

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.)

	$J_{Gd}=J_1$ (eV)	$J_{Ce}(p=0)$ (eV)	$J_{Ce}(p=10)$ (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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siglio Nazionale delle Ricerche, Rome, Italy.

¹T. F. Smith, Phys. Rev. Letters **17**, 386 (1966).

²T. Sugawara and H. Eguchi, J. Phys. Soc. Japan **21**, 725 (1966).

³B. Coqblin, thesis, Orsay, 1967 (unpublished); B. Coqblin and A. Blandin, Advan. Phys. **17**, 281 (1968).

⁴J. R. Schrieffer and P. A. Wolff, Phys. Rev. **149**, 491 (1966); J. R. Schrieffer, J. Appl. Phys. **38**, 1143 (1967).

⁵P. G. de Gennes, J. Phys. Radium **23**, 510 (1962).

⁶B. Coqblin and J. R. Schrieffer, to be published.

⁷A. A. Abrikosov and L. P. Gorkhov, Zh. Eksperim. i Teor. Fiz. **41**, 569 (1961) [translation: Soviet Phys. -JETP **12**, 1243 (1961)]; S. Skalski, O. Betbeder-Matibet, and P. R. Weiss, Phys. Rev. **136**, A1500 (1964).

⁸K. Andres, Phys. Rev. **168**, 708 (1968).

⁹T. L. Loucks, Phys. Rev. **144**, 504 (1966).

¹⁰B. Coqblin and C. F. Ratto, to be published.

¹¹T. Sugawara, J. Phys. Soc. Japan **20**, 2252 (1965)