot10^{-1}$	$5.2649\cdot10^{-2}$
c/a	$\sqrt{8/3}$	1.4318	1.0237	1.3970	2.0518	1.7597	1.1417	$5.5740\cdot10^{-1}$	$1.0669\cdot10^{-1}$
	1.65	1.4600	1.0233	1.3373	2.0208	1.7759	1.1763	$6.0201\cdot10^{-1}$	$1.4156\cdot10^{-1}$
	1.7	1.5451	1.0393	1.1488	1.8867	1.7877	1.2606	$7.2608\cdot10^{-1}$	$2.6644\cdot10^{-1}$
	1.75	1.6302	1.0689	$9.6342\cdot10^{-1}$	1.7007	1.7446	1.3233	$8.4067\cdot10^{-1}$	$4.2054\cdot10^{-1}$
	1.8	1.7075	1.1154	$7.9668\cdot10^{-1}$	1.4868	1.6301	1.3602	$9.4224\cdot10^{-1}$	$5.4929\cdot10^{-1}$
	1.85	1.7367	1.1696	$6.7022\cdot10^{-1}$	1.2392	1.4912	1.3684	1.0361	$6.6000\cdot10^{-1}$

Ni - Ω_0

Supplementary Table 9: Values of Ω_0 cubic-base lattices of Ni as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

c/a \ ***b/a***	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
0.8	$3.3677\cdot10^{-1}$												
0.9	$7.6576\cdot10^{-1}$	$8.3185\cdot10^{-1}$											
0.95	1.0034	$8.8511\cdot10^{-1}$	$9.5845\cdot10^{-1}$										
1	1.2282	$8.7842\cdot10^{-1}$	$9.5852\cdot10^{-1}$	1									
1.05	1.4791	$8.3016\cdot10^{-1}$	$8.9447\cdot10^{-1}$	$9.5896\cdot10^{-1}$	$9.6120\cdot10^{-1}$								
1.1	1.7577	$7.5594\cdot10^{-1}$	$7.7441\cdot10^{-1}$	$8.6014\cdot10^{-1}$	$9.0425\cdot10^{-1}$	$8.9144\cdot10^{-1}$							
1.207	2.4944	$6.0101\cdot10^{-1}$	$4.3351\cdot10^{-1}$	$5.0083\cdot10^{-1}$	$6.2773\cdot10^{-1}$	$7.5339\cdot10^{-1}$	$9.8977\cdot10^{-1}$						
1.314	3.4426	$6.1785\cdot10^{-1}$	$1.8149\cdot10^{-1}$	$1.3561\cdot10^{-1}$	$3.0341\cdot10^{-1}$	$5.5945\cdot10^{-1}$	1.2159	1.9232					
1.364	3.9865	$7.3040\cdot10^{-1}$	$1.5661\cdot10^{-1}$	$3.6087\cdot10^{-2}$	$1.9813\cdot10^{-1}$	$5.0628\cdot10^{-1}$	1.3352	2.2755	2.7319				
$\sqrt{2}$	4.5806	$9.3144\cdot10^{-1}$	$1.9993\cdot10^{-1}$	0	$1.4418\cdot10^{-1}$	$4.8987\cdot10^{-1}$	1.4947	2.6322	3.1834	3.7403			
1.464	5.2297	1.2072	$3.2824\cdot10^{-1}$	$3.1113\cdot10^{-2}$	$1.5360\cdot10^{-1}$	$5.1592\cdot10^{-1}$	1.6894	3.0189	3.6619	4.3063	4.9556		
1.514	5.9306	1.5741	$5.4620\cdot10^{-1}$	$1.5712\cdot10^{-1}$	$2.3555\cdot10^{-1}$	$6.1212\cdot10^{-1}$	1.9215	3.4289	4.1595	4.8855	5.6104	6.3409	
1.6	7.2511	2.3629	1.1306	$5.7319\cdot10^{-1}$	$5.6532\cdot10^{-1}$	$9.4004\cdot10^{-1}$	2.4269	4.1932	5.0526	5.9101	6.7526	7.5896	9.0426

Supplementary Table 10: Values of Ω_0 hexagonal-base lattices of Ni as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

c/a \ ***b/a***	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$-3.5470\cdot10^{-1}$	$-6.4405\cdot10^{-1}$	$-4.8595\cdot10^{-1}$	$-1.1402\cdot10^{-1}$	$-1.1836\cdot10^{-1}$	$-2.0797\cdot10^{-1}$	-1.0697
1.45	$-4.2716\cdot10^{-1}$	$-6.4972\cdot10^{-1}$	$-6.7034\cdot10^{-1}$	$-3.1829\cdot10^{-1}$	$-3.0380\cdot10^{-1}$	$-1.9703\cdot10^{-1}$	-1.0805
1.5	$-5.5200\cdot10^{-1}$	$-8.4750\cdot10^{-1}$	$-7.8965\cdot10^{-1}$	$-5.0112\cdot10^{-1}$	$-1.8637\cdot10^{-1}$	$-4.5800\cdot10^{-1}$	-1.1682
1.55	$-7.4103\cdot10^{-1}$	$-6.4919\cdot10^{-1}$	$-8.2753\cdot10^{-1}$	$-7.4648\cdot10^{-1}$	$-3.1822\cdot10^{-1}$	$-6.2659\cdot10^{-1}$	$-5.8776\cdot10^{-1}$
1.6	$-9.6871\cdot10^{-1}$	$-6.6083\cdot10^{-1}$	$-7.8629\cdot10^{-1}$	$-9.4839\cdot10^{-1}$	$-4.8968\cdot10^{-1}$	$-5.5494\cdot10^{-1}$	$-6.4872\cdot10^{-1}$
$\sqrt{8/3}$	-1.1387	$-6.9058\cdot10^{-1}$	$-7.4332\cdot10^{-1}$	-1.0952	$-5.1719\cdot10^{-1}$	$-5.7879\cdot10^{-1}$	-1.0294
1.65	-1.2049	$-7.0874\cdot10^{-1}$	$-7.2312\cdot10^{-1}$	-1.1119	$-5.6746\cdot10^{-1}$	$-5.9858\cdot10^{-1}$	-1.0912
1.7	-1.5054	$-6.7424\cdot10^{-1}$	$-6.7097\cdot10^{-1}$	-1.0497	$-6.9659\cdot10^{-1}$	$-8.8679\cdot10^{-1}$	-1.2999
1.75	-1.7552	$-7.5199\cdot10^{-1}$	$-6.1603\cdot10^{-1}$	-1.2036	-1.3122	$-8.2383\cdot10^{-1}$	$-9.4776\cdot10^{-1}$

Ω_M for cubic and hexagonal systems

Co - Ω_M

Supplementary Table 11: Values of Ω_M cubic-base lattices of Co as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

							b/a						
c/a	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
0.8	$-6.3494\cdot10^{-1}$												
0.9	$-7.9180\cdot10^{-2}$	$4.8131\cdot10^{-1}$											
0.95	$5.7903\cdot10^{-2}$	$6.4951\cdot10^{-1}$	$8.6860\cdot10^{-1}$										
1	$6.2125\cdot10^{-2}$	$6.0583\cdot10^{-1}$	$8.8733\cdot10^{-1}$	1									
1.05	$-1.9919\cdot10^{-2}$	$3.7031\cdot10^{-1}$	$6.8092\cdot10^{-1}$	$8.7980\cdot10^{-1}$	$9.0207\cdot10^{-1}$								
1.1	$-1.0593\cdot10^{-1}$	$4.1981\cdot10^{-2}$	$3.0753\cdot10^{-1}$	$5.6558\cdot10^{-1}$	$7.2459\cdot10^{-1}$	$6.6555\cdot10^{-1}$							
1.207	$-1.1316\cdot10^{-1}$	$-5.7833\cdot10^{-1}$	$-5.2381\cdot10^{-1}$	$-3.3161\cdot10^{-1}$	$-9.3453\cdot10^{-2}$	$1.0167\cdot10^{-1}$	$1.6714\cdot10^{-1}$						
1.314	$1.1460\cdot10^{-1}$	$-8.2922\cdot10^{-1}$	$-9.7209\cdot10^{-1}$	$-9.3921\cdot10^{-1}$	$-7.6161\cdot10^{-1}$	$-5.1788\cdot10^{-1}$	$-1.0898\cdot10^{-1}$	$2.1725\cdot10^{-2}$					
1.364	$2.5725\cdot10^{-1}$	$-7.8036\cdot10^{-1}$	-1.0282	-1.0620	$-9.3493\cdot10^{-1}$	$-7.1397\cdot10^{-1}$	$-2.2358\cdot10^{-1}$	$2.3230\cdot10^{-2}$	$8.2961\cdot10^{-2}$				
$\sqrt{2}$	$4.0025\cdot10^{-1}$	$-6.6565\cdot10^{-1}$	$-9.9564\cdot10^{-1}$	-1.0974	-1.0263	$-8.3253\cdot10^{-1}$	$-3.1208\cdot10^{-1}$	$3.8063\cdot10^{-2}$	$1.3357\cdot10^{-1}$	$2.2179\cdot10^{-1}$			
1.464	$5.2481\cdot10^{-1}$	$-5.0275\cdot10^{-1}$	$-9.1500\cdot10^{-1}$	-1.0549	-1.0278	$-8.6013\cdot10^{-1}$	$-3.4235\cdot10^{-1}$	$6.9830\cdot10^{-2}$	$1.9848\cdot10^{-1}$	$3.1026\cdot10^{-1}$	$4.0150\cdot10^{-1}$		
1.514	$6.4610\cdot10^{-1}$	$-3.1490\cdot10^{-1}$	$-7.2563\cdot10^{-1}$	$-9.4576\cdot10^{-1}$	$-9.5956\cdot10^{-1}$	$-8.2436\cdot10^{-1}$	$-3.1917\cdot10^{-1}$	$1.3259\cdot10^{-1}$	$2.8222\cdot10^{-1}$	$3.9933\cdot10^{-1}$	$4.9779\cdot10^{-1}$	$5.7906\cdot10^{-1}$	
1.6	$7.9854\cdot10^{-1}$	$4.0310\cdot10^{-2}$	$-3.6443\cdot10^{-1}$	$-6.3458\cdot10^{-1}$	$-7.0384\cdot10^{-1}$	$-6.1919\cdot10^{-1}$	$-1.8154\cdot10^{-1}$	$2.9794\cdot10^{-1}$	$4.6513\cdot10^{-1}$	$5.8663\cdot10^{-1}$	$6.6568\cdot10^{-1}$	$7.2428\cdot10^{-1}$	$8.0452\cdot10^{-1}$

