

Abstract Submitted
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Perpendicularly magnetized exchange-biased magnetic tunnel junctions ANDREAS NEY¹, IBM Research Division, Almaden Research Center, 650 Harry Road, San Jose, CA 95120, SEBASTIAAN VAN DIJKEN, Department of Physics, Trinity Collge, Dublin 2, Ireland, STUART PARKIN, IBM Research Division, Almaden Research Center, 650 Harry Road, San Jose, CA 95120 — Exchange biased magnetic tunnel junctions (MTJs) with perpendicular magnetic anisotropy (PMA) have been studied. The ferromagnetic electrodes were fabricated from either Co/Pt or Co/Pd multilayers and the tunnel barriers were formed from Al₂O₃. In some cases one of the electrodes was exchange biased with either PtMn or IrMn. We discuss the dependence of the PMA and the exchange bias on the thickness of the Co, Pt and Pd layers. The properties of the MTJs are strongly influenced by the structural morphology of the Co/Pt and the Co/Pd multilayer electrodes, which appear to give rise to rough tunnel barriers with low resistance.

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