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Magnetic Properties of Prussian Blue Analog Films[1] D.M. PAJEROWSKI, M.W. MEISEL, E.S. KNOWLES, Dept. Phys., Univ. Florida, M.J. ANDRUS, J.E. GARDNER, D.R. TALHAM, Dept. Chem., Univ. Florida, S. DATTA, A. OZAROWSKI, S. HILL, NHMFL, Florida State Univ. — The study of magnetization in thin film geometries of Prussian blue analogs, $Rb_jM'_k[M(CN)_6]_l \cdot nH_2O$, has shown emergent phenomena compared to bulk-like precursors. One example is the photoinduced decrease in magnetization for M′=Co, M=Fe materials when the plane of the films is perpendicular to the applied magnetic field, as opposed to the usual increase in magnetization observed in the powder material [1,2]. By studying additional compounds without the photoinduced bistability, such as the M′=Ni(S=1), M=Cr(S=3/2) ferromagnet with a $T_C \sim 75$ K and the M′=Cu(S=1/2), M=Fe(S=1/2) ferromagnet with a $T_C \sim 20$ K, we have gained insight into the magnetic anisotropy present in the general class of Prussian blue analog thin films. Samples have been characterized by SQUID magnetometry, ESR, AFM, SEM, EDS and FT-IR.

[1] J.-H. Park, *et al.*, Appl. Phys. Lett. **85**, 3797 (2004).
[2] F. A. Frye *et al.*, Chem. Mater. **20**, 5706 (2008).

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