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

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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).
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