INFLUENCE OF BIQUADRATIC EXCHANGE ON TWO-MAGNON LIGHT ABSORPTION IN MAGNETO-ORDERING CRYSTALS.

M.N. Abdullaev,Yu.M. Seidov and Z.Yu. Seidov
Institute of Physics Academy of Sciences of Azerbaijan, Huseyn Javid St.33,
370143 Baku, Azerbaijan

9.7 cm

In this paper we present the investigation of influence of parameter of biquadratic exchange on two-magnon light absoption for two cases when antiferromagnet sublattice spins are collinear and non-collinear. It is shown that the biquadratic exchange parameter does not change the character of pair excitation but the number of spectrum branches increases. In particular we get two branches for the first case and four branches for the second case. In the first case the both branches are degenerate. In the second case the first two are degenerate and two others are their combinations. Another feature of biquadratic exchange is that the spectrum of one magnon excitation contains both linear and non-linear terms, whereas the two-magnon excitation spectrum is only non-linear.

13.4 cm

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Corresponding author :
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Address for correspondence :
Institute of Physics Academy of Sciences of Azerbaijan,
Huseyn Javid St.33, 370143 Baku, Azerbaijan

Email address :
seidov@lan.ab.az