

Magnetocrystalline anisotropy of Ni-Mn-Ga-Co-Cu tetragonal martensite

The martensites of Heusler alloys based on Ni-Mn-Ga exhibit magnetically induced reorientation resulting in giant field induced strain up to 12 % in Ni-Mn-Ga-Co-Cu with 4 at.% of Co and Cu. As the driving force of the phenomenon is the magnetocrystalline anisotropy (MCA), we studied the evolution of MCA in different tetragonal single crystalline Ni-Mn-Ga-Co-Cu and compared with pure Ni-Mn-Ga. The MCA of martensite was determined from magnetic hysteresis loops. No clear trends were observed.

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