INFLUENCE OF ELECTRON-DEFORMATION INTERACTION ON THE ELECTRIC PROPERTIES OF A BARRIER AT AN EDGE DISLOCATION

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S u m m a r y

In the framework of a self-consistent model of the electron-deformation interaction, the influence of the filling factor of the conduction band on the rectification parameters of a dislocation barrier has been studied. It has been shown that the basic characteristics of the diode effect at a single edge dislocation are governed by both the electrostatic potential of the charged dislocation and the self-consistent potential of the electron-deformation interaction, resulting from the spatial redistribution of conduction electrons in the vicinity of the dislocation.