

Calorimetric investigation of the continuous demagnetization of Ce impurities in superconducting La, Th alloys

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A calorimetric investigation of the magnetic-nonmagnetic transition of an impurity (Ce) in a superconducting binary-alloy matrix (La, Th) is reported for the first time. The continuous demagnetization of the Ce ions with increasing Th composition is documented in terms of the specific heat jump at the superconducting transition temperature T_c as a function of T_c . A recent calculation by Müller-Hartmann and Zittartz for superconducting Kondo systems describes these data remarkably well out to ~ 70 at.% Th, but fails at higher Th compositions. © 1974 The American Physical Society.