

Abstract Submitted
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An extremely well-isolated 2D antiferromagnet CHRISTOPHER LANDEE, NIZAR NAITLHO, Department of Physics, Clark University, M.M. TURNBULL, Carlson School of Chemistry, Clark University — We report on the synthesis, structure, and magnetic susceptibility of an extremely well-isolated rectangular Heisenberg, $S = 1/2$ antiferromagnet, $[\text{Cu}(\text{pz})_2(4\text{-OHpy})_2](\text{PF}_6)_2$, where pz = pyrazine and 4-OHpy = 4-pyridone. The copper and pyrazine form nearly square layers of pyrazine-bridged copper(II) ions, with the pyridone molecules normal to the layers, coordinated to the copper sites by the oxygen. The distance between copper sites in adjacent layers is approximately 13 Å indicating a high degree of two-dimensionality. The magnetic susceptibility is best described by a model of an antiferromagnetic rectangle with the stronger and weaker interactions of 8.3 K and 4.4 K, respectively. The compound is more symmetric than an analogous compound $[\text{Cu}(\text{pz})_2(2\text{-OHpy})_2](\text{ClO}_4)_2$, reported previously [1].

[1] V. Selmani, C. P. Landee, M. M. Turnbull, J. L. Wikaira, and F. Xiao. *Inorg. Chem. Comm.* 13, 1399-1401 (2010), doi: 10.1016/j.inoche.2010.07.045

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