Abstract Submitted
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Asymmetric Reversal in Exchange Bias: experiment and micromagnetic simulations[1] ZHI-PAN LI, Physics Department, UCSD, La Jolla, CA, USA, OLEG PETRACIC[2], IVAN K. SCHULLER, Physics Department, UCSD, La Jolla, CA, USA — Asymmetric reversal process in several exchange biased systems is a yet unexplained problem. Recent experimental results on epitaxial FeF_2/Ni bilayers reveal strongly asymmetrical hysteresis loops. A systematic micromagnetic study based on the assumption of pinned AF moments at the ferromagnetic interface is performed. The simulation result suggests a winding and unwinding of *local* incomplete domain walls in the ferromagnet parallel to the ferro-/antiferromagnet interface at only one side of the saturation is responsible for the asymmetry observed. The simulations are in very good agreement with the experiment results.

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