Abstract Submitted
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Antiferromagnetic Ordering of Mn(III)F(salen)[1] M.W. MEISEL, Dept. of Physics and NHMFL, Univ. of Florida, TONG WANG, S.E. BROWN, Dept. of Physics, UCLA, M. BOTKO, E. ČIŽMÁR, Inst. of Physics, Šafárik Univ., Košice, Slovakia, O.N. RISSET, D.R. TALHAM, Dept. of Chemistry, Univ. of Florida — Due to a report suggesting Mn(III)F(salen), salen = $H_{14}C_{16}N_2O_2$, is an $S = 2$ Haldane system with $J/k_B = 50$ K and no long-range order down to 2 K based on standard magnetometry studies,[2] specific heat and NMR measurements were performed. Using small single crystals, specific heat studies revealed the presence of an anomaly near 23 K, and this response was robust in fields up to 9 T. The ^{1}H NMR results performed on a single crystal in 1 T revealed a sharp transition characteristic of antiferromagnetic ordering at 22.5 K. Measuring the magnetic response of the same single crystal in a commercial magnetometer reveals the presence of a subtle feature, near 23 K, that is not resolved with as-grown, randomlly oriented microcrystalline samples. These findings provide insight into the results obtained in torque magnetometry, EPR, and neutron scattering data.[3]

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[2]T. Birk *et al.*, Inorg. Chem. **50** (2011) 5312.
[3]J.-H. Park *et al.*, Acta Phys. Pol. A, in press.

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