Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Coulomb blockade magnetoresistance in organic spin transport device[1] DALI SUN, X.-G ZHANG, PAUL C. SNIJDERS, Oak Ridge National Laboratory, HANGWEN GUO, The University of Tennessee / Oak Ridge National Laboratory, ZHENG GAI, T. ZAC WARD, Oak Ridge National Laboratory, JIAN SHEN, The University of Tennessee / Fudan University — Using buffer-layer-assisted growth, we successfully fabricated organic spin transport devices with a discontinuous granular magnetic layer centered in an organic spacer film. The Coulomb blockade magnetoresistance (MR) effects were observed, as predicted by X.-G. Zhang *et al* (Phys. Rev. B. 81, 155122, 2010). The spin-dependent Coulomb blockade voltage arises from the coupled magnetic dots inside the organic material and correlate with the observed MR effect.

[1]Research sponsored by the Division of Materials Sciences and Engineering, Office of Basic Energy Sciences, U.S. Department of Energy

Dali Sun
Oak Ridge National Laboratory

Date submitted: 17 Nov 2010 Electronic form version 1.4