Supplementary Table 12: Values of Ω_M hexagonal-base lattices of Co as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

				b/a			
c/a	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$5.5970\cdot10^{-1}$	$-8.2705\cdot10^{-1}$	-1.1595	$-8.6014\cdot10^{-1}$	$-8.0468\cdot10^{-1}$	-1.1061	-1.3322
1.45	$8.0651\cdot10^{-1}$	$-7.2322\cdot10^{-1}$	-1.2574	$-9.2081\cdot10^{-1}$	$-7.5222\cdot10^{-1}$	$-9.5971\cdot10^{-1}$	-1.1864
1.5	$9.5052\cdot10^{-1}$	$-6.6212\cdot10^{-1}$	-1.3077	$-9.6267\cdot10^{-1}$	$-6.6279\cdot10^{-1}$	$-7.6927\cdot10^{-1}$	$-9.8401\cdot10^{-1}$
1.55	1.1553	$-4.9754\cdot10^{-1}$	-1.3057	$-9.8345\cdot10^{-1}$	$-6.0169\cdot10^{-1}$	$-5.9814\cdot10^{-1}$	$-7.8639\cdot10^{-1}$
1.6	1.3341	$-3.2095\cdot10^{-1}$	-1.2356	$-9.8500\cdot10^{-1}$	$-5.6524\cdot10^{-1}$	$-4.6351\cdot10^{-1}$	$-5.9947\cdot10^{-1}$
$\sqrt{8/3}$	1.4281	$-2.0483\cdot10^{-1}$	-1.1703	$-9.0226\cdot10^{-1}$	$-5.0358\cdot10^{-1}$	$-3.4081\cdot10^{-1}$	$-4.4633\cdot10^{-1}$
1.65	1.4728	$-1.4490\cdot10^{-1}$	-1.1316	$-8.7577\cdot10^{-1}$	$-4.6778\cdot10^{-1}$	$-2.8070\cdot10^{-1}$	$-3.6531\cdot10^{-1}$
1.7	1.5767	$1.6472\cdot10^{-2}$	-1.0043	$-8.1936\cdot10^{-1}$	$-3.1045\cdot10^{-1}$	$-5.8852\cdot10^{-2}$	$-7.8522\cdot10^{-2}$
1.75	1.6887	$1.7654\cdot10^{-1}$	$-8.6476\cdot10^{-1}$	$-6.7833\cdot10^{-1}$	$-1.6516\cdot10^{-1}$	$1.2569\cdot10^{-1}$	$1.6173\cdot10^{-1}$
1.8	1.7421	$3.1825\cdot10^{-1}$	$-7.1860\cdot10^{-1}$	$-5.3890\cdot10^{-1}$	$-8.1386\cdot10^{-3}$	$3.0646\cdot10^{-1}$	$3.9169\cdot10^{-1}$
1.85	1.7846	$4.3865\cdot10^{-1}$	$-5.7342\cdot10^{-1}$	$-3.7459\cdot10^{-1}$	$1.0843\cdot10^{-1}$	$4.2006\cdot10^{-1}$	$5.3772\cdot10^{-1}$

Cr - Ω_M

Supplementary Table 13: Values of Ω_M cubic-base lattices of Cr as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a													
c/a	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6	1.7
0.8	$2.7494\cdot10^{-1}$													
0.9	$4.4526\cdot10^{-1}$	$7.7110\cdot10^{-1}$												
0.95	$4.6431\cdot10^{-1}$	$8.3369\cdot10^{-1}$	$9.4136\cdot10^{-1}$											
1	$4.5180\cdot10^{-1}$	$7.9792\cdot10^{-1}$	$9.4559\cdot10^{-1}$	1										
1.05	$4.1061\cdot10^{-1}$	$6.7422\cdot10^{-1}$	$8.4857\cdot10^{-1}$	$9.4671\cdot10^{-1}$	$9.5035\cdot10^{-1}$									
1.1	$3.6869\cdot10^{-1}$	$5.1248\cdot10^{-1}$	$6.8221\cdot10^{-1}$	$8.0997\cdot10^{-1}$	$8.6204\cdot10^{-1}$	$8.3117\cdot10^{-1}$								
1.207	$3.5834\cdot10^{-1}$	$2.3729\cdot10^{-1}$	$3.0583\cdot10^{-1}$	$4.1170\cdot10^{-1}$	$5.0207\cdot10^{-1}$	$5.5225\cdot10^{-1}$	$5.1630\cdot10^{-1}$							
1.314	$4.0947\cdot10^{-1}$	$1.5273\cdot10^{-1}$	$9.4996\cdot10^{-2}$	$1.2345\cdot10^{-1}$	$1.9659\cdot10^{-1}$	$2.7132\cdot10^{-1}$	$3.8121\cdot10^{-1}$	$4.2941\cdot10^{-1}$						
1.364	$4.2906\cdot10^{-1}$	$1.7418\cdot10^{-1}$	$6.7315\cdot10^{-2}$	$5.3660\cdot10^{-2}$	$1.1251\cdot10^{-1}$	$1.8846\cdot10^{-1}$	$3.2883\cdot10^{-1}$	$4.2573\cdot10^{-1}$	$4.4501\cdot10^{-1}$					
$\sqrt{2}$	$4.4190\cdot10^{-1}$	$2.1422\cdot10^{-1}$	$8.1500\cdot10^{-2}$	$3.1322\cdot10^{-2}$	$7.0423\cdot10^{-2}$	$1.4402\cdot10^{-1}$	$2.9927\cdot10^{-1}$	$4.1588\cdot10^{-1}$	$4.4645\cdot10^{-1}$	$4.5624\cdot10^{-1}$				
1.464	$4.5160\cdot10^{-1}$	$2.6245\cdot10^{-1}$	$1.2531\cdot10^{-1}$	$5.1694\cdot10^{-2}$	$6.7799\cdot10^{-2}$	$1.3624\cdot10^{-1}$	$2.9593\cdot10^{-1}$	$4.1070\cdot10^{-1}$	$4.3882\cdot10^{-1}$	$4.4737\cdot10^{-1}$	$4.3789\cdot10^{-1}$			
1.514	$4.6012\cdot10^{-1}$	$3.1437\cdot10^{-1}$	$1.8727\cdot10^{-1}$	$1.0051\cdot10^{-1}$	$9.8274\cdot10^{-2}$	$1.5671\cdot10^{-1}$	$3.1201\cdot10^{-1}$	$4.1291\cdot10^{-1}$	$4.3361\cdot10^{-1}$	$4.3407\cdot10^{-1}$	$4.1712\cdot10^{-1}$	$3.9368\cdot10^{-1}$		
1.6	$4.8238\cdot10^{-1}$	$4.0183\cdot10^{-1}$	$3.0668\cdot10^{-1}$	$2.1846\cdot10^{-1}$	$1.9469\cdot10^{-1}$	$2.2661\cdot10^{-1}$	$3.5573\cdot10^{-1}$	$4.3048\cdot10^{-1}$	$4.3799\cdot10^{-1}$	$4.2505\cdot10^{-1}$	$3.9747\cdot10^{-1}$	$3.6417\cdot10^{-1}$	$3.1513\cdot10^{-1}$	
1.7	$5.1670\cdot10^{-1}$	$5.0835\cdot10^{-1}$	$4.5906\cdot10^{-1}$	$3.7834\cdot10^{-1}$	$3.2972\cdot10^{-1}$	$3.2601\cdot10^{-1}$	$3.9864\cdot10^{-1}$	$4.5231\cdot10^{-1}$	$4.5469\cdot10^{-1}$	$4.4110\cdot10^{-1}$	$4.1212\cdot10^{-1}$	$3.7576\cdot10^{-1}$	$3.0494\cdot10^{-1}$	$2.5132\cdot10^{-1}$

