

Dynamics hysteresis behavior of Co/Pt multilayers

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We report our experimental study on the dynamic hysteresis scaling behavior of Co/Pt multilayers with perpendicular magnetic anisotropy. The dynamic hysteresis measurement was carried out with variation of sweeping rate of cycling field by means of a polar magneto-optical Kerr effect (P-MOKE) and analyzed base on Steinmetz law[1]. It has been observed that there exist dynamics scaling behaviors for the loop area, as shown in figure 1, as well as the coercive field, the nucleation field, and the saturation field. Analytic model regarding the microscopic domain patterns are adopted to predict scaling factors, which is consistent with the experimental observations.

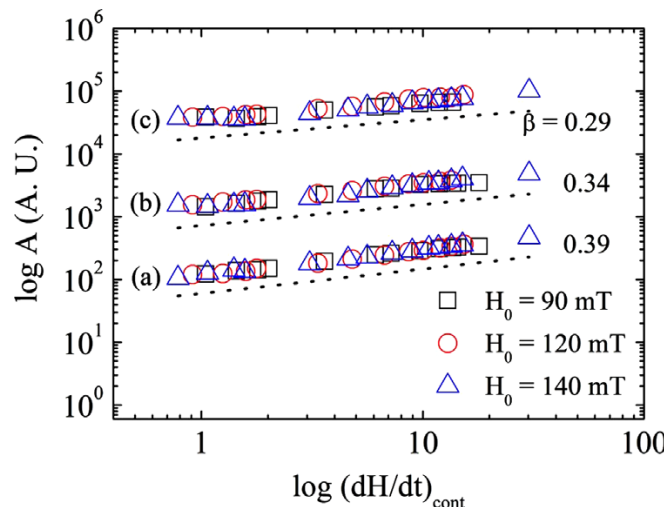


Fig. 1. The loop area scaling behavior with respect to the sweep rate for different Co layer thickness

Reference

- [1] D. Handoko, S. -H. Lee, K. M. Lee, J. -R. Jeong, and D. -H. Kim, *J. Magn. Magn. Mater.* **351** (2014) 82.