

**Calibration of magnetic force microscopy probes modification
resulting from external in-plane magnetic fields**

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Magnetic force microscopy (MFM) measurements in external in-plane magnetic fields are difficult to analyze due to the tilt of the magnetic moment of the MFM tip due to the external magnetic fields. We developed calibration samples with magnetic patterns whose magnetic state is independent on the magnetic field range to determine this tilt. For the fabrication of such topographically planar patterns we used standard lithography methods and keV He ion bombardment of exchange biased bilayers. We will present the production of calibration samples of different materials and a procedure to determine the influence of external in-plane magnetic fields on the magnetic dipole moment of commercial MFM tips.

← 13.4 cm →

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9.7 cm