Supplementary Table 14: Values of Ω_M hexagonal-base lattices of Cr as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a						
c/a	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$5.0824\cdot10^{-1}$	$-5.3076\cdot10^{-2}$	$-2.0389\cdot10^{-2}$	$8.2573\cdot10^{-2}$	$9.2548\cdot10^{-2}$	$4.7538\cdot10^{-2}$	$-5.6119\cdot10^{-2}$
1.45	$6.1718\cdot10^{-1}$	$-1.0707\cdot10^{-2}$	$-9.3509\cdot10^{-2}$	$2.0891\cdot10^{-2}$	$6.6504\cdot10^{-2}$	$6.1336\cdot10^{-2}$	$2.6506\cdot10^{-3}$
1.5	$7.0436\cdot10^{-1}$	$6.8543\cdot10^{-2}$	$-1.4994\cdot10^{-1}$	$-2.7401\cdot10^{-2}$	$6.0339\cdot10^{-2}$	$9.2604\cdot10^{-2}$	$9.0945\cdot10^{-2}$
1.55	$7.6499\cdot10^{-1}$	$1.6276\cdot10^{-1}$	$-1.8137\cdot10^{-1}$	$-5.7881\cdot10^{-2}$	$6.8512\cdot10^{-2}$	$1.4578\cdot10^{-1}$	$2.0159\cdot10^{-1}$
1.6	$7.9744\cdot10^{-1}$	$2.5293\cdot10^{-1}$	$-1.7836\cdot10^{-1}$	$-6.0544\cdot10^{-2}$	$1.0330\cdot10^{-1}$	$2.1603\cdot10^{-1}$	$3.0023\cdot10^{-1}$
$\sqrt{8/3}$	$8.0046\cdot10^{-1}$	$3.1317\cdot10^{-1}$	$-1.5574\cdot10^{-1}$	$-4.5728\cdot10^{-2}$	$1.3369\cdot10^{-1}$	$2.6508\cdot10^{-1}$	$3.5491\cdot10^{-1}$
1.65	$7.9987\cdot10^{-1}$	$3.4017\cdot10^{-1}$	$-1.3873\cdot10^{-1}$	$-3.3697\cdot10^{-2}$	$1.5133\cdot10^{-1}$	$2.8713\cdot10^{-1}$	$3.7943\cdot10^{-1}$
1.7	$7.8149\cdot10^{-1}$	$4.0588\cdot10^{-1}$	$-7.2057\cdot10^{-2}$	$1.7175\cdot10^{-2}$	$2.1327\cdot10^{-1}$	$3.4954\cdot10^{-1}$	$4.3955\cdot10^{-1}$
1.75	$7.5243\cdot10^{-1}$	$4.5620\cdot10^{-1}$	$3.4983\cdot10^{-3}$	$7.1885\cdot10^{-2}$	$2.6566\cdot10^{-1}$	$4.0190\cdot10^{-1}$	$4.8285\cdot10^{-1}$
1.8	$7.1387\cdot10^{-1}$	$4.9675\cdot10^{-1}$	$7.7321\cdot10^{-2}$	$1.3827\cdot10^{-1}$	$3.1803\cdot10^{-1}$	$4.4904\cdot10^{-1}$	$5.2189\cdot10^{-1}$
1.85	$6.7271\cdot10^{-1}$	$5.0544\cdot10^{-1}$	$1.3931\cdot10^{-1}$	$1.9716\cdot10^{-1}$	$3.6156\cdot10^{-1}$	$4.7315\cdot10^{-1}$	$5.2828\cdot10^{-1}$

Fe - Ω_M

Supplementary Table 15: Values of Ω_M cubic-base lattices of Fe as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a													
c/a	0.7	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
0.7	-1.7181													
0.8	$-9.3527\cdot10^{-1}$	$-9.2841\cdot10^{-1}$												
0.9	$9.0110\cdot10^{-2}$	$-2.0368\cdot10^{-1}$	$3.5075\cdot10^{-1}$											
0.95	$4.0209\cdot10^{-1}$	$2.0358\cdot10^{-2}$	$5.4171\cdot10^{-1}$	$7.9295\cdot10^{-1}$										
1	$5.9816\cdot10^{-1}$	$8.5660\cdot10^{-2}$	$5.2549\cdot10^{-1}$	$8.3441\cdot10^{-1}$	1									
1.05	$6.9537\cdot10^{-1}$	$3.6294\cdot10^{-2}$	$2.7563\cdot10^{-1}$	$5.7615\cdot10^{-1}$	$8.0510\cdot10^{-1}$	$8.4288\cdot10^{-1}$								
1.1	$7.2483\cdot10^{-1}$	$-5.3800\cdot10^{-2}$	$-8.0379\cdot10^{-2}$	$1.7629\cdot10^{-1}$	$4.4794\cdot10^{-1}$	$6.0399\cdot10^{-1}$	$5.8473\cdot10^{-1}$							
1.207	$7.0473\cdot10^{-1}$	$-1.7022\cdot10^{-1}$	$-8.5607\cdot10^{-1}$	$-7.8457\cdot10^{-1}$	$-5.5225\cdot10^{-1}$	$-2.6769\cdot10^{-1}$	$-1.9583\cdot10^{-2}$	$1.4057\cdot10^{-1}$						
1.314	$5.6342\cdot10^{-1}$	$-1.3084\cdot10^{-1}$	-1.2371	-1.4598	-1.3796	-1.1161	$-7.7752\cdot10^{-1}$	$-1.3195\cdot10^{-1}$	$1.6532\cdot10^{-1}$					
1.364	$4.6124\cdot10^{-1}$	$-7.8342\cdot10^{-2}$	-1.2467	-1.5824	-1.6130	-1.3965	-1.0539	$-2.7516\cdot10^{-1}$	$2.1004\cdot10^{-1}$	$3.3048\cdot10^{-1}$				
$\sqrt{2}$	$3.5115\cdot10^{-1}$	$-1.6125\cdot10^{-2}$	-1.1672	-1.5749	-1.7167	-1.5633	-1.2377	$-3.9575\cdot10^{-1}$	$2.3556\cdot10^{-1}$	$4.1092\cdot10^{-1}$	$5.3957\cdot10^{-1}$			
1.464	$2.3545\cdot10^{-1}$	$5.5738\cdot10^{-2}$	-1.0128	-1.4508	-1.6697	-1.6049	-1.3203	$-4.7456\cdot10^{-1}$	$2.2921\cdot10^{-1}$	$4.5474\cdot10^{-1}$	$6.1980\cdot10^{-1}$	$7.2983\cdot10^{-1}$		
1.514	$1.1537\cdot10^{-1}$	$9.9144\cdot10^{-2}$	$-7.9996\cdot10^{-1}$	-1.2443	-1.5074	-1.5336	-1.3178	$-5.0631\cdot10^{-1}$	$2.3505\cdot10^{-1}$	$4.7851\cdot10^{-1}$	$6.6332\cdot10^{-1}$	$7.8834\cdot10^{-1}$	$8.6150\cdot10^{-1}$	
1.6	$-9.8795\cdot10^{-2}$	$1.3046\cdot10^{-1}$	$-3.8549\cdot10^{-1}$	$-7.7850\cdot10^{-1}$	-1.0837	-1.2149	-1.1402	$-4.7615\cdot10^{-1}$	$2.5990\cdot10^{-1}$	$5.0516\cdot10^{-1}$	$6.8714\cdot10^{-1}$	$8.1487\cdot10^{-1}$	$8.7336\cdot10^{-1}$	$8.6655\cdot10^{-1}$

Supplementary Table 16: Values of Ω_M hexagonal-base lattices of Fe as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a							
c/a	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$5.9971\cdot10^{-1}$	$-2.3653\cdot10^{-1}$	-1.9776	-2.0799	-1.4183	-1.0346	-1.1030	-1.4337
1.45	$5.9145\cdot10^{-1}$	$7.7691\cdot10^{-2}$	-1.8468	-2.3525	-1.6757	-1.1249	$-9.8154\cdot10^{-1}$	-1.1581
1.5	$5.2814\cdot10^{-1}$	$3.4674\cdot10^{-1}$	-1.6353	-2.5225	-1.8756	-1.1905	$-8.5147\cdot10^{-1}$	$-8.9016\cdot10^{-1}$
1.55	$4.2641\cdot10^{-1}$	$5.5663\cdot10^{-1}$	-1.3763	-2.5747	-1.9952	-1.2036	$-7.2803\cdot10^{-1}$	$-6.5914\cdot10^{-1}$
1.6	$3.0456\cdot10^{-1}$	$6.9178\cdot10^{-1}$	-1.0943	-2.4780	-2.0223	-1.1826	$-6.1726\cdot10^{-1}$	$-4.4785\cdot10^{-1}$
$\sqrt{8/3}$	$2.1631\cdot10^{-1}$	$7.4204\cdot10^{-1}$	$-9.0541\cdot10^{-1}$	-2.3542	-1.9971	-1.1521	$-5.4139\cdot10^{-1}$	$-3.2368\cdot10^{-1}$
1.65	$1.6959\cdot10^{-1}$	$7.5678\cdot10^{-1}$	$-8.0895\cdot10^{-1}$	-2.2772	-1.9708	-1.1320	$-5.0660\cdot10^{-1}$	$-2.6470\cdot10^{-1}$
1.7	$3.0492\cdot10^{-2}$	$7.6377\cdot10^{-1}$	$-5.3302\cdot10^{-1}$	-2.0168	-1.8454	-1.0555	$-4.0779\cdot10^{-1}$	$-1.1022\cdot10^{-1}$
1.75	$-1.0807\cdot10^{-1}$	$7.3029\cdot10^{-1}$	$-2.8461\cdot10^{-1}$	-1.7269	-1.6637	$-9.5519\cdot10^{-1}$	$-3.1385\cdot10^{-1}$	$2.8590\cdot10^{-2}$

