

Spin Transport in Nanoscopic Metallic Spin Valves

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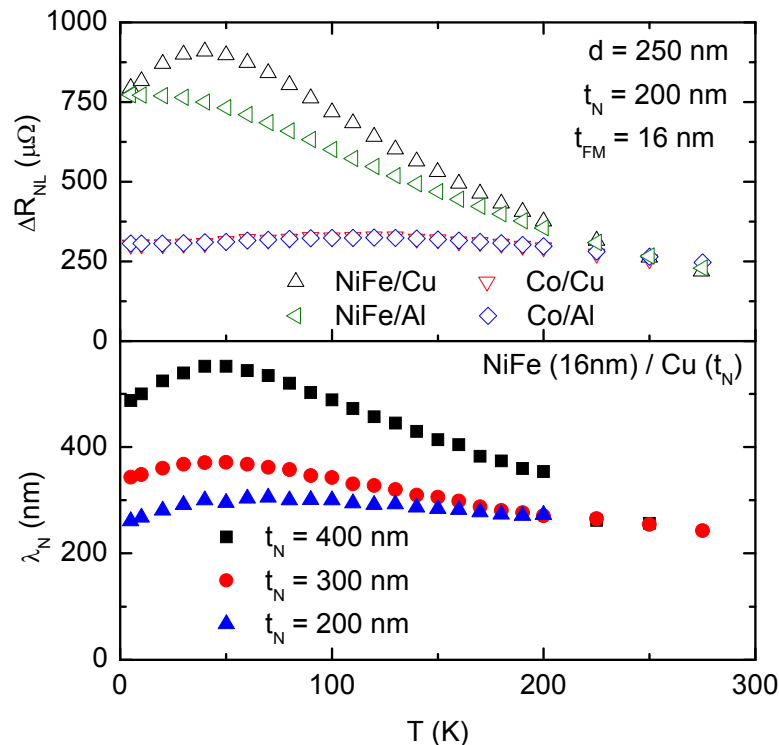
NNIN Facilities utilized: Nanofabrication Center and Characterization Facility

- Spin transport in ferromagnetic (FM) / normal metal (N) heterostructures

- ◆ Use spin valves to study spin-dependent transport for ferromagnetic (FM) and normal metals (N)
- ◆ Focus on role of material interfaces and surfaces on spin relaxation

- Spin transport dominated by FM and geometry

- ◆ Temperature dependent spin-dependent resistance (ΔR_{NL}) is strongly impacted by FM injector material
- ◆ Spin diffusion length (λ_N) of N increases with increasing device thickness, indicating enhanced spin relaxation at surfaces



- Publications

- ◆ M.J. Erickson, C. Leighton, P.A. Crowell (in preparation)

