

Abstract Submitted
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Phase diagram of the spinel system $\text{Fe}_{1+x}\text{Cr}_{2-x}\text{O}_4$ ($0 \leq x \leq 1$)¹ ANDHIKA KISWANDHI, JAMES BROOKS, Natl High Magnetic Field Lab, HAIDONG ZHOU, University of Tennessee — Here, we report the resistivity, specific heat, and the susceptibility of the series of polycrystalline spinel $\text{Fe}_{1+x}\text{Cr}_{2-x}\text{O}_4$ with $0 \leq x \leq 1$. The study shows that as the degree of inversion (x) increases, the magnetic transition temperature increases while the resistivity decreases in general. This demonstrates the intricate relationship between the magnetic interaction and the transport properties. Comparison to the previously studied normal vanadate spinel AV_2O_4 is also presented.

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