Mn - Ω_M

Supplementary Table 17: Values of Ω_M cubic-base lattices of Mn as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a												
		0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
	0.8	1.2498												
	0.9	$7.5662\cdot10^{-1}$	1.0152											
	0.95	$4.1837\cdot10^{-1}$	$9.4729\cdot10^{-1}$	$9.9336\cdot10^{-1}$										
	1	$1.6781\cdot10^{-1}$	$8.4538\cdot10^{-1}$	$9.7315\cdot10^{-1}$										
	1.05	$9.2455\cdot10^{-2}$	$7.9752\cdot10^{-1}$	$9.5243\cdot10^{-1}$	$9.9341\cdot10^{-1}$	$9.7597\cdot10^{-1}$								
	1.1	$1.3022\cdot10^{-1}$	$8.0644\cdot10^{-1}$	$9.7513\cdot10^{-1}$	1.0053	$9.5911\cdot10^{-1}$	$8.7938\cdot10^{-1}$							
c/a	1.207	$3.8134\cdot10^{-1}$	$9.8558\cdot10^{-1}$	1.1470	1.1715	1.0477	$8.4804\cdot10^{-1}$	$4.0009\cdot10^{-1}$						
	1.314	$6.2139\cdot10^{-1}$	1.2095	1.3530	1.3669	1.2426	$9.9670\cdot10^{-1}$	$3.2728\cdot10^{-1}$	$-1.3520\cdot10^{-1}$					
	1.364	$7.1155\cdot10^{-1}$	1.2368	1.4050	1.4402	1.3321	1.1011	$3.8896\cdot10^{-1}$	$-1.9695\cdot10^{-1}$	$-3.3160\cdot10^{-1}$				
	$\sqrt{2}$	$7.8225\cdot10^{-1}$	1.2001	1.3933	1.4643	1.3969	1.1988	$4.8946\cdot10^{-1}$	$-1.8681\cdot10^{-1}$	$-3.8114\cdot10^{-1}$	$-4.7200\cdot10^{-1}$			
	1.464	$8.5246\cdot10^{-1}$	1.1241	1.3193	1.4265	1.4117	1.2637	$5.9978\cdot10^{-1}$	$-1.2802\cdot10^{-1}$	$-3.5546\cdot10^{-1}$	$-4.8685\cdot10^{-1}$	$-5.3030\cdot10^{-1}$		
	1.514	$8.9158\cdot10^{-1}$	1.0512	1.2105	1.3320	1.3664	1.2755	$6.9452\cdot10^{-1}$	$-3.5685\cdot10^{-2}$	$-2.8220\cdot10^{-1}$	$-4.3794\cdot10^{-1}$	$-5.1502\cdot10^{-1}$	$-5.2281\cdot10^{-1}$	
	1.6	$8.9525\cdot10^{-1}$	$9.4659\cdot10^{-1}$	1.0138	1.1253	1.1942	1.1802	$8.0097\cdot10^{-1}$	$1.6857\cdot10^{-1}$	$-8.9107\cdot10^{-2}$	$-2.8297\cdot10^{-1}$	$-4.0078\cdot10^{-1}$	$-4.7370\cdot10^{-1}$	$-5.3190\cdot10^{-1}$

Supplementary Table 18: Values of Ω_M hexagonal-base lattices of Mn as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a							
		0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
	1.4	1.1322	1.1084	1.6483	1.6211	1.0777	$4.6304\cdot10^{-1}$	$4.6053\cdot10^{-2}$	$1.5709\cdot10^{-2}$
	1.45	1.1569	1.0866	1.7025	1.8206	1.2727	$6.2123\cdot10^{-1}$	$1.2754\cdot10^{-1}$	$-2.2525\cdot10^{-2}$
	1.5	1.2125	1.0664	1.7042	1.9848	1.4557	$7.7827\cdot10^{-1}$	$2.2706\cdot10^{-1}$	$-1.9706\cdot10^{-2}$
	1.55	1.2965	1.0409	1.6372	2.0806	1.6060	$9.3025\cdot10^{-1}$	$3.4009\cdot10^{-1}$	$-9.9816\cdot10^{-4}$
	1.6	1.3772	1.0256	1.5093	2.0899	1.7132	1.0671	$4.6649\cdot10^{-1}$	$5.2649\cdot10^{-2}$
c/a	$\sqrt{8/3}$	1.4318	1.0237	1.3970	2.0518	1.7597	1.1417	$5.5740\cdot10^{-1}$	$1.0669\cdot10^{-1}$
	1.65	1.4600	1.0233	1.3373	2.0208	1.7759	1.1763	$6.0201\cdot10^{-1}$	$1.4156\cdot10^{-1}$
	1.7	1.5451	1.0393	1.1488	1.8867	1.7877	1.2606	$7.2608\cdot10^{-1}$	$2.6644\cdot10^{-1}$
	1.75	1.6302	1.0689	$9.6342\cdot10^{-1}$	1.7007	1.7446	1.3233	$8.4067\cdot10^{-1}$	$4.2054\cdot10^{-1}$
	1.8	1.7075	1.1154	$7.9668\cdot10^{-1}$	1.4868	1.6301	1.3602	$9.4224\cdot10^{-1}$	$5.4929\cdot10^{-1}$
	1.85	1.7367	1.1696	$6.7022\cdot10^{-1}$	1.2392	1.4912	1.3684	1.0361	$6.6000\cdot10^{-1}$

Ni - Ω_M

Supplementary Table 19: Values of Ω_M cubic-base lattices of Ni as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a												
		0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
	0.8	$5.0236\cdot10^{-1}$												
	0.9	$8.1371\cdot10^{-1}$	$7.9318\cdot10^{-1}$											
	0.95	$9.5249\cdot10^{-1}$	$8.9943\cdot10^{-1}$	$9.4858\cdot10^{-1}$										
	1	$9.9404\cdot10^{-1}$	$9.6686\cdot10^{-1}$	$9.7561\cdot10^{-1}$	1									
	1.05	$8.9120\cdot10^{-1}$	$9.2722\cdot10^{-1}$	$8.8691\cdot10^{-1}$	$9.6733\cdot10^{-1}$	$9.7902\cdot10^{-1}$								
	1.1	$7.0887\cdot10^{-1}$	$8.2995\cdot10^{-1}$	$7.9577\cdot10^{-1}$	$8.2938\cdot10^{-1}$	$8.8365\cdot10^{-1}$	$9.5974\cdot10^{-1}$							
c/a	1.207	$1.4381\cdot10^{-1}$	$5.6756\cdot10^{-1}$	$5.6806\cdot10^{-1}$	$5.7519\cdot10^{-1}$	$6.7122\cdot10^{-1}$	$8.1371\cdot10^{-1}$	1.0012						
	1.314	$-3.1251\cdot10^{-1}$	$2.7722\cdot10^{-1}$	$3.9117\cdot10^{-1}$	$4.1922\cdot10^{-1}$	$4.8816\cdot10^{-1}$	$6.0598\cdot10^{-1}$	$8.5848\cdot10^{-1}$	$8.2457\cdot10^{-1}$					
	1.364	$-5.3504\cdot10^{-1}$	$1.7455\cdot10^{-1}$	$2.8803\cdot10^{-1}$	$3.5573\cdot10^{-1}$	$4.1319\cdot10^{-1}$	$4.9434\cdot10^{-1}$	$7.1841\cdot10^{-1}$	$7.0221\cdot10^{-1}$	$5.9908\cdot10^{-1}$				
	$\sqrt{2}$	$-7.3606\cdot10^{-1}$	$7.1064\cdot10^{-3}$	$2.3621\cdot10^{-1}$	$3.2811\cdot10^{-1}$	$3.2977\cdot10^{-1}$	$3.8239\cdot10^{-1}$	$5.4367\cdot10^{-1}$	$5.4942\cdot10^{-1}$	$4.6223\cdot10^{-1}$	$3.3305\cdot10^{-1}$			
	1.464	$-9.1786\cdot10^{-1}$	$-8.8050\cdot10^{-2}$	$1.6997\cdot10^{-1}$	$2.9690\cdot10^{-1}$	$2.7422\cdot10^{-1}$	$2.8145\cdot10^{-1}$	$3.4320\cdot10^{-1}$	$3.6491\cdot10^{-1}$	$2.8711\cdot10^{-1}$	$1.5337\cdot10^{-1}$	$-8.3169\cdot10^{-3}$		
	1.514	-1.0923	$-2.0833\cdot10^{-1}$	$9.8517\cdot10^{-2}$	$2.3222\cdot10^{-1}$	$2.1296\cdot10^{-1}$	$1.8614\cdot10^{-1}$	$1.7136\cdot10^{-1}$	$1.5932\cdot10^{-1}$	$7.9006\cdot10^{-2}$	$-4.4557\cdot10^{-2}$	$-2.0274\cdot10^{-1}$	$-4.0076\cdot10^{-1}$	
	1.6	-1.3749	$-3.6212\cdot10^{-1}$	$-3.0936\cdot10^{-2}$	$1.2354\cdot10^{-1}$	$9.6963\cdot10^{-2}$	$-1.4538\cdot10^{-2}$	$-1.5992\cdot10^{-1}$	$-2.1510\cdot10^{-1}$	$-2.9752\cdot10^{-1}$	$-4.3851\cdot10^{-1}$	$-5.5807\cdot10^{-1}$	$-7.4851\cdot10^{-1}$	-1.1792

