

Abstract Submitted
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Magnetic and Transport Properties of Heterostructured Films of Prussian Blue Analogues and Manganites P.A. QUINTERO, H. JEEN, E.S. KNOWLES, A. BISWAS, M.W. MEISEL, Dept. Physics and NHMFL, Univ. Florida, M.J. ANDRUS, D.R. TALHAM, Dept. Chemistry, Univ. Florida — The magnetic and transport properties of heterostructured films consisting of Prussian blue analogues, $A_jM'_k[M(CN)_6]_\ell \cdot nH_2O$ (M'M-PBA), where A is an alkali ion and M', M are transition metals, and manganites have been studied. Specifically, NiCr-PBA and CoFe-PBA films¹ of ~ 100 nm thickness have been deposited on perovskite $(La_{1-y}Pr_y)_{0.67}Ca_{0.33}MnO_3$ (LPCMO) manganese films² of ~ 30 nm thickness. The effect of the ferromagnetic NiCr-PBA, $T_c \sim 70$ K, and the photo-controllable ferromagnetic CoFe-PBA, $T_c \sim 20$ K, on the I-V properties of the LPCMO will be reported, where special attention will be given to the changes of the transition temperatures of the ferromagnetic metallic (FMM) and the charge-ordered insulating (COI) phases in the LPCMO substrate.

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