

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Electron Spin Magnetic Resonance Force Microscopy of Nitroxide Spin Labels ERIC W. MOORE, SANGGAP LEE, STEVEN A. HICKMAN, SARAH J. WRIGHT, JOHN A. MAROHN, Department of Chemistry and Chemical Biology, Cornell University — Nitroxide spin labels are widely used in electron spin resonance studies of biological and polymeric systems. Magnetic resonance force microscopy (MRFM) is a magnetic resonance technique that couples the high spatial resolution of a scanning probe microscope with the species selectivity of magnetic resonance. We report on our investigations of 4-amino TEMPO, a nitroxide spin label, by force-gradient MRFM. Our microscope operates at high vacuum in liquid helium, using a custom fabricated ultra-soft silicon cantilever in the magnet-on-cantilever geometry. An 18 GHz gap coupled microstripline resonator supplies the transverse field.

Eric W. Moore
Department of Chemistry and Chemical Biology, Cornell University

Date submitted: 21 Nov 2008

Electronic form version 1.4