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【819】Time-resolved X-ray detected ferromagnetic resonance with spatial resolution using scanning X-ray microscopy

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Recently we have combined a scanning transmission x-ray microscopy (STXM) setup with a novel microwave synchronization scheme for studying high frequency magnetization dynamics in the GHz regime [1] enabeling spatially resolved ferromagnetic resonance (FMR) studies on magnetic micro- and nanostructures. Compared to other spatially resolved FMR detection schemes [2] the STXM-FMR setup features element-selectivity as well as high temporal and spatial resolution down to 18 ps and 35 nm [1]. We will briefly present the STXM-FMR detection [1] and first results for coupled magnetic structures (Co stripe coupled to Py dot).

[1] S. Bonetti et al., Rev. Sci. Instrum. 86, 093703 (2015)
[2] R. Meckenstock, Rev. Sci. Instrum. 79, 041101(2008)

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