

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Electronic Interactions between Au Films and the Prussian Blue Analog $\text{Co}_3[\text{Os}(\text{CN}_6)]_2$ T. WELLINGTON, Texas A&M University, Department of Physics, M. HILFIGER, Texas A&M University, Department of Chemistry, A. FORD, Texas A&M University, Department of Physics, C. AVENDANO, K. DUNBAR, Texas A&M University, Department of Chemistry, W. TEIZER, Texas A&M University, Department of Physics — The Prussian blue analog $\text{Co}_3[\text{Os}(\text{CN}_6)]_2$ exhibits photoinduced changes of magnetic behavior as well as charge transfer induced spin transitions at low temperature. Magnetic measurements on the bulk material show an increased magnetic susceptibility after illumination with red light, as the analog exhibits an abrupt spin transition due to enhanced cooperativity. We are exploring electronic interactions between this Prussian blue analog and gold films of varying thickness. Low-temperature measurements of the magnetoresistance of the gold films, with and without a surface layer of the analog, are performed. The study focuses on how the presence of the analog on the surface affects the transport properties within the gold film.

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Date submitted: 02 Dec 2008

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