

# Influence of anisotropy on spin wave propagation characteristics in PLD-grown YIG thin films

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Spin wave (SW) propagation in thin films has become intensively investigated topic in recent years due to its promising applications in modern electronics. Nowadays, yttrium iron garnet (YIG), which serves as a medium for SWs, is a leading material due to the lowest attainable magnetization damping, thus SWs can propagate over large distances. Here, we report on SW propagation in the 82 nm thick YIG film over 150  $\mu\text{m}$  range and discuss the influence of magnetic anisotropy fields on SW characteristics. We show that the anisotropy fields present in YIG films cause an increase in SW frequency and group velocity. Moreover, we elucidate that high anisotropy in PLD-grown films allows for faster information processing in SW circuits than in Liquid Phase Epitaxy films for which the values of anisotropy fields are smaller.

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