

Abstract Submitted  
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**Magnetic susceptibility and Mössbauer studies of  $[\text{FeX}_3](\text{ClO}_4)_2 \cdot \text{H}_2\text{O}$  with  $\text{X} = \text{bpz}$ ,  $\text{bpy}$ ,  $\text{phen}$  or  $\text{tpy}$**  J.C. HO, H.H. HAMDEH, R. KIRGAN, D.P. RILLEMA, Wichita State University — Magnetic studies have been made on several tris-chelated iron complex compounds  $[\text{FeX}_3](\text{ClO}_4)_2 \cdot \text{H}_2\text{O}$  with aromatic nitrogen heterocycle ligands  $\text{X} = \text{bpz}$  (2,2'-bipyrazine),  $\text{bpy}$  (2,2'-bipyridine),  $\text{phen}$  (1,10-phenanthroline) or  $\text{tpy}$  (2,2':6,2''-terpyridine). SQUID data (2-300 K and 0.01-1 T) yielded small effective magnetic moments, which are characteristic of low-spin Fe(II), in agreement with the isomer shift and quadrupole splitting values from Mössbauer measurements (4-300 K, 0-5 T). Meanwhile, apart from the expected diamagnetism, a positive term of temperature-independent paramagnetic susceptibility prevails in most cases.

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