Supplementary Table 20: Values of Ω_M hexagonal-base lattices of Ni as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a						
		0.8	0.9	1	1.1	1.2	1.3	1.4
	1.4	$-3.5470\cdot10^{-1}$	$-6.4405\cdot10^{-1}$	$-4.8595\cdot10^{-1}$	$-1.1402\cdot10^{-1}$	$-1.1836\cdot10^{-1}$	$-2.0797\cdot10^{-1}$	-1.0697
	1.45	$-4.2716\cdot10^{-1}$	$-6.4972\cdot10^{-1}$	$-6.7034\cdot10^{-1}$	$-3.1829\cdot10^{-1}$	$-3.0380\cdot10^{-1}$	$-1.9703\cdot10^{-1}$	-1.0805
	1.5	$-5.5200\cdot10^{-1}$	$-8.4750\cdot10^{-1}$	$-7.8965\cdot10^{-1}$	$-5.0112\cdot10^{-1}$	$-1.8637\cdot10^{-1}$	$-4.5800\cdot10^{-1}$	-1.1682
	1.55	$-7.4103\cdot10^{-1}$	$-6.4919\cdot10^{-1}$	$-8.2753\cdot10^{-1}$	$-7.4648\cdot10^{-1}$	$-3.1822\cdot10^{-1}$	$-6.2659\cdot10^{-1}$	$-5.8776\cdot10^{-1}$
c/a	1.6	$-9.6871\cdot10^{-1}$	$-6.6083\cdot10^{-1}$	$-7.8629\cdot10^{-1}$	$-9.4839\cdot10^{-1}$	$-4.8968\cdot10^{-1}$	$-5.5494\cdot10^{-1}$	$-6.4872\cdot10^{-1}$
	$\sqrt{8/3}$	-1.1387	$-6.9058\cdot10^{-1}$	$-7.4332\cdot10^{-1}$	-1.0952	$-5.1719\cdot10^{-1}$	$-5.7879\cdot10^{-1}$	-1.0294
	1.65	-1.2049	$-7.0874\cdot10^{-1}$	$-7.2312\cdot10^{-1}$	-1.1119	$-5.6746\cdot10^{-1}$	$-5.9858\cdot10^{-1}$	-1.0912
	1.7	-1.5054	$-6.7424\cdot10^{-1}$	$-6.7097\cdot10^{-1}$	-1.0497	$-6.9659\cdot10^{-1}$	$-8.8679\cdot10^{-1}$	-1.2999
	1.75	-1.7552	$-7.5199\cdot10^{-1}$	$-6.1603\cdot10^{-1}$	-1.2036	-1.3122	$-8.2383\cdot10^{-1}$	$-9.4776\cdot10^{-1}$

Ω_{nC} for cubic and hexagonal systems

Co - Ω_{nC}

Supplementary Table 21: Values of Ω_{nC} cubic-base lattices of Co as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a												
		0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
	0.8	$9.6825\cdot10^{-1}$												
	0.9	$9.1727\cdot10^{-1}$	$9.7768\cdot10^{-1}$											
	0.95	$8.7425\cdot10^{-1}$	$9.7010\cdot10^{-1}$	$9.8769\cdot10^{-1}$										
	1	$8.3291\cdot10^{-1}$	$9.6403\cdot10^{-1}$	$9.8827\cdot10^{-1}$										
	1.05	$7.9679\cdot10^{-1}$	$9.4559\cdot10^{-1}$	$9.7264\cdot10^{-1}$	$9.9113\cdot10^{-1}$	$9.7553\cdot10^{-1}$								
c/a	1.1	$7.4214\cdot10^{-1}$	$9.2406\cdot10^{-1}$	$9.8020\cdot10^{-1}$	$9.8778\cdot10^{-1}$	$9.8555\cdot10^{-1}$	$9.7123\cdot10^{-1}$							
	1.207	$6.5819\cdot10^{-1}$	$8.6719\cdot10^{-1}$	$9.5126\cdot10^{-1}$	$9.7556\cdot10^{-1}$	$9.7392\cdot10^{-1}$	$9.4741\cdot10^{-1}$	$8.9274\cdot10^{-1}$						
	1.314	$5.7591\cdot10^{-1}$	$7.8711\cdot10^{-1}$	$8.6841\cdot10^{-1}$	$9.2558\cdot10^{-1}$	$9.2791\cdot10^{-1}$	$8.8665\cdot10^{-1}$	$8.1830\cdot10^{-1}$	$7.5183\cdot10^{-1}$					
	1.364	$5.4257\cdot10^{-1}$	$7.3554\cdot10^{-1}$	$8.2179\cdot10^{-1}$	$8.7137\cdot10^{-1}$	$8.7780\cdot10^{-1}$	$8.6013\cdot10^{-1}$	$7.8332\cdot10^{-1}$	$7.1756\cdot10^{-1}$	$6.9248\cdot10^{-1}$				
	$\sqrt{2}$	$5.0704\cdot10^{-1}$	$6.7212\cdot10^{-1}$	$7.6105\cdot10^{-1}$	$8.1978\cdot10^{-1}$	$8.4693\cdot10^{-1}$	$8.2553\cdot10^{-1}$	$7.4796\cdot10^{-1}$	$6.8902\cdot10^{-1}$	$6.8835\cdot10^{-1}$	$6.7277\cdot10^{-1}$			
	1.464	$4.7410\cdot10^{-1}$	$6.1406\cdot10^{-1}$	$7.2129\cdot10^{-1}$	$7.7395\cdot10^{-1}$	$7.9443\cdot10^{-1}$	$7.7323\cdot10^{-1}$	$7.0470\cdot10^{-1}$	$6.6508\cdot10^{-1}$	$6.6517\cdot10^{-1}$	$6.3719\cdot10^{-1}$	$6.4053\cdot10^{-1}$		
	1.514	$4.3578\cdot10^{-1}$	$5.6277\cdot10^{-1}$	$6.4716\cdot10^{-1}$	$7.1499\cdot10^{-1}$	$7.4094\cdot10^{-1}$	$7.3251\cdot10^{-1}$	$6.5912\cdot10^{-1}$	$6.4556\cdot10^{-1}$	$6.3185\cdot10^{-1}$	$6.3216\cdot10^{-1}$	$6.2901\cdot10^{-1}$	$6.2906\cdot10^{-1}$	
	1.6	$4.0640\cdot10^{-1}$	$4.8537\cdot10^{-1}$	$5.3560\cdot10^{-1}$	$6.0696\cdot10^{-1}$	$6.3372\cdot10^{-1}$	$6.3724\cdot10^{-1}$	$6.1206\cdot10^{-1}$	$5.8965\cdot10^{-1}$	$5.7832\cdot10^{-1}$	$5.8593\cdot10^{-1}$	$5.9711\cdot10^{-1}$	$6.1430\cdot10^{-1}$	$6.2271\cdot10^{-1}$

