Dynamic observation of [CoNix]y multi-layers with high brightness, high spin-polarization and long life time SPLEEM

T.Koshikawa, M.Suzuki, T.Yasue, E.Bauer[1], Y.Takeda[2] and T.Nakanishi[2]
Osaka Electro-Communication University, Neyagawa, Osaka, Japan
1. Arizona State Univ. Tempe, Arizona, USA
2. Nagoya Univ.Furo-cho, Nagoya, Japan

Memory size has been tremendously enlarged after the development of GMR. Recently new concept MRAM (magnetic random access memory) has been proposed, in which the magnetic domain wall can be driven with current (current-induced domain wall motion: CWM) using perpendicular magnetic anisotropy [1]. [Co/Nix] multi-layer nano-wires might be an important candidate, which has strong perpendicular magnetic anisotropy [2]. Here we have investigated the detailed magnetization process of those multi-layer with newly developed very high brightness, highly spin-polarized and long life time SPLEEM [3-6]. The magnetic images of $Co/Ni_2/W(110)$ and 1 ML Au on $Co/Ni_2/W(110)$ are shown in Fig.1 which show that Au ultra thin film conducts to the strong perpendicular magnetic anisotropy.

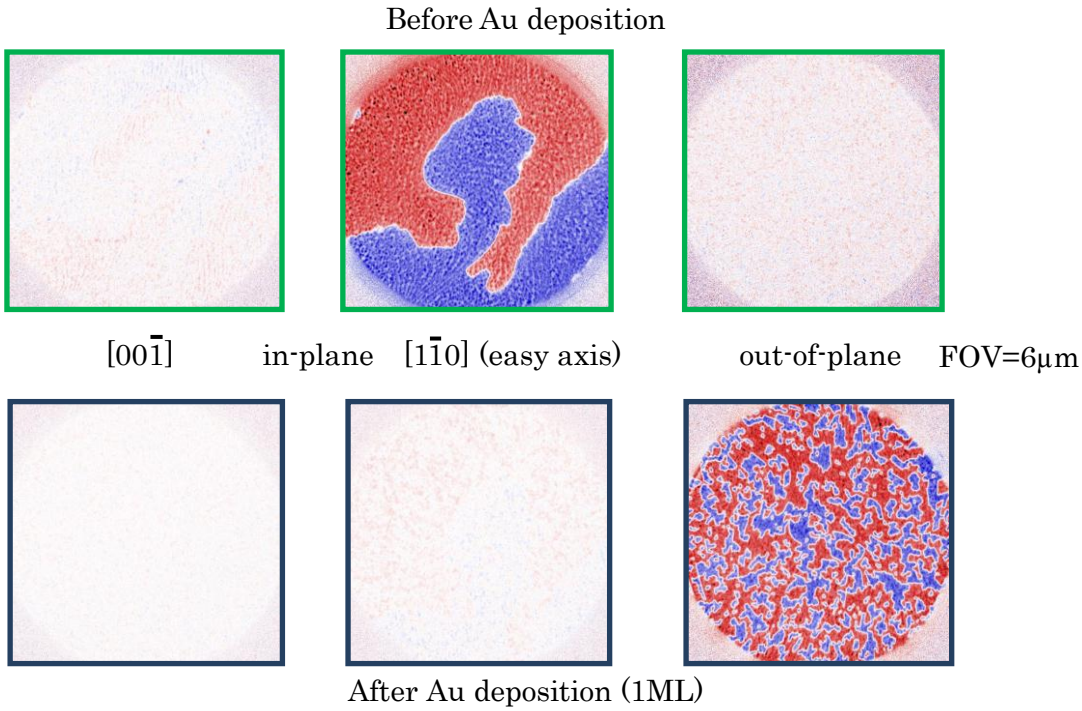

Fig.1 Magnetic domain images of in-plain and out-of plain of $Co/Ni_2/W$ (110) and 1 ML Au on $Co/Ni_2/W$ (110).

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*E-mail address: kosikawa@isc.osakac.ac.jp