Abstract Submitted
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Transport Properties of Films of Cobalt Iron Prussian Blue Analogues[1] PEDRO A. QUINTERO, MARK W. MEISEL, Dept. Phys. and NHMFL, Univ. Florida, OLIVIA N. RISSET, DANIEL R. TALHAM, Dept. Chem., Univ. Florida — The magnetic and transport properties of films of the bistable, photomagnetic, cobalt iron Prussian blue analogue $A_jCo_k[Fe(CN)_6]$ (A = Na, K, Rb)[2] on ITO and FTO substrates as a function of temperature (100 - 300 K) and under white light irradition have been studied. The magnetic data show the charge transfer induced spin transition (CTIST) between 230 - 280 K. The DC and AC transport measurements also show a transition between different conduction states in the same temperature region. Specifically, the AC data (1 kHz) reveals a smooth hysteresis, which is similar to the response observed in the magnetic data. Upon irradiation with white light, swithching is observed between the two conduction states at low temperature T $\sim$ 120 K.

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[2]O. Sato *et al.*, Science **272** (1996) 704; O. Sato *et al.*, J. Am. Chem. Soc. **126** (2004) 13176.

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