

Switchable magnetization dynamics by different domain states

By engineering the magnetic domain structure different integral dynamic high frequency properties can be reached. The high frequency response of multi-domain states are dependent on local dynamics of the individual magnetic domain states and can show phenomena as local ferromagnetic resonance [1]. In order to gain a more deep understanding of these processes, multiple (already existing) samples should be investigated by an optical ferromagnetic resonance experiment. There are no prerequisites to this thesis. During the thesis, Matlab® *can* be used for data evaluation purposes. Simple programming skills *can* be acquired during the thesis. Imaging with an optical microscope *will* be the most prominent technique.

[1] C. Hengst et al., Physical Review B 89, 214412 (2014)

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