

Magnetocrystalline anisotropy and exchange interaction of single crystalline RCo_4M (R: Y, Gd, Ho; M: Al, B)

Thang C.V., Thuy N.P., Hien T.D., Franse J.J.M., Colpa J.H.P.,
Brommer P.E., Bruck E.

Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, Netherlands; Cryogenic Laboratory, University of Hanoi, Intl. Train. Inst. for Mat. Science, Hanoi, Viet Nam

Abstract: The RCo_4M compounds (R: rare earth; M: Al, B) can be obtained from RCo_5 by substituting M for Co. For the first time, large single crystalline samples of RCo_4M (R: Y, Gd, Ho) have been grown. Some differences have been found between the effects of Al and B substitution. In particular, a first-order magnetisation process associated with the Co sublattice is reported for RCo_4B (R: Gd, Y).

Author Keywords: First-order magnetisation process; Magnetocrystalline anisotropy

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Correspondence Address: Thang, C.V.; Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, Netherlands

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Authors with affiliations:

1. Thang, C.V., Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, Netherlands, Cryogenic Laboratory, University of Hanoi, Intl. Train. Inst. for Mat. Science, Hanoi, Viet Nam
2. Thuy, N.P., Cryogenic Laboratory, University of Hanoi, Intl. Train. Inst. for Mat. Science, Hanoi, Viet Nam
3. Hien, T.D., Cryogenic Laboratory, University of Hanoi, Intl. Train. Inst. for Mat. Science, Hanoi, Viet Nam
4. Franse, J.J.M., Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam,

Netherlands

5. Colpa, J.H.P., Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, Netherlands
6. Brommer, P.E., Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, Netherlands
7. Br?ck, E., Van der Waals-Zeeman Institute, University of Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, Netherlands

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