

SUPPLEMENTAL MATERIAL

Exchange-coupled Fe-Pt/Ru/Fe-Pt nanogranular films as potential HAMR media with reduced writing temperature

Daisuke Ogawa,^{1,*} Anton Bolyachkin,¹ Angayarkanni R. Dilipan,^{1,2}
Nikita Kulesh,¹ Hossein Sepehri-Amin,¹ and Yukiko K. Takahashi^{1,†}

¹*National Institute for Materials Science, Tsukuba 305-0047, Japan*

²*Graduate School of Science and Technology,
University of Tsukuba, Tsukuba 305-8577, Japan*

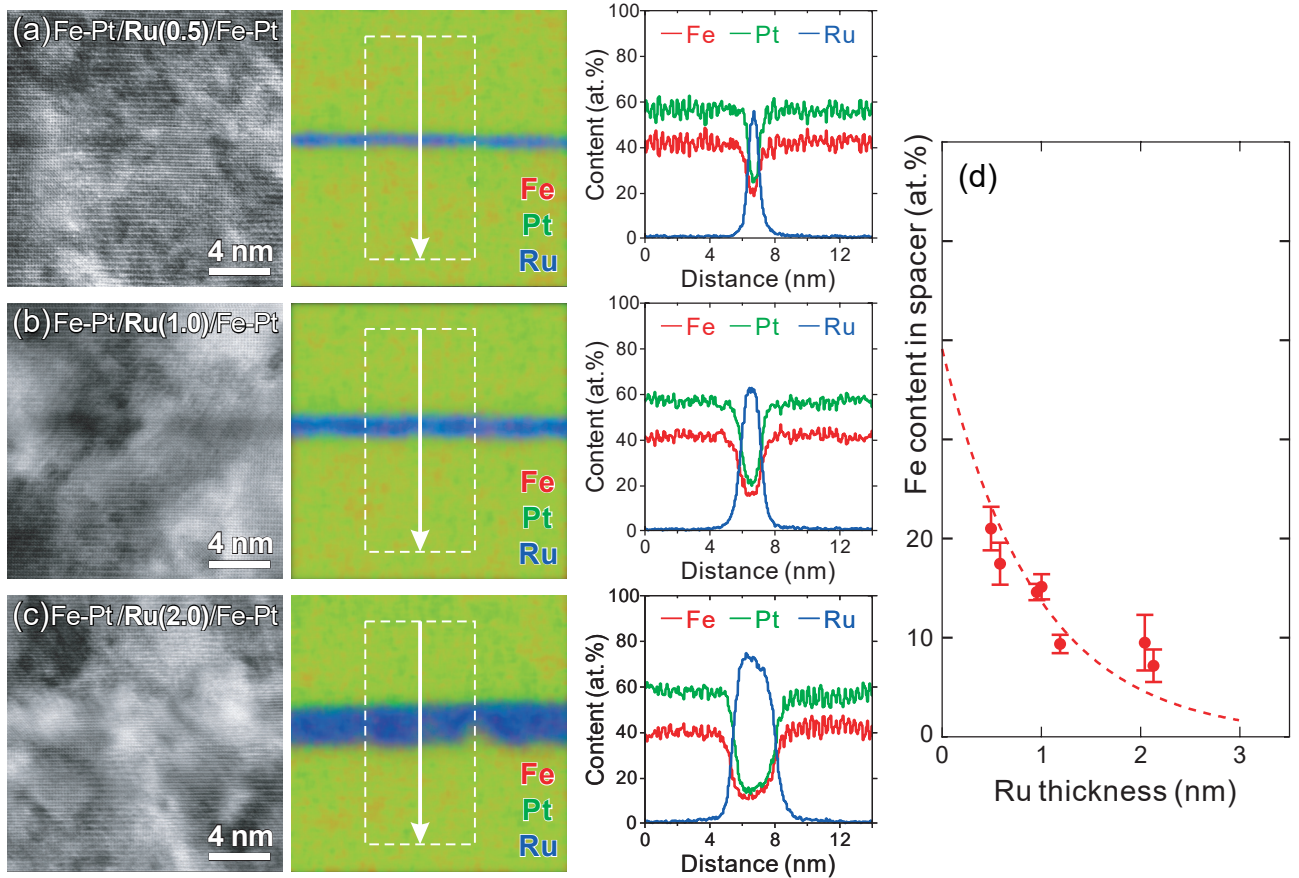


FIG. S1. Cross-sectional HAADF-STEM images, EDS maps, and composition line profiles across the highlighted regions of interest for the Fe-Pt/Ru/Fe-Pt continuous films with Ru thickness of (a) 0.5 nm, (b) 1.0 nm, and (c) 2.0 nm. (d) The content of diffused Fe in the Ru spacer depending on its thickness. Dashed line is a guide to the eye.

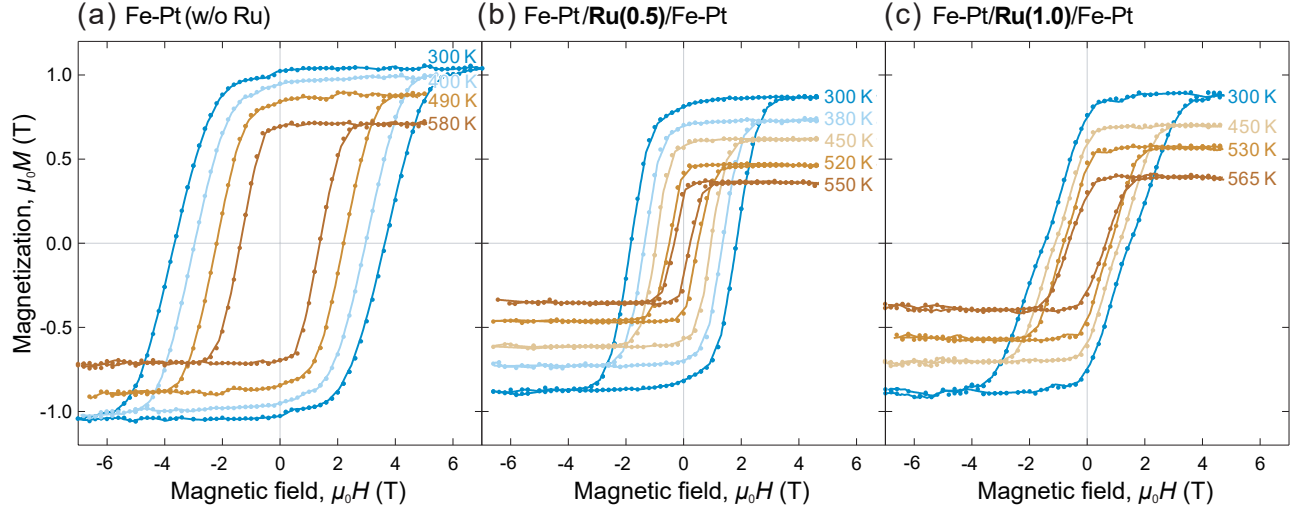


FIG. S2. Out-of-plane hysteresis loops of (a) the FePt reference film and the Fe-Pt/Ru/Fe-Pt granular films with Ru thickness of (b) 0.5 nm and (c) 1.0 nm measured at selected temperatures.

* ogawa.daisuke@nims.go.jp

† takahashi.yukiko@nims.go.jp