

Abstract Submitted
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Temperature and Angular Dependences of Dynamic Spin-Polarized Resonant Tunneling¹ CASEY W. MILLER, University of South Florida, Tampa FL 33620, USA, JOHAN ÅKERMAN, YAN ZHOU, Royal Institute of Technology, Electrum 229, 164 40 Kista, Sweden, RENU DAVE, JON SLAUGHTER, Technology Solutions Organization, Freescale Semiconductor, Inc., Chandler AZ 85224, USA, IVAN K. SCHULLER, UC San Diego, La Jolla CA 92093, USA — The bias dependence of tunneling magnetoresistance oscillations due to dynamic resonant tunneling in CoFeB/MgO/NiFe magnetic tunnel junctions was studied as functions of temperature and the relative magnetization angle of the two magnetic layers. The effect of temperature is consistent with thermal smearing, while that of the relative magnetic orientation was typical of a spin valve. A model of tunneling between spin-split free electron bands using the exact solution of the Schrödinger equation for a trapezoidal tunnel barrier agrees with experiment.

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