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Magnetic properties of the Laves-type phases Ti_2Co_3Si and Ti_2Fe_3Si and their solid solution

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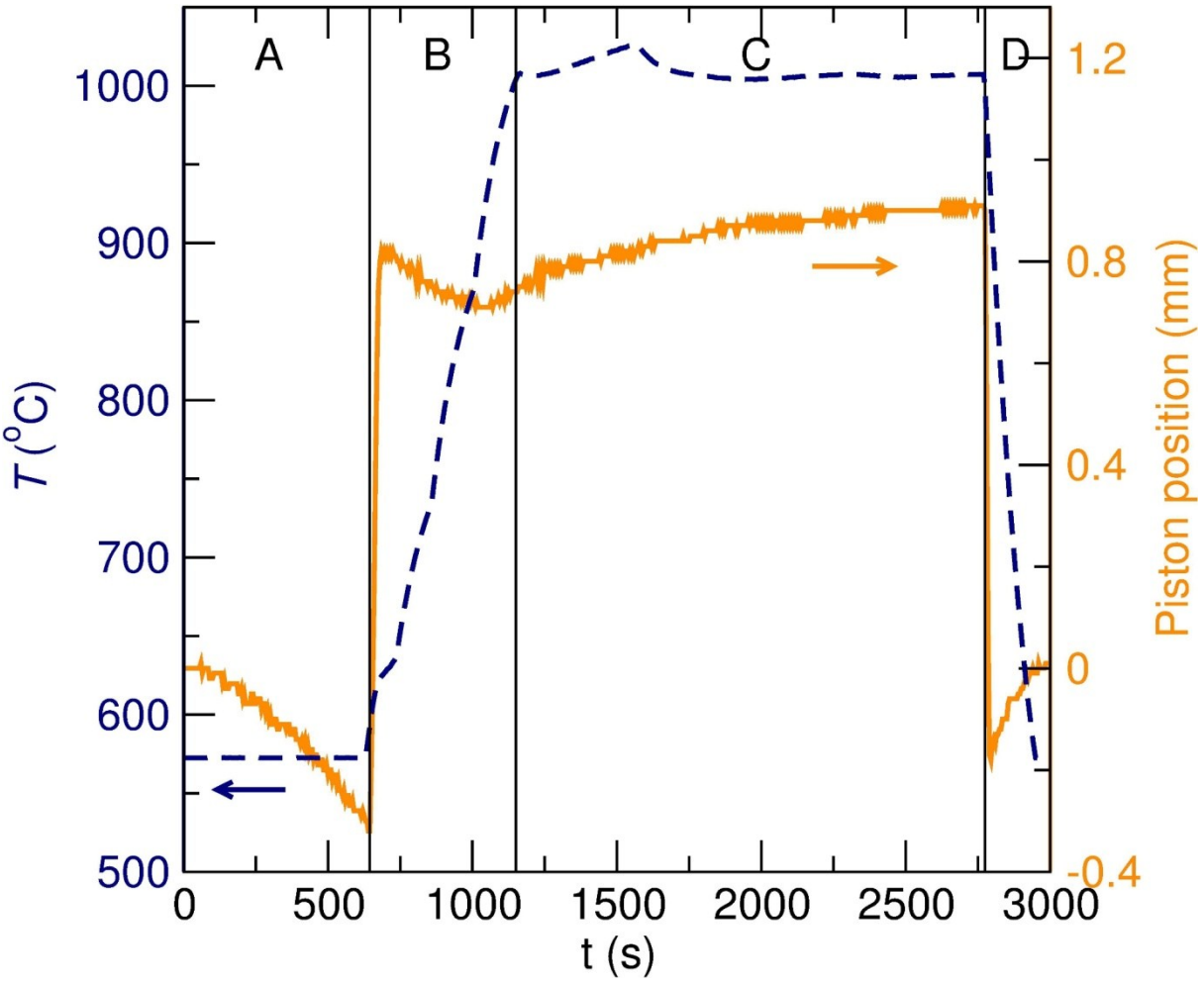

Figure SI 1. Pressing profile of the spark plasma sintering process. A: Heating to 573°C under a pressure of 30 MPa (negative piston travel due to expansion of the material upon heating), B: Heating to the final temperature of 1000°C and simultaneous increase of pressure to 100 MPa, C: Holding of final temperature for approximately 30 min (positive piston travel due to sintering of the material), D: Release of pressure and cooling to room temperature.

