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Kondo Fluctuation Signature on the Magnetocaloric Effect in the $YbInCu_4$ Under Pressure A.L. LIMA SHARMA, San Jose State University, A.M. GOMES, Universidade Fereral do Rio de Janeiro, CATALINA SALAZAR MEJIA, Universidade Federal do Rio de Janeiro, F.R. DRYMIOTIS, Clemson University, A.M.G. CARVALHO, Instituto de Pesos e Medidas — We have found a remarkable signature of the Kondo effect in the magnetocaloric effect MCE of $YbInCu_4$. The compound YblnCu4 presents a well-observed valence transition near 42K from free-moment to a low-temperature metallic mixed-valence phase. The magnetocaloric effect (MCE), ΔS, presents several features that can be understood as signatures of Kondo effect, valence transition and crystal electric field effects. Under pressure, the MCE not only increases in absolute value of the isothermal entropy change, but also shifts the low temperatures towards the Kondo temperature. We measured the heat flux using a differential scanning calorimeter in order to estimate the internal pressure of the local moment phase over the itinerant one, near the vicinity of the transition temperature. Moreover, we found that this compound, when submitted to a thermodynamic cycle, follows a nearly reversible process.

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