

Structural, magnetostriction and Mössbauer studies of Fe/Tb(Fe_{0.55}Co_{0.45})_{1.5}/Fe sandwich films

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Abstract: Sputtered {15nm Fe/600nm Tb(Fe_{0.55}Co_{0.45})_{1.5}/15nm Fe} sandwich films have been investigated by X-ray diffraction, magnetostriction and Mössbauer measurements. A perpendicular anisotropy is evidenced from the magnetostriction data for both as-deposited and 450°C-annealed films. The Mössbauer spectra are fitted with two contributions. The magnetisation of the TbFeCo layer is orientated out of the film plane, whereas that of the Fe layers tends to be in the plane. The enhancement of the coercivity is attributed to the top TbFeCo/Fe interface. © 2003 Published by Elsevier B.V.

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