Supplementary Table 22: Values of Ω_{nC} hexagonal-base lattices of Co as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a						
		0.8	0.9	1	1.1	1.2	1.3	1.4
	1.4	$5.5421\cdot10^{-1}$	$7.7481\cdot10^{-1}$	$9.3805\cdot10^{-1}$	$9.6668\cdot10^{-1}$	$9.8327\cdot10^{-1}$	$9.5874\cdot10^{-1}$	$9.4315\cdot10^{-1}$
	1.45	$4.9714\cdot10^{-1}$	$7.1959\cdot10^{-1}$	$8.7373\cdot10^{-1}$	$9.0379\cdot10^{-1}$	$9.2244\cdot10^{-1}$	$8.9596\cdot10^{-1}$	$8.7224\cdot10^{-1}$
	1.5	$3.8197\cdot10^{-1}$	$6.4667\cdot10^{-1}$	$8.1084\cdot10^{-1}$	$8.9198\cdot10^{-1}$	$8.9051\cdot10^{-1}$	$8.6191\cdot10^{-1}$	$8.3123\cdot10^{-1}$
	1.55	$3.2698\cdot10^{-1}$	$5.8734\cdot10^{-1}$	$7.5140\cdot10^{-1}$	$8.3237\cdot10^{-1}$	$8.3257\cdot10^{-1}$	$8.0585\cdot10^{-1}$	$7.8707\cdot10^{-1}$
	1.6	$2.8224\cdot10^{-1}$	$5.2941\cdot10^{-1}$	$6.9735\cdot10^{-1}$	$7.7019\cdot10^{-1}$	$7.4970\cdot10^{-1}$	$7.2722\cdot10^{-1}$	$7.1133\cdot10^{-1}$
c/a	$\sqrt{8/3}$	$2.6162\cdot10^{-1}$	$4.9280\cdot10^{-1}$	$6.6303\cdot10^{-1}$	$7.2075\cdot10^{-1}$	$7.1689\cdot10^{-1}$	$6.9856\cdot10^{-1}$	$6.8319\cdot10^{-1}$
	1.65	$2.5062\cdot10^{-1}$	$4.7440\cdot10^{-1}$	$6.4521\cdot10^{-1}$	$7.0600\cdot10^{-1}$	$7.0079\cdot10^{-1}$	$6.8408\cdot10^{-1}$	$6.6981\cdot10^{-1}$
	1.7	$2.1808\cdot10^{-1}$	$4.2129\cdot10^{-1}$	$5.9240\cdot10^{-1}$	$6.7063\cdot10^{-1}$	$6.8524\cdot10^{-1}$	$6.7914\cdot10^{-1}$	$6.7086\cdot10^{-1}$
	1.75	$2.0057\cdot10^{-1}$	$3.7409\cdot10^{-1}$	$5.3893\cdot10^{-1}$	$6.2347\cdot10^{-1}$	$6.4215\cdot10^{-1}$	$6.4380\cdot10^{-1}$	$6.4480\cdot10^{-1}$
	1.8	$1.9045\cdot10^{-1}$	$3.3243\cdot10^{-1}$	$4.8564\cdot10^{-1}$	$5.7617\cdot10^{-1}$	$6.0064\cdot10^{-1}$	$6.1141\cdot10^{-1}$	$6.1991\cdot10^{-1}$
	1.85	$1.8509\cdot10^{-1}$	$2.9751\cdot10^{-1}$	$4.3461\cdot10^{-1}$	$5.4498\cdot10^{-1}$	$5.2919\cdot10^{-1}$	$5.7313\cdot10^{-1}$	$6.0074\cdot10^{-1}$

Cr - Ω_{nC}

Supplementary Table 23: Values of Ω_{nC} cubic-base lattices of Cr as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a													
c/a	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6	1.7
0.8	$4.4304\cdot10^{-1}$													
0.9	$5.4731\cdot10^{-1}$	$8.3890\cdot10^{-1}$												
0.95	$5.3465\cdot10^{-1}$	$8.8283\cdot10^{-1}$	$9.6191\cdot10^{-1}$											
1	$4.8900\cdot10^{-1}$	$8.5084\cdot10^{-1}$	$9.6530\cdot10^{-1}$											
1.05	$4.2287\cdot10^{-1}$	$7.5110\cdot10^{-1}$	$8.9174\cdot10^{-1}$	$9.6700\cdot10^{-1}$	$9.6862\cdot10^{-1}$									
1.1	$3.6169\cdot10^{-1}$	$6.1397\cdot10^{-1}$	$7.6882\cdot10^{-1}$	$8.6704\cdot10^{-1}$	$9.0398\cdot10^{-1}$	$8.7735\cdot10^{-1}$								
1.207	$3.1041\cdot10^{-1}$	$3.6067\cdot10^{-1}$	$4.5795\cdot10^{-1}$	$5.5276\cdot10^{-1}$	$6.2568\cdot10^{-1}$	$6.5269\cdot10^{-1}$	$5.8414\cdot10^{-1}$							
1.314	$2.9856\cdot10^{-1}$	$2.2705\cdot10^{-1}$	$2.4789\cdot10^{-1}$	$3.0279\cdot10^{-1}$	$3.5999\cdot10^{-1}$	$4.0085\cdot10^{-1}$	$4.2727\cdot10^{-1}$	$3.9465\cdot10^{-1}$						
1.364	$2.8181\cdot10^{-1}$	$1.9864\cdot10^{-1}$	$1.8443\cdot10^{-1}$	$2.1899\cdot10^{-1}$	$2.7262\cdot10^{-1}$	$3.1737\cdot10^{-1}$	$3.6517\cdot10^{-1}$	$3.6541\cdot10^{-1}$	$3.5001\cdot10^{-1}$					
$\sqrt{2}$	$2.5454\cdot10^{-1}$	$1.8029\cdot10^{-1}$	$1.4209\cdot10^{-1}$	$1.5852\cdot10^{-1}$	$2.0560\cdot10^{-1}$	$2.5521\cdot10^{-1}$	$3.2209\cdot10^{-1}$	$3.4032\cdot10^{-1}$	$3.3283\cdot10^{-1}$	$3.2158\cdot10^{-1}$				
1.464	$2.2152\cdot10^{-1}$	$1.6608\cdot10^{-1}$	$1.1444\cdot10^{-1}$	$1.1526\cdot10^{-1}$	$1.5623\cdot10^{-1}$	$2.1294\cdot10^{-1}$	$2.9847\cdot10^{-1}$	$3.2782\cdot10^{-1}$	$3.2259\cdot10^{-1}$	$3.0954\cdot10^{-1}$	$2.9244\cdot10^{-1}$			
1.514	$1.8738\cdot10^{-1}$	$1.5474\cdot10^{-1}$	$1.0183\cdot10^{-1}$	$9.0025\cdot10^{-2}$	$1.2401\cdot10^{-1}$	$1.8527\cdot10^{-1}$	$2.8787\cdot10^{-1}$	$3.2326\cdot10^{-1}$	$3.1860\cdot10^{-1}$	$3.0154\cdot10^{-1}$	$2.7774\cdot10^{-1}$	$2.5497\cdot10^{-1}$		
1.6	$1.2781\cdot10^{-1}$	$1.3696\cdot10^{-1}$	$9.4822\cdot10^{-2}$	$7.7718\cdot10^{-2}$	$9.8379\cdot10^{-2}$	$1.5747\cdot10^{-1}$	$2.7868\cdot10^{-1}$	$3.1816\cdot10^{-1}$	$3.1162\cdot10^{-1}$	$2.8935\cdot10^{-1}$	$2.6132\cdot10^{-1}$	$2.3246\cdot10^{-1}$	$1.9302\cdot10^{-1}$	
1.7	$6.3977\cdot10^{-2}$	$1.1653\cdot10^{-1}$	$1.0059\cdot10^{-1}$	$8.7409\cdot10^{-2}$	$9.3638\cdot10^{-2}$	$1.3835\cdot10^{-1}$	$2.5670\cdot10^{-1}$	$2.9666\cdot10^{-1}$	$2.9069\cdot10^{-1}$	$2.7263\cdot10^{-1}$	$2.4594\cdot10^{-1}$	$2.1530\cdot10^{-1}$	$1.6658\cdot10^{-1}$	$1.2116\cdot10^{-1}$

Supplementary Table 24: Values of Ω_{nC} hexagonal-base lattices of Cr as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a						
c/a	0.8	0.9	1	1.1	1.2	1.3	1.4
1.4	$2.0158\cdot10^{-1}$	$8.3892\cdot10^{-2}$	$2.2818\cdot10^{-1}$	$2.9762\cdot10^{-1}$	$2.9090\cdot10^{-1}$	$2.4366\cdot10^{-1}$	$1.4819\cdot10^{-1}$
1.45	$2.0971\cdot10^{-1}$	$6.4402\cdot10^{-2}$	$1.5669\cdot10^{-1}$	$2.3789\cdot10^{-1}$	$2.5041\cdot10^{-1}$	$2.2799\cdot10^{-1}$	$1.5930\cdot10^{-1}$
1.5	$2.0781\cdot10^{-1}$	$6.8605\cdot10^{-2}$	$9.3370\cdot10^{-2}$	$1.8109\cdot10^{-1}$	$2.1692\cdot10^{-1}$	$2.1632\cdot10^{-1}$	$1.7531\cdot10^{-1}$
1.55	$1.9648\cdot10^{-1}$	$7.3690\cdot10^{-2}$	$3.7901\cdot10^{-2}$	$1.3335\cdot10^{-1}$	$1.9151\cdot10^{-1}$	$2.1728\cdot10^{-1}$	$2.1081\cdot10^{-1}$
1.6	$1.6927\cdot10^{-1}$	$7.8815\cdot10^{-2}$	$6.4661\cdot10^{-4}$	$9.7216\cdot10^{-2}$	$1.6877\cdot10^{-1}$	$2.1270\cdot10^{-1}$	$2.3077\cdot10^{-1}$
$\sqrt{8/3}$	$1.4294\cdot10^{-1}$	$8.4198\cdot10^{-2}$	$-1.1132\cdot10^{-2}$	$7.7408\cdot10^{-2}$	$1.6018\cdot10^{-1}$	$2.1441\cdot10^{-1}$	$2.4270\cdot10^{-1}$
1.65	$1.2630\cdot10^{-1}$	$8.5630\cdot10^{-2}$	$-1.6962\cdot10^{-2}$	$6.9011\cdot10^{-2}$	$1.5414\cdot10^{-1}$	$2.1202\cdot10^{-1}$	$2.4456\cdot10^{-1}$
1.7	$7.6295\cdot10^{-2}$	$8.4883\cdot10^{-2}$	$-2.2665\cdot10^{-2}$	$5.3758\cdot10^{-2}$	$1.4670\cdot10^{-1}$	$2.0771\cdot10^{-1}$	$2.4584\cdot10^{-1}$
1.75	$2.1463\cdot10^{-2}$	$7.7115\cdot10^{-2}$	$-1.6154\cdot10^{-2}$	$4.1202\cdot10^{-2}$	$1.3293\cdot10^{-1}$	$1.9705\cdot10^{-1}$	$2.3323\cdot10^{-1}$
1.8	$-3.1685\cdot10^{-2}$	$6.5586\cdot10^{-2}$	$-7.3836\cdot10^{-3}$	$3.9573\cdot10^{-2}$	$1.2365\cdot10^{-1}$	$1.8727\cdot10^{-1}$	$2.1739\cdot10^{-1}$
1.85	$-8.6157\cdot10^{-2}$	$3.4949\cdot10^{-2}$	$-1.9818\cdot10^{-3}$	$3.2388\cdot10^{-2}$	$1.1006\cdot10^{-1}$	$1.6106\cdot10^{-1}$	$1.9311\cdot10^{-1}$

