

Abstract Submitted  
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**Magnetic and surface studies of transition metal complexes for molecular spintronics**<sup>1</sup> PATRICK TRUITT, RAMAN TALWAR, EZEKIEL JOHNSTON-HALPERIN, Dept. of Physics, The Ohio State University, NORBANI ABDULLAH, Dept. of Chemistry, University of Malaya, CARLY REED, NAMRATA SINGH, CHANDRANI CHATTERJEE, MALCOLM CHISHOLM, Dept. of Chemistry, The Ohio State University — We have synthesized organometallic complexes consisting of a transition metal ion chelated by amphiphilic ligands. This talk will focus on efforts to assess the suitability of these molecules for the creation of magnetically active monolayers via the Langmuir-Blodgett technique. The paramagnetic nature of the molecules is probed by SQUID magnetometry and EPR spectroscopy, demonstrating that the spin magnitude can be varied by chemical substitution of the transition metal ion. To study monolayer formation ability, the molecules are spread on a Langmuir trough and pressure-area isotherms are recorded under compression. Attempts to deposit monolayers onto substrates and to make electrical contact for transport measurements will also be discussed.

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