

Abstract Submitted  
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**Dynamic exchange coupling and spin pumping in ferromagnetic/normal metal bilayer**<sup>1</sup> ROBERTO RODRIGUEZ, Pontificia Universidad Católica de Chile, Santiago, Chile, SERGIO REZENDE, ANTONIO AZEVEDO, Universidade Federal de Pernambuco. Recife, PE, Brasil — It is known that in ultra-thin ferromagnetic (FM) layers in contact with normal metals (NM), the spin pumping is the most important magnetic relaxation channel. In this work we present a detailed calculation of the NM thickness dependence of the magnetic relaxation in FM/NM bilayers. To calculate the relaxation rate we consider that at the FM/NM interface the spins of the FM layer interact with the NM conduction electron spins through the s-d exchange interaction. The coupled motion of the FM magnetization with the NM spin accumulation transfers to the FM magnetization an additional relaxation from the overdamped motion of the conduction electron spins in the NM layer. We compare our results with the well know treatment that consider only spin currents and show that both yield the same result.

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