Fe - Ω_{nC}

Supplementary Table 25: Values of Ω_{nC} cubic-base lattices of Fe as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a													
		0.7	0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
c/a	0.7	$1.0451\cdot10^{-1}$													
	0.8	$3.2447\cdot10^{-1}$	$4.5578\cdot10^{-1}$												
	0.9	$4.2794\cdot10^{-1}$	$5.8556\cdot10^{-1}$	$8.4539\cdot10^{-1}$											
	0.95	$4.4260\cdot10^{-1}$	$5.6532\cdot10^{-1}$	$8.8257\cdot10^{-1}$	$9.6078\cdot10^{-1}$										
	1	$4.5696\cdot10^{-1}$	$5.2501\cdot10^{-1}$	$8.4661\cdot10^{-1}$	$9.6234\cdot10^{-1}$	1									
	1.05	$4.7632\cdot10^{-1}$	$4.7837\cdot10^{-1}$	$7.5747\cdot10^{-1}$	$8.9335\cdot10^{-1}$	$9.6461\cdot10^{-1}$	$9.6562\cdot10^{-1}$								
	1.1	$5.0279\cdot10^{-1}$	$4.3839\cdot10^{-1}$	$6.4349\cdot10^{-1}$	$7.7805\cdot10^{-1}$	$8.7218\cdot10^{-1}$	$9.0298\cdot10^{-1}$	$8.7324\cdot10^{-1}$							
	1.207	$5.8137\cdot10^{-1}$	$4.0488\cdot10^{-1}$	$3.9479\cdot10^{-1}$	$4.8266\cdot10^{-1}$	$5.7721\cdot10^{-1}$	$6.4821\cdot10^{-1}$	$6.7629\cdot10^{-1}$	$6.0559\cdot10^{-1}$						
	1.314	$6.5475\cdot10^{-1}$	$4.2868\cdot10^{-1}$	$2.4701\cdot10^{-1}$	$2.3294\cdot10^{-1}$	$2.9316\cdot10^{-1}$	$3.7098\cdot10^{-1}$	$4.3527\cdot10^{-1}$	$4.8229\cdot10^{-1}$	$4.5843\cdot10^{-1}$					
	1.364	$6.7158\cdot10^{-1}$	$4.4633\cdot10^{-1}$	$2.1545\cdot10^{-1}$	$1.6634\cdot10^{-1}$	$1.8893\cdot10^{-1}$	$2.6266\cdot10^{-1}$	$3.4191\cdot10^{-1}$	$4.3618\cdot10^{-1}$	$4.4408\cdot10^{-1}$	$4.4308\cdot10^{-1}$				
	$\sqrt{2}$	$6.7405\cdot10^{-1}$	$4.6271\cdot10^{-1}$	$2.0313\cdot10^{-1}$	$1.3010\cdot10^{-1}$	$1.1639\cdot10^{-1}$	$1.8549\cdot10^{-1}$	$2.7223\cdot10^{-1}$	$3.9992\cdot10^{-1}$	$4.3525\cdot10^{-1}$	$4.4291\cdot10^{-1}$	$4.5142\cdot10^{-1}$			
	1.464	$6.6896\cdot10^{-1}$	$4.7771\cdot10^{-1}$	$2.0482\cdot10^{-1}$	$1.1863\cdot10^{-1}$	$8.7241\cdot10^{-2}$	$1.3920\cdot10^{-1}$	$2.2448\cdot10^{-1}$	$3.7606\cdot10^{-1}$	$4.3388\cdot10^{-1}$	$4.4831\cdot10^{-1}$	$4.6176\cdot10^{-1}$	$4.7617\cdot10^{-1}$		
	1.514	$6.5776\cdot10^{-1}$	$4.8761\cdot10^{-1}$	$2.1609\cdot10^{-1}$	$1.2294\cdot10^{-1}$	$8.1981\cdot10^{-2}$	$1.1847\cdot10^{-1}$	$1.9636\cdot10^{-1}$	$3.6468\cdot10^{-1}$	$4.4108\cdot10^{-1}$	$4.5971\cdot10^{-1}$	$4.7630\cdot10^{-1}$	$4.9292\cdot10^{-1}$	$5.1155\cdot10^{-1}$	
	1.6	$6.3678\cdot10^{-1}$	$5.0069\cdot10^{-1}$	$2.4968\cdot10^{-1}$	$1.5398\cdot10^{-1}$	$1.0147\cdot10^{-1}$	$1.2226\cdot10^{-1}$	$1.8463\cdot10^{-1}$	$3.6443\cdot10^{-1}$	$4.6850\cdot10^{-1}$	$4.9179\cdot10^{-1}$	$5.1018\cdot10^{-1}$	$5.2803\cdot10^{-1}$	$5.4568\cdot10^{-1}$	$5.7909\cdot10^{-1}$

Supplementary Table 26: Values of Ω_{nC} hexagonal-base lattices of Fe as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a							
		0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
c/a	1.4	$2.5393\cdot10^{-1}$	$1.8525\cdot10^{-1}$	$1.0502\cdot10^{-1}$	$2.6507\cdot10^{-1}$	$4.2452\cdot10^{-1}$	$4.4451\cdot10^{-1}$	$3.7099\cdot10^{-1}$	$2.8999\cdot10^{-1}$
	1.45	$2.5709\cdot10^{-1}$	$2.0640\cdot10^{-1}$	$7.5244\cdot10^{-2}$	$1.5538\cdot10^{-1}$	$3.3093\cdot10^{-1}$	$3.9220\cdot10^{-1}$	$3.4994\cdot10^{-1}$	$2.9367\cdot10^{-1}$
	1.5	$2.5679\cdot10^{-1}$	$2.2579\cdot10^{-1}$	$6.9484\cdot10^{-2}$	$6.3247\cdot10^{-2}$	$2.4460\cdot10^{-1}$	$3.4951\cdot10^{-1}$	$3.4365\cdot10^{-1}$	$3.0713\cdot10^{-1}$
	1.55	$2.5258\cdot10^{-1}$	$2.4377\cdot10^{-1}$	$8.8103\cdot10^{-2}$	$-2.1025\cdot10^{-4}$	$1.7141\cdot10^{-1}$	$3.1835\cdot10^{-1}$	$3.4847\cdot10^{-1}$	$3.3807\cdot10^{-1}$
	1.6	$2.4866\cdot10^{-1}$	$2.5664\cdot10^{-1}$	$1.1414\cdot10^{-1}$	$-2.6130\cdot10^{-2}$	$1.1575\cdot10^{-1}$	$2.9808\cdot10^{-1}$	$3.6442\cdot10^{-1}$	$3.7032\cdot10^{-1}$
	$\sqrt{8/3}$	$2.4598\cdot10^{-1}$	$2.6163\cdot10^{-1}$	$1.3249\cdot10^{-1}$	$-2.0526\cdot10^{-2}$	$9.4250\cdot10^{-2}$	$2.8810\cdot10^{-1}$	$3.7616\cdot10^{-1}$	$3.9109\cdot10^{-1}$
	1.65	$2.4456\cdot10^{-1}$	$2.6304\cdot10^{-1}$	$1.4212\cdot10^{-1}$	$-1.1770\cdot10^{-2}$	$8.6606\cdot10^{-2}$	$2.8300\cdot10^{-1}$	$3.8086\cdot10^{-1}$	$4.0155\cdot10^{-1}$
	1.7	$2.4171\cdot10^{-1}$	$2.6410\cdot10^{-1}$	$1.6795\cdot10^{-1}$	$2.1950\cdot10^{-2}$	$7.6544\cdot10^{-2}$	$2.6663\cdot10^{-1}$	$3.9214\cdot10^{-1}$	$4.2999\cdot10^{-1}$
	1.75	$2.4240\cdot10^{-1}$	$2.6123\cdot10^{-1}$	$1.9056\cdot10^{-1}$	$6.0424\cdot10^{-2}$	$8.1977\cdot10^{-2}$	$2.5229\cdot10^{-1}$	$3.9717\cdot10^{-1}$	$4.5462\cdot10^{-1}$

