Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Ultrafast magnetization and spin oscillation in thin Ni/Fe film
JOO IN LEE, CHAN YONG HWANG, Center for Advanced Instrumentation, Korea Research Institute of Standards and Science — We investigated the electron and spin dynamics in thin Ni/Fe film by means of time-resolved magneto-optical Kerr effect (MOKE). The magnetization of the film changes rapidly during the subpicosecond, including the spin relaxation and electron-phonon coupling. We observed the spin oscillations in the MOKE signal varying the polarization angle between the pump and probe beams. The period of the spin oscillations was about 200 fs. It is supposed that this is not only related to the polarization in film induced ultrafast optical field but mediated also the spin-obit coupling.

Chan Yong Hwang
Center for Advanced Instrumentation,
Korea Research Institute of Standards and Science

Date submitted: 01 Dec 2009 Electronic form version 1.4