



Interlayer interaction in Mo/Si multilayers

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Abstract

Interlayer interaction in Mo/Si superconducting multilayers was determined by two methods involving the measurements of the critical magnetic fields and magnetoresistivity (MR) in a normal state at both parallel and perpendicular H orientations. Data on MR allow one to determine the effective thickness of the metal layer L^* which characterizes interlayer interaction. On the Mo/Si series with the constant Si layer thickness L_{Si} the oscillations of L^* are observed which correlate closely with ones of anisotropy parameter γ . The tunnel (Josephson) nature of the interlayer coupling is confirmed by the data obtained on multilayer series with variable L_{Si} . On these samples the correlation between γ and L^* behavior is also found.