THE SIZE EFFECT OF THE TEMPERATURE DEPENDENCE OF THE ELECTRICAL RESISTIVITY IN THIN POLYCRYSTALLINE Cr AND Cu METAL FILMS

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S u m m a r y

A new model for the description of electrical resistivity in thin polycrystalline metal films is proposed. It is supposed that a polycrystalline film consists of two paralel layers with diferent parameters of resistivity and thermal coefficient of resistance. The obtained equations allow one to separate the grain-boundary and surface electron scatterings in Cr and Cu thin films. The temperature dependence of resistivity in thin films of various thicknesses is calculated.