

Direct measurement of the spin-lattice relaxation in a ferromagnet

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Abstract

We propose to use ferromagnetic resonance force microscopy to measure the dissipative term that enters in the equation of motion for the magnetization vector. The experiments were carried out at microwave frequencies on a micron-size single crystal disk of yttrium iron garnet. We compare the results obtained by resonance linewidth measurements and quantitative measurement of the longitudinal magnetization. © 2003 Elsevier B.V. All rights reserved.

<http://dx.doi.org/10.1016/j.jmmm.2003.12.129>

Keywords

Ferromagnetic resonance, Magnetic resonance force microscopy, Relaxation