

MAGNETOELASTIC COUPLING AS A SOURCE OF SHAPE DEPENDENCE OF AFMR SPECTRA

H.V. Gomonay, E.G. Kornienko¹, V.M. Loktev

Bogolyubov Institute for Theoretical Physics,
Nat. Acad. Sci. of Ukraine
(14b, Metrolohichna Str. Kyiv 03143, Ukraine),

¹National Technical University "KPI"
(37, Peremogy Ave., Kyiv 03056, Ukraine;
e-mail: malyshen@ukrpack.net)

S u m m a r y

We study the possible influence of the crystal shape on AFMR spectra in the framework of a phenomenological theory with regard for the destressing energy. It is shown that, for the crystals with strong magnetoelastic coupling, the crystal shape may be a source of artificial anisotropy of the magnetoelastic nature. The shape-induced anisotropy may be greater than the bare magnetic anisotropy of a crystal. If this is the case, the gap in AFMR spectra must be sensitive to the orientation of an external magnetic field.