ELECTRONIC AND TRANSPORT PROPERTIES OF $Dy_2Co_7B_3$ COMPOUND

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9.7 cm

New results of the electronic and transport properties (electrical resistivity) of $Dy_2Co_7B_3$ compound are reported. This alloy crystallizes in the hexagonal $Ce_2Co_7B_3$ type of structure. The electronic structure has been studied by the X-ray photoemission spectroscopy (XPS). The valence band of the XPS spectra is determined mainly by the Co(3d) and Dy(4f) bands. The peaks positions are in a good agreement with the binding energies of a metallic dysprosium. The resistivity at low temperatures shows a T^2 dependence. At higher temperatures the resistivity is a nonlinear function of temperature, which indicates an electron-phonon interaction in the presence of a small s-d scattering.

13.4 cm

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