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Magnetic Domain Properties of Co/Pt Multilayer Thin Films[1]
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— The magnetic domain patterns that form on Co/Pt multilayer thin films display perpendicular anisotropy and produce a mix of stripe and bubble domains. The morphology of such domains is of interest for high-density magnetic data storage. We studied how the domain morphology changes throughout the magnetization process, for different thicknesses of Co and different numbers of layer repeats. We use magnetic force microscopy (MFM) to investigate the domain morphology while applying a magnetic field in situ. We completed these studies for layer repeats of N=20, 18 and Co/Pt thicknesses of 10 Å / 7 Å. We find that an applied field has a significant effect on the morphology of the domains and consequently on their density. These studies are useful for data storage applications and characterizes effects of applied fields on these films.

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