

The influence of severe plastic deformation on magnetic properties of ferromagnetic 4-*f* elements: Tb and Dy

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In this work we continue our previous investigations of the severe plastic deformation (SPD) on the magnetic properties of 4-*f* elements, with special accent on magnetic anisotropy and magnetic transformations. Severe plastic deformation has a great effect on magnetic properties of 4-*f* elements [1]. For instance, in Gd a significant increase of the magnetocrystalline anisotropy (up to 2 orders of magnitude) has been observed. The aim of this work is to investigate other important for permanent magnets industry ferromagnetic elements Tb and Dy for a change in physical properties.

References:

[1] S. V. Taskaev, M. D. Kuz'min, K. P. Skokov, D. Yu. Karpenkov, A. P. Pellenen, V. D. Buchelnikov and O. Gutfleisch, *JMMM* **331**, 33 (2013).

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