Journal of Surface Investigation 2014 vol.8 N3, pages 569-572

Change in the sign of the Kerr effect in ion-bea--synthesized Fe3Si films

Chirkov V., Gumarov G., Petukhov V., Valeev V., Denisov A.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Ion-beam-synthesized Fe3Si thin films are studied using the magneto-optical Kerr effect, ferromagnetic resonance, electron diffraction, and Auger spectroscopy. A change in the direction of rotation of the plane-polarized light as a function of film-synthesis conditions is discovered when the meridional Kerr effect is recorded. It is shown that the observed effect is related to the presence of thin interference films with different thicknesses on the surfaces of the magnetic layers. © Pleiades Publishing, Ltd., 2014.

http://dx.doi.org/10.1134/S1027451014030288