

Abstract Submitted
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Angular Dependent Magnetic Susceptibility with Photoexcitation Studies on Prussian Blue Analog Thin Films¹

D.M. PAJEROWSKI, J.-H. PARK, M.W. MEISEL, Physics Department, University of Florida, F.A. FRYE, D.R. TALHAM, Chemistry Department, University of Florida — Prussian blue analog systems are the topic of ongoing research because of their novel physical effects. One such effect is persistent photoinduced magnetism, found in CoFe analogs. For such an optical system, in an attempt to maximize the material's interaction with incident photons, a thin film geometry is often utilized; this geometry can produce new effects [1]. Samples of different starting materials have been characterized with respect to photoinduced states, angular dependent susceptibility, film thickness, and chemical formula. Notably, magnetic anisotropies present in the systems show a dependence on the studied factors. One class of interesting starting materials are $\text{Rb}_j\text{Ni}_k[\text{Cr}(\text{CN})_6]_l \cdot n\text{H}_2\text{O}$ and $\text{Rb}_j\text{Co}_k[\text{Fe}(\text{CN})_6]_l \cdot n\text{H}_2\text{O}$ heterostructures, generated by sequential adsorption on a Melinex substrate, that display behavior different than a noninteracting admixture of the two materials by themselves.

[1] J.-H. Park, E. Cizmar, M. W. Meisel, Y. D. Huh, F. Frye, S. Lane, and D. R. Talham, *Appl. Phys. Lett.* 85, 3797 (2004).

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