

Spin Cavitronics with YIG

Gerrit E.W. Bauer, Institute for Materials Research, Tohoku University, Sendai, Japan / Kavli Institute of Nanoscience, TU Delft, NL

Cavities are bounded regions that support standing waves and a peaked density of states of photons, magnons, or phonons. The interaction of probes inserted into such cavities allows control of their interactions with the waves in question. The science and technology to employ cavities to manipulate spin and magnetization may be referred to as “spin cavitronics”. In this colloquium, I will review recent work on the spin cavitronics using Yttrium Iron Garnet, a ferrimagnetic insulator with high optical, acoustic, and magnetic quality.

