

NMR lineshape in anisotropic superconductors with nonregular vortex lattice

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Abstract

The nuclear magnetic resonance line shapes within a primitive cell of the vortex lattice of the type II anisotropic superconductors in a case when a vortex is displaced on small distance a from a regular position in a primitive cell are constructed. The results of the numerical calculations show that displacement of the flux line lattice essentially changes the NMR lineshape. The derivative of the power of the absorption energy with respect to the magnetic field is calculated. It allows to obtain more detailed information about the real vortex lattice of a superconductor. © Springer Science+Business Media, LLC 2006.

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Keywords

High-Tc superconductivity, Nuclear magnetic resonance, Vortex lattice