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### **Yttrium Iron Garnet Nano Films for Spintronics Applications<sup>1</sup>**

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Magnetization precession in yttrium iron garnet (YIG) damps slower than in any other known magnetic materials. This fact gives rise to the recent birth of a new paradigm in the discipline of spintronics – “spintronics using yttrium iron garnets.” This presentation will touch on several important topics related to YIG spintronics. The first part will demonstrate the feasibility of the use of pulsed laser deposition and magnetron sputtering to grow low-damping, nanometer-thick YIG films. The second part will present the determination of efficiency of spin angular momentum transfer across YIG/normal metal interfaces. The last part of the presentation will report on the impacts of the magnetic proximity effect on spin pumping in YIG/Pt heterostructures.

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