Mn - Ω_{nC}

Supplementary Table 27: Values of Ω_{nC} cubic-base lattices of Mn as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a												
		0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
	0.8	1.5459												
	0.9	1.3433	1.1627											
	0.95	1.2491	1.1249	1.0469										
	1	1.2089	1.1422	1.0361	1									
	1.05	1.1785	1.2060	1.1162	1.0428	1.0418								
	1.1	1.1525	1.3084	1.2347	1.1444	1.0795	1.1217							
c/a	1.207	1.0385	1.5007	1.5092	1.4507	1.3671	1.2950	1.2281						
	1.314	$7.6948\cdot10^{-1}$	1.5239	1.6638	1.6604	1.5716	1.4903	1.2520	1.0929					
	1.364	$6.0562\cdot10^{-1}$	1.4482	1.6427	1.7036	1.6599	1.5550	1.2705	1.0337	$9.4270\cdot10^{-1}$				
	$\sqrt{2}$	$4.3439\cdot10^{-1}$	1.3178	1.5578	1.6825	1.6581	1.5617	1.2650	$9.6899\cdot10^{-1}$	$8.4962\cdot10^{-1}$	$7.3134\cdot10^{-1}$			
	1.464	$2.5818\cdot10^{-1}$	1.1692	1.4290	1.5932	1.6007	1.5419	1.2411	$8.9730\cdot10^{-1}$	$7.5432\cdot10^{-1}$	$6.1115\cdot10^{-1}$	$4.9285\cdot10^{-1}$		
	1.514	$7.4733\cdot10^{-2}$	$9.9084\cdot10^{-1}$	1.2789	1.4570	1.4958	1.4668	1.1872	$8.1312\cdot10^{-1}$	$6.5244\cdot10^{-1}$	$5.0400\cdot10^{-1}$	$3.6430\cdot10^{-1}$	$2.2070\cdot10^{-1}$	
	1.6	$-2.4659\cdot10^{-1}$	$6.9643\cdot10^{-1}$	$9.8670\cdot10^{-1}$	1.1812	1.2533	1.2550	1.0243	$6.2726\cdot10^{-1}$	$4.4814\cdot10^{-1}$	$2.8858\cdot10^{-1}$	$1.2981\cdot10^{-1}$	$-2.7509\cdot10^{-2}$	$-3.4968\cdot10^{-1}$

Supplementary Table 28: Values of Ω_{nC} hexagonal-base lattices of Mn as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

		b/a							
		0.7	0.8	0.9	1	1.1	1.2	1.3	1.4
	1.4	$3.0058\cdot10^{-1}$	$7.3692\cdot10^{-1}$	1.0548	1.1308	1.0070	$8.9144\cdot10^{-1}$	$8.3995\cdot10^{-1}$	$8.9430\cdot10^{-1}$
	1.45	$1.0535\cdot10^{-1}$	$6.2902\cdot10^{-1}$	1.0445	1.1809	1.0408	$9.0828\cdot10^{-1}$	$8.2126\cdot10^{-1}$	$8.1564\cdot10^{-1}$
	1.5	$-8.4444\cdot10^{-2}$	$5.1885\cdot10^{-1}$	1.0190	1.2318	1.0743	$9.2085\cdot10^{-1}$	$7.9645\cdot10^{-1}$	$7.3959\cdot10^{-1}$
	1.55	$-2.4832\cdot10^{-1}$	$3.9416\cdot10^{-1}$	$9.3537\cdot10^{-1}$	1.2602	1.1002	$9.2662\cdot10^{-1}$	$7.6730\cdot10^{-1}$	$6.3355\cdot10^{-1}$
	1.6	$-4.3716\cdot10^{-1}$	$2.6299\cdot10^{-1}$	$8.3025\cdot10^{-1}$	1.2487	1.1145	$9.1885\cdot10^{-1}$	$7.1905\cdot10^{-1}$	$5.2812\cdot10^{-1}$
c/a	$\sqrt{8/3}$	$-5.5895\cdot10^{-1}$	$1.7344\cdot10^{-1}$	$7.5738\cdot10^{-1}$	1.2218	1.0987	$9.0385\cdot10^{-1}$	$6.8845\cdot10^{-1}$	$4.6271\cdot10^{-1}$
	1.65	$-6.2556\cdot10^{-1}$	$1.3245\cdot10^{-1}$	$7.1558\cdot10^{-1}$	1.1934	1.0858	$8.9398\cdot10^{-1}$	$6.7223\cdot10^{-1}$	$4.3082\cdot10^{-1}$
	1.7	$-7.8854\cdot10^{-1}$	$-7.1391\cdot10^{-3}$	$5.8764\cdot10^{-1}$	1.1019	1.0398	$8.5512\cdot10^{-1}$	$6.2474\cdot10^{-1}$	$3.4405\cdot10^{-1}$
	1.75	$-9.2420\cdot10^{-1}$	$-1.3052\cdot10^{-1}$	$4.6719\cdot10^{-1}$	$9.8626\cdot10^{-1}$	$9.6471\cdot10^{-1}$	$8.0277\cdot10^{-1}$	$5.7139\cdot10^{-1}$	$2.6571\cdot10^{-1}$
	1.8	-1.0584	$-2.6271\cdot10^{-1}$	$3.3982\cdot10^{-1}$	$8.6296\cdot10^{-1}$	$8.6022\cdot10^{-1}$	$7.2142\cdot10^{-1}$	$4.8544\cdot10^{-1}$	$1.4577\cdot10^{-1}$
	1.85	-1.5942	$-4.9358\cdot10^{-1}$	$2.3501\cdot10^{-1}$	$7.9037\cdot10^{-1}$	$7.7480\cdot10^{-1}$	$6.8203\cdot10^{-1}$	$4.5338\cdot10^{-1}$	$5.6564\cdot10^{-2}$

Ni - Ω_{nC}

Supplementary Table 29: Values of Ω_{nC} cubic-base lattices of Ni as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a													
		0.8	0.9	0.95	1	1.05	1.1	1.207	1.314	1.364	$\sqrt{2}$	1.464	1.514	1.6
c/a	0.8	1.2873												
	0.9	1.1617	1.0925											
	0.95	1.1148	1.0623	1.0206										
	1	1.1259	1.0598	1.0189	1									
	1.05	1.1603	1.0886	1.0810	1.0177	1.0183								
	1.1	1.1947	1.1420	1.1232	1.0860	1.0791	1.0543							
	1.207	1.2534	1.2602	1.2643	1.2466	1.1977	1.1471	1.0975						
	1.314	1.1798	1.3445	1.3443	1.3405	1.3052	1.2643	1.1610	1.1691					
	1.364	1.1369	1.3365	1.3811	1.3695	1.3348	1.2892	1.2066	1.1812	1.1913				
	$\sqrt{2}$	1.0977	1.3556	1.3759	1.3494	1.3570	1.3227	1.2348	1.1991	1.2075	1.2087			
	1.464	1.0669	1.3192	1.3598	1.3543	1.3769	1.3425	1.2615	1.1994	1.1976	1.2157	1.2205		
	1.514	1.0435	1.2899	1.3443	1.3468	1.3740	1.3470	1.2466	1.1913	1.1857	1.2012	1.2157	1.2327	
	1.6	1.0180	1.2383	1.2950	1.3163	1.3444	1.3476	1.2347	1.1642	1.1551	1.1794	1.1903	1.2212	1.2580

Supplementary Table 30: Values of Ω_{nC} hexagonal-base lattices of Ni as a function of b/a and c/a ratios as depicted in Supplementary Figure 1

	b/a							
		0.8	0.9	1	1.1	1.2	1.3	1.4
c/a	1.4	1.2221	1.3176	1.3288	1.3790	1.4863	1.6530	1.8494
	1.45	1.1906	1.2956	1.3225	1.3507	1.4229	1.5595	1.7436
	1.5	1.1594	1.2845	1.3183	1.3271	1.3619	1.4692	1.6384
	1.55	1.1405	1.2705	1.3179	1.3081	1.3109	1.3896	1.5493
	1.6	1.1260	1.2590	1.3216	1.2919	1.2721	1.3249	1.4693
	$\sqrt{8/3}$	1.1196	1.2487	1.3275	1.2853	1.2481	1.2841	1.4158
	1.65	1.1177	1.2440	1.3272	1.2797	1.2382	1.2626	1.3894
	1.7	1.1222	1.2283	1.3295	1.2652	1.2068	1.2079	1.3113
	1.75	1.1315	1.2192	1.3271	1.2487	1.1783	1.1569	1.2390