Abstracts

Magnetostatic Wave Propagation in YIG Double Layers

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This paper presents calculations for the magnetostatic surface wave propagation characteristics in single-crystal double layers of yttrium iron garnet (YIG) with arbitrary direction of magnetization. The induced uniaxial magnetic anisotropy field is assumed to be different in the two layers; hence, the magnetization in one layer is aligned at an angle with respect to the magnetization direction in the other layer. The magnetostatic field interactions between layers depend on the angle between the two magnetization directions and on the separation between the two YIG layers. The wave propagation directions and time delays in each layer can be strongly affected by the application of an applied magnetic field and the magnetostatic coupling between the two layers, as well as by the uniaxial anisotropy energy in each layer.

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