

BCC to FCC transformation in Fe₂MnGa Heusler alloy films

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A BCC to FCC transformation is observed in microcrystalline Fe-Mn-Ga Heusler alloy (HA) films. The transformation results in a drastic increase in the magnetization, the Curie temperature as well as in a change of the sign of temperature coefficient of resistivity from negative to positive. These effects are discussed in terms of band structures of L₂₁ and L₁₂ phases of stoichiometric Fe₂MnGa HA.

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