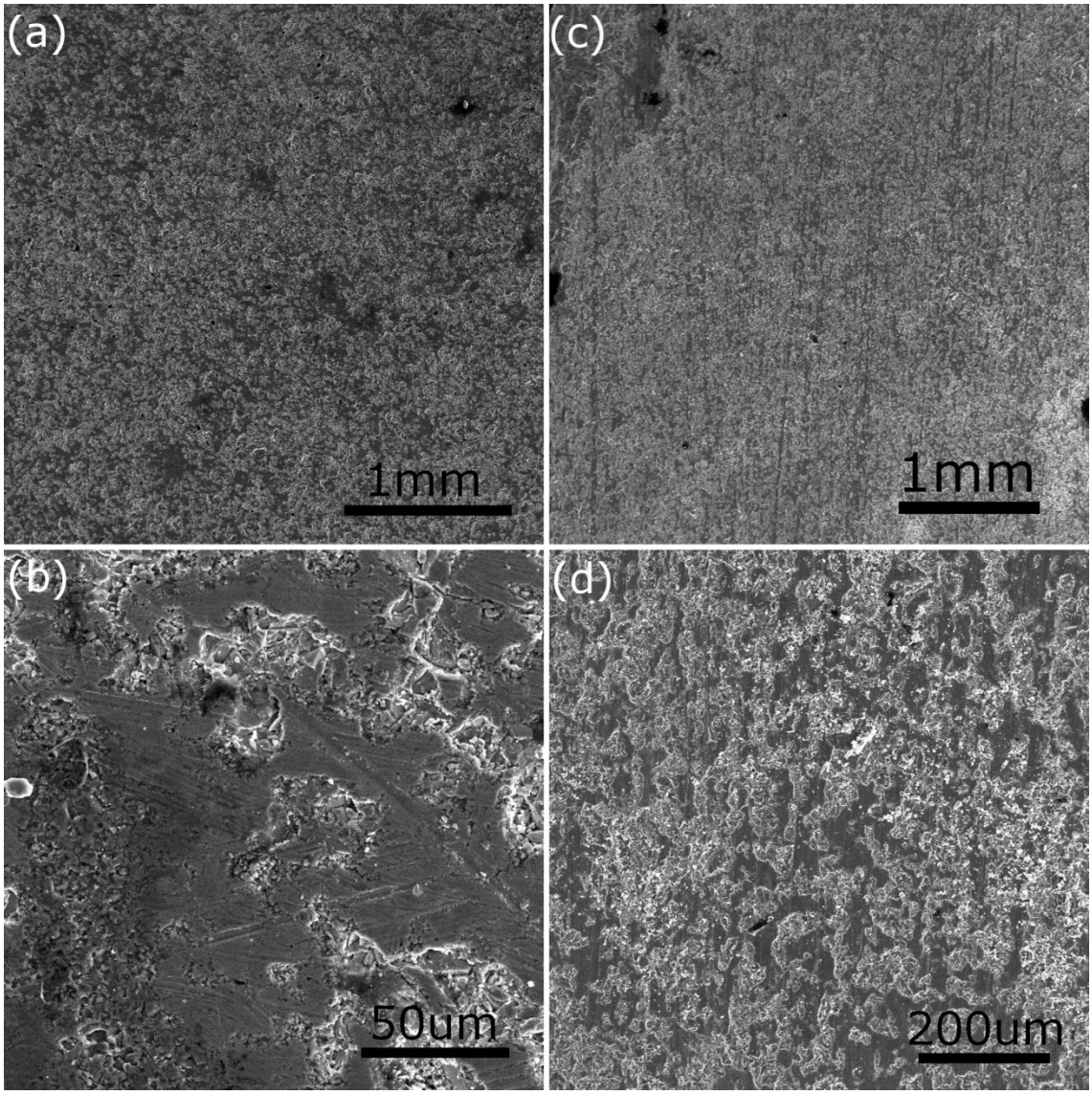

Figure SI 2. Electron micrographs of Ti_2Co_3Si ((a) and (b)) and Ti_2Fe_3Si ((c) and (d)).

Table SI 1. Refined occupation factors of the two end members showing antisite disorder on the M1 and M2 sites.

	Ti_2Fe_3Si	**Ti_2Co_3Si**
Ti, 4f (1/3, 2/3, z), z	0.56263	0.56189
M1, 6h (x, 2x, ¼), x	0.17089	0.17136
Occ.	4.825 Fe + 1.175 Si	5.347 Co + 0.653 Si
M2, 2a (0,0,0) Occ.	1.175 Fe + 0.825 Si	0.653 Co + 1.347 Si