

Structural, magnetostriction and Mossbauer 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 Mossbauer measurements. A perpendicular anisotropy is evidenced from the magnetostriction data for both as-deposited and 450  C-annealed films. The Mossbauer 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.

Author Keywords: Magnetostriction; Mossbauer spectra; Sandwich films; X-ray diffraction

Index Keywords: Iron alloys; Magnetic anisotropy; Magnetization; Magnetostriction; Magnetron sputtering; Mossbauer spectroscopy; X ray diffraction; Magnstostriction studies; Parallel magnetostriction; Sandwich films; Metallic films

Year: 2004

Source title: Journal of Magnetism and Magnetic Materials

Volume: 272-276

Issue: III

Page : 2086-2087

Link: [Scopus Link](#)

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ISSN: 3048853

CODEN: JMMMD

DOI: 10.1016/j.jmmm.2003.12.844

Language of Original Document: English

Abbreviated Source Title: Journal of Magnetism and Magnetic Materials

Document Type: Conference Paper

Source: Scopus

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