

Magnetic resonance in $\text{GdMnO}_3/\text{SrTiO}_3$

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Rare-earth manganites with orthorhombically distorted perovskite structure have been subject to intensive studies since the multiferroic phases, in which magnetism and ferroelectricity simultaneously emerge, were found in some of these materials, for example in GdMnO_3 .

The thin film of the multiferroic GdMnO_3 of thickness about 100 nm was deposited onto ferroelectric material SrTiO_3 ($\text{GdMnO}_3/\text{SrTiO}_3$) and investigated using electron spin resonance (ESR) in the wide temperature range. The most interesting results was observed in the temperature range from 40 K to 100 K where except the exchange-narrowed line from GdMnO_3 we observed the group of lines of the spin wave resonance. The intensity of the group of lines of spin wave resonance increases with increasing the external magnetic field or with decreasing the temperature.

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