Magnetic and anisotropy properties of the $Y_2Fe_{17-x}Mn_x$ and $Er_2Fe_{17-x}Mn_x$ compounds

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Abstract: The effects of Mn-substitutions in the Y_2Fe_{17} and Er_2Fe_{17} compounds have been studied by magnetization measurements. The magnetic moment and the magnetic anisotropy of the 3d sublattice are found to reduce upon increasing the Mn-concentration. The magnetization reorientation processes that exist in the $Er_2Fe_{14}Mn_3$ and $Er_2Fe_{13}Mn_4$ compounds are, therefore, a consequence of competing contributions of the planar anisotropy of the 3d sublattice and the axial one of the erbium partner. ?? 1988.

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