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**Bias voltage dependence of the tunneling magneto-resistance of SrTiO<sub>3</sub> based magnetic tunnel junctions grown epitaxially on Si (100)**  
GUENOLE JAN, MAHESH SAMANT, ANDREAS NEY, KEVIN ROCHE, S.S.P PARKIN, IBM Almaden Research Center — We present data on the magneto-transport properties of epitaxial magnetic tunnel junctions fabricated with SrTiO<sub>3</sub>. These junctions were deposited on silicon <100> using pulsed laser and magnetron sputtering techniques. Various ferromagnetic electrode materials were studied. The structures were patterned using in-situ metal shadow masks. Structural and material characterization of these films was performed using x-ray diffraction, SQUID, Auger spectroscopy and transmission electron microscopy. The relationship of the sign of the tunneling magneto-resistance, whether positive or negative, to details of the structures will be presented.

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