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**Spin Pumping in Py/Ir and Py/Cu/Ir**[1] THOMAS WHITE, TIGHE BAILEY, CASEY W. MILLER, Rochester Institute of Technology — We report on spin pumping in Py/Ir and Py/Cu/Ir as functions of Ir thickness. Samples were fabricated by magnetron sputtering. Py and Cu layers were held constant at 5nm and 4nm, respectively, while the Ir thickness ranged from 1nm to 500nm. Room temperature FMR from 3-40 GHz was conducted in the flip-chip geometry using the NanOsc PhaseFMR tool with the applied field in the plane of the sample. We find very strong enhancement of the Gilbert damping parameter, $\alpha$, when the Ir directly contacts the Py ($\alpha = 0.023$), relative to samples in which Cu separates the Py and Ir ($\alpha = 0.013$); the control Py had $\alpha = 0.0085$. This indicates the presence of spin memory loss at the interface between Py and Ir. While the Py/Ir series had the inhomogeneous broadening increased about a factor of two relative to the Py/Cu/Ir series, we found no significant evidence for the Ir thickness affecting $\alpha$, the effective magnetization, or the g-factor. The lack of thickness dependence of $\alpha$ indicates the spin diffusion length in Ir is of the order 1nm.

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Casey Miller
Rochester Institute of Technology

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