MAGNETISM AND BAND STRUCTURE OF Co/Ti MULTILAYERS BY AB-INITIO METHODS

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We present the electronic structure and magnetism of Co–Ti systems, in which Co and Ti atoms are distributed in the planes of the different crystallographic structures (bcc, hcp and $L2_1$). The band structure and magnetic moments are calculated by the spin–polarised TB LMTO, ASW, and FP LAPW methods within the local spin density approximation. The number of Co and Ti layers changes from 1 to 10 depending on the type of structure. We study also the effect of alloying between Co and Ti layers. The value of the magnetic moment of Co depends strongly on the local environment. We observe that the value of magnetic moment of Co decreases almost two times when the Co is surrounded by Ti atoms.

9.7 cm

13.4 cm

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