

Abstract Submitted  
for the MAR08 Meeting of  
The American Physical Society

**Spin dynamics in single-molecule magnets combining surface acoustic waves and high frequency electron paramagnetic resonance**  
STEPHEN HILL, JONATHAN LAWRENCE, Department of Physics, University of Florida, FERRAN MACIA, JOAN MANEL HERNANDEZ, JAVIER TEJADA, Departament de Física Fonamental, University of Barcelona, PAULO SANTOS, Paul-Drude-Institut, Berlin, CHRISTOS LAMPROPOULOS, GEORGE CHRISTOU, Department of Chemistry, University of Florida — We report a new experimental technique that integrates high frequency surface acoustic waves (SAWs) with high frequency electron paramagnetic resonance (HFEPR) spectroscopy in order to measure spin dynamics on fast time scales in single-molecule magnets. After driving the system out of equilibrium by triggering magnetic avalanches, or simply by heating with short SAW pulses, the evolution of the spin populations within fixed energy levels is measured using HFEPR spectroscopy.

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Date submitted: 11 Jan 2008

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