

# Spin reorientation phenomena in $Dy_{1-x}Y_xFe_{11}Ti$ alloys

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**Abstract:** Spin reorientation phenomena in the  $Dy_{1-x}Y_xFe_{11}Ti$  ( $x = 0, 0.2, 0.4, 0.6, 0.8$  and  $1$ ) compounds have been studied by ac susceptibility and magnetization measurements on bulk and magnetically aligned powder samples. The observed concentration dependence of the spin reorientation temperatures and the temperature dependence of the cone structure of this series of compounds have been analyzed on the basis of the crystal field model. A set of crystal field parameters is proposed. ?? 1993.

**Index Keywords:** Crystal structure; Magnetic materials; Magnetic properties; Magnetization; Thermal effects; Crystal field model; Spin reorientation; Alloys

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