

# On the magnetic properties of the $Y_{1-x}Gd_xCo_4B$ compounds

Minh Hong N., Ngoc Minh P., Phu Thuy N.

Cryogenic Laboratory, Faculty of Physics University of Hanoi, 90 Nguyen Trai, Hanoi, Viet Nam

Abstract: Magnetic phase transitions in  $Y_{1-x}Gd_xCo_4B$  with  $x$  ranging from 0 to 1 have been determined in the temperature range of 77 to 600K. The compensation temperature is found in the compounds with  $x \geq 0.6$ , while in the rest compounds a spin reorientation from the  $c$ -axis towards the basal plane upon decreasing temperature is observed. On the basis of the observed Curie and compensation temperatures the intersublattice exchange interaction coefficient has been derived and the contribution of the anisotropic exchange interaction to the anisotropy energy of the Gd containing compounds has been estimated. ?? 1992.

Index Keywords: Crystals--Physical Properties; Gadolinium Compounds; Magnetic Materials--Phase Transitions; Exchange interactions; Magnetic phase transitions; Yttrium Compounds

Year: 1992

Source title: Solid State Communications

Volume: 82

Issue: 4

Page : 211-214

Cited by: 1

Link: [Scopus Link](#)

Correspondence Address: Minh Hong, N.; Cryogenic Laboratory, Faculty of Physics University of Hanoi, 90 Nguyen Trai, Hanoi, Viet Nam

ISSN: 381098

CODEN: SSCOAA

Language of Original Document: English

Abbreviated Source Title: Solid State Communications

Document Type: Article

Source: Scopus

Authors with affiliations:

1. Minh Hong, N., Cryogenic Laboratory, Faculty of Physics University of Hanoi, 90 Nguyen Trai, Hanoi, Viet Nam
2. Ngoc Minh, P., Cryogenic Laboratory, Faculty of Physics University of Hanoi, 90 Nguyen Trai, Hanoi, Viet Nam
3. Phu Thuy, N., Cryogenic Laboratory, Faculty of Physics University of Hanoi, 90 Nguyen Trai, Hanoi, Viet Nam