

Magnetic coupling in the Gd-T intermetallics (T-Fe, Co)

Duc N.H., Hien T.D., Givord D.

Cryogenic Laboratory, University of Hanoi, Hanoi, Viet Nam; Laboratoire Louis Néel, C.N.R.S. 166X, 38042 Grenoble cedex, France

Abstract: Using the strength of the Gd-Gd interactions, deduced in different Gd-T intermetallics from the ordering temperature of GdNi_2 , the Gd-T exchange coupling parameter (A_{GdT}) of the R_mT_n (T=Fe or Co; $m/n=1/2; 1/3; 6/23; 1/5$ and $2/17$) and $\text{R}_m\text{T}_n\text{A}_k$ (A=metalloids and other metals; $m/n/k=1/4/1; 2/14/1; 1/11/1$ and $1/10/2$) systems has been evaluated from analysis of the Curie temperature. Going from T-poor to T-rich compounds, a tendency to decrease is found for both $A_{\text{Gd=Co}}$ and $A_{\text{Gd=Fe}}$; these variations are compared with those observed in the exchange parameters $A_{\text{Co=Co}}$ and $A_{\text{Fe=Fe}}$. ?? 1992.

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Authors with affiliations:

1. Duc, N.H., Cryogenic Laboratory, University of Hanoi, Hanoi, Viet Nam
2. Hien, T.D., Cryogenic Laboratory, University of Hanoi, Hanoi, Viet Nam
3. Givord, D., Laboratoire Louis Néel, C.N.R.S. 166X, 38042 Grenoble cedex, France