

Table I. Values (in eV) of the exchange integral J for La:Ce and La:Gd alloys, of the position E of the $4f$ level, and its variation dE under a 10 kbar pressure in La:Ce alloys. Calculations are done with two densities of states, $n(E_F)=2.4$ and 0.5 states/eV atom, and with a half-width $\Delta=0.02$ eV. (Between brackets the pressures p are expressed in kbar.)

	$J_{\text{Gd}}=J_1$ (eV)	$J_{\text{Ce}}(p=0)$ (eV)	$J_{\text{Ce}}(p=10)$ (eV)	$E(p=0)$ (eV)	$E(p=10)$ (eV)	$dE=E(p=0)-E(p=10)$ (eV)
$n(E_F)=2.4$ states/eV atom	0.03	-0.08	-0.11	0.05	0.04	0.01
$n(E_F)=0.5$ states/eV atom	0.06	-0.18	-0.24	0.11	0.085	0.025

similar system, the Y:Ce alloys,¹¹ which are not superconductors, would also be very interesting to study at very high pressures. Both La:Ce and Y:Ce alloys show a Kondo effect and are good candidates to study experimentally the transition from magnetism to nonmagnetism at very high pressures when E becomes zero. This study would relate directly to all the recent theoretical developments on the Kondo effect.

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