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Dynamics of spin valves investigated using Magneto-Optical Kerr Effect Spectroscopy[1] CHRISTOPHER STEVENS, JAGANNATH PAUL, PRASENJIT DEY, Univ of South Florida, CASEY MILLER, Rochester Institute of Technology, STEPHEN MCGILL, National High Magnetic Field Lab, FSU, DENIS KARAISKAJ, Univ of South Florida — Through an all-optical approach, we are investigating the spin dynamics in different spin torque based structures. Using pump-probe Time-Resolved Magneto-Optical Kerr Effect (TR-MOKE) spectroscopy, we are able to monitor the ultrafast magnon propagation on a sub-picosecond timescale as well as the longer lived oscillations and demagnetization. This represents a recent efforts to realize magnon induced spin torque using an all optical method.

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