

## INTERACTIONS OF MAGNONS WITH OPTICAL PHONONS IN RARE EARTH ORTHOFERRITES

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### S u m m a r y

We present the magnetoelastic invariants which describe the interaction of magnons with optical phonons of a definite type in rare-earth orthoferrites  $RFeO_3$ . In the calculation, we used the results of V.G. Bar'yakhtar, I.M. Vitebsky, D.A. Yablonsky who performed the symmetry analyses of magnetic structures and magnon spectra in these materials. The frequencies of coupled oscillations of magnons and optical phonons which are excited by an alternating electric field are calculated. It is shown that these electroactive phonons interact only with oscillations the rare-earth sublattice of orthoferrites.