Abstract Submitted
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Electrical, Thermal, and Magnetic Properties of Single Crystal $CaMn_2O_4$ Marokite[1] B.D. WHITE, J.J. NEUMEIER, J.A. SOUZA, Montana State University, C. CHIORESCU, J.L. COHN, University of Miami — $CaMn_2O_4$ was first described [1] in 1963 as a natural mineral called Marokite. Since its discovery, it has been studied as a minor structural impurity phase in CMR- related $CaMnO_3$ and for its structural similarities to high-pressure phases of spinel-oxide compounds. However, little attention has previously been paid to physical properties beyond its temperature-dependent magnetization. We will present a detailed physical properties study of $CaMn_2O_4$ single crystals grown by the optical floating zone method. [2] These measurements, several of which display anisotropy as a result of an orthorhombic crystal structure, include electrical transport, thermal transport, thermal expansion, heat capacity, and magnetization.
[1] C. Gaudefroy, G. Jouravsky, F. Permingeat, Bull. Soc. Franç. Minér. Crist. **86** (1963) 359. [2] B. D. White, C. A. M. dos Santos, J. A. Souza, K. J. McClellan, J. J. Neumeier submitted to J. Cryst. Growth.

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