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Spin wave excitation by spin-transfer torque in a magnetic insulator JIANG XIAO, Department of Physics, Fudan University, GERRIT BAUER, IMR, Tohoku University — We study the excitation of spin waves in magnetic insulators by the current-induced spin-transfer torque. We predict preferential excitation of surface spin waves induced by an easy-axis surface anisotropy. The critical excitation current for the surface spin wave is inversely proportional to the penetration depth and surface anisotropy. Compared to the bulk modes, the critical current and excitation power of such surface spin wave are greatly reduced and enhanced, respectively.

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