SSNN 30P **FEATURES OF ROTATION DIAGRAMS TRANSVERSE MAGNETORESISTANCE BULK SAMPLES AND SEMICONDUCTOR ALLOYS WIRES $Bi_{1-x}Sb_x$**

P. P. Bodiul*, I. A. Popov, Gh. I. Para, A. Rusu, E. Istratii
Ghitu Institute of Electronic Engineering and Nanotechnologies, ASM, Chisinau, Moldova
*E-mail: pavelbodiul@mail.ru

Experimental study of anisotropy of the galvanomagnetic properties of bismuth ant its alloys is performed by removing the rotation diagrams transverse magnetoresistance (RDTM). Study of RDTM particularly important in the wires, having a test cylinder as in addition to studying the magnetoresistance anisotropy, its dependence on temperature, magnetic field, the sample sizes, the it is the only method that allows orientation of the magnetic field along certain crystallographic directions. Accurate fixation of crystallographic directions in cylindrical shape samples (wires) allows the study of the Shubnikov de Haas oscillations, and the structure of Fermi surface, particularly in the case of Bi-Sb alloys and presence of these surface states [2]. Science the frequencies of Quantum SdH oscillations are directly related to the Fermi surface (FS) cross sections via the Onsager relation: $F = \frac{\hbar c}{2\pi} * A$, where A is the area of an extremal cyclotron orbit, the shape and size of the FS can be obtained from the angular dependences of FS measusured within the three main crystallogaphyc planes. In this paper we investigated RDTM of bulk samples Bi-17at%Sb, cut by electricspark way along the bisector axis and in the wires of similar composition and orientation. Wires Bi-17at%Sb in the glass cover obtained by casting from liquid phase – Ulitovsky method [3]. It is shown that in a weak magnetic fields at T = 300 K, 4,2 K, if the current derected along the bisector axis, that in magnetic fields up to 0,4 T rotation curve has simple bell-shaped form. In the analytical writing he expressed by the formula: $\rho_{22}(B) - \rho_{22}(\theta = \rho_{11,22}B^2 sin^2\theta + \rho_{11,33}B^2 cos^2\theta)$. In samples of pure Bi increase of magnetic field produces a minimum at 90° and two maxima at 45° and 135°. Characteristically, that $\rho_{22}(B_3)$ starting with 0,5 T grows with magnetic field faster, than $\rho_{22}(B_2)$. Further increase of the magnetic field does not lead to appearance of new details in the rotation curve of transverse magnitoresistance. A different situation occurs in the bulk samples and wires of semiconductor alloys Bi, $Bi_{1-x}Sb_x$. Investigated RDTM wires Bi-17at%Sb and bulk sample Bi-8at%Sb. The feature RDTM of semiconductor alloys $Bi_{1-x}Sb_x$ is that, when at H || C_3 magnetoresistance in strong magnetic fields smaller than for H || C_2, unlike semimetallic wires Bi and $Bi_{1-x}Sb_x$. This fact should be considered in studies of cylindrical shape wires semiconductor alloys $Bi_{1-x}Sb_x$. It is shown that the efficiency of the magnetic field at 77 K for two orders lower than at 4,2 K. In strong magnetic fields, the cross section of the Fermi surface functionally related with the cross section of the Fermi surface by a plane perpendicular to magnetic field direction and thus in the presence of SdH oscillations the Fermi surface can be restored, in particular surface states.

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