

Abstract Submitted  
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**Perpendicular magnetization of CoFeGe alloy films induced by MgO interface**<sup>1</sup> MANLI DING, University of Virginia, SEBASTIAN SCHAFER, University of Alabama, XIAOPU LI, University of Virginia, TIM MEWES, University of Alabama, JOSEPH POON, University of Virginia — The perpendicular magnetization of CoFeGe alloy films was achieved in the structures of CoFeGe/MgO with the perpendicular magnetic anisotropy energy density ( $K_u$ ) of  $\sim 1 \times 10^6$  erg/cm<sup>3</sup>. The CoFeGe thickness dependence of  $K_u$  was investigated, indicating that the perpendicular anisotropy of CoFeGe is contributed by the interfacial anisotropy between CoFeGe and MgO. High-resolution transmission electron microscope images clearly show formation of bcc crystalline structure of CoFeGe well lattice matched with the (100)-oriented MgO barrier. Gilbert damping constant for the films was evaluated by using ferromagnetic resonance measurement.

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