

Abstract Submitted  
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**Nitrogen doping in single-crystal MgO magnetic tunnel junctions.** JUSTIN BROCKMAN, CHENG-HAN YANG, IBM / Stanford, MAHESH SAMANT, KEVIN ROCHE, STUART PARKIN, IBM — Recent experiments have shown evidence for induced ferromagnetism in thin films of carbon and nitrogen-doped zinc oxide. We have discovered similar behavior in nitrogen-doped MgO films grown by plasma-assisted thermal evaporation. Here, we incorporate these films as tunneling barriers into single-crystal multilayer magnetic tunnel junctions and present experimental results showing the magnetoresistance and current-voltage characteristics for these structures.

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