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Thickness Dependency of Ferromagnetic Domains in CoPt Multilayers ANDREW WESTOVER, NATHAN GAY, KARINE CHESNEL, OLAV HELLWIG, BRIGHAM YOUNG UNIVERSITY, PROVO TEAM, HITACHI GLOBAL STORAGE COLLABORATION — Ferromagnetic materials have been providing and still provide large potential technological interests, especially in the data storage industry. We use Atomic and Magnetic Force Microscopy (AFM/ MFM) to study the influence of the film thickness on domain morphology in Co/Pt multilayers. While AFM is sensitive to the topography of the film, MFM allows the imaging of magnetic domains through an interaction between a sharp magnetic probe and the stray fields emanating from the sample in the perpendicular direction. Through this technique we have obtained AFM and MFM images of Co/Pt multilayers ranging from 4A to 60A and have found that as the thickness of the Co/Pt multilayers influences the morphology (periodicity, orientation, and correlation length etc.) of the magnetic domains.

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