Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Detection of thin film NMR spectrum by Magnetic Resonance Force Microscopy SEUNG-BO SAUN, SUNGMIN KWON, SOONCHIL LEE, Korea Adv Inst of Sci & Tech, SOONHO WON, Korea Institute of Material Science — NMR is widely used in many fields due to its powerful advantages such as nondestructive, chemically selective detection, and local probing. However, because of its low sensitivity, it is difficult to investigate thin film samples by conventional NMR. MRFM is the combined technic of NMR and Scanning Probe Microscopy (SPM), and it enabled exceptional sensitivity increasement of NMR detection. We succeeded in detecting general thin film NMR spectrum for the first time by modifying the MRFM. CaF_2 34nm thin film NMR was detected and we observed 20 Gauss spectrum in proximity to bulk spectrum which is about 10 Gauss.

Seung-Bo Saun
Korea Adv Inst of Sci & Tech

Date submitted: 14 Nov 2013 Electronic form version 1.4