

Abstract Submitted
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Impurity and magnetic field investigation of PrOs₄Sb₁₂ COSTEL ROTUNDU, BOHDAN ANDRAKA, University of Florida, P.O. Box 118440, Gainesville, FL 32611-8440 —

We have performed a low level doping study of PrOs₄Sb₁₂. Samples with small amounts of La and Nd substituted for Pr were investigated by magnetic susceptibility and specific heat in magnetic fields to 14 T. The goal of this study was to search for correlations between superconductivity, effective electron mass, crystalline electric fields, and field-induced antiferro-quadrupolar order. In agreement with our previous study ¹, we find T_c to be only weakly affected by the alloying while other characteristics, such as the specific heat discontinuity at T_c and the width of the transition, show a dramatic dependence on the concentration of impurities. Results will be discussed in relation to considered models of superconductivity and heavy fermion behavior. Supported by Department of Energy, grant No. DE-FG02-99ER45748.

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