

Crystalline-electric-field effect in some rare-earth intermetallic compounds

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Abstract: The results of research on the crystalline-electric-field (CEF) effect in RCu_2 , $\text{R}_2\text{Fe}_{14}\text{B}$ and RFe_{11}Ti compounds are presented. In the study of the CEF effect in the RCu_2 compounds, attention is paid to the combined analysis of specific heat and thermal expansion. An attempt has been undertaken to investigate the systematic behavior of CEF interactions by comparing different compounds with the same crystallographic structure. From the analysis of spin-reorientation phenomena in $\text{R}_2\text{Fe}_{14}\text{B}$ and RFe_{11}Ti compounds the sets of CEF parameters are derived. ?? 2002 Elsevier Science B.V. All rights reserved.

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