

Abstract Submitted
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Synthesis and basic characterization of the itinerant ferromagnet $\text{Cr}_{11}\text{Ge}_{19}$ ¹ NIRMAL GHIMIRE, University of Tennessee, MICHAEL MCGUIRE, Oak Ridge National Laboratory, DAVID MANDRUS, University of Tennessee and Oak Ridge National Laboratory — $\text{Cr}_{11}\text{Ge}_{19}$ is a member of the tetragonal, but structurally complex family of materials known as Nowotny chimney-ladder phases. These materials have composition T_nX_m where $2 > m/n > 1.25$ (T=transition element, X=Si, Ge, Sn or Ga). Although $\text{Cr}_{11}\text{Ge}_{19}$ was reported to be an itinerant ferromagnet, its basic properties have not been well characterized. Here we present resistivity, magnetization, and heat capacity results on polycrystalline $\text{Cr}_{11}\text{Ge}_{19}$.

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