

CdTe semiconductor is a good material for the construction of X-ray and gamma ray detectors. Its physical properties are strongly influenced by an existence of deep levels in the forbidden band. This thesis deals with an influence of deep levels to the photoelectric transport in high resistivity CdTe. Experimental part of this thesis consists of measurement of slopes of Lux-Ampere characteristics of variously doped CdTe samples depended on voltage and energy of excitation. Gradients of measured guidelines of Lux-Ampere characteristics show strong dependency on an electric charge accumulated on deep levels. This thesis also contains numerical models of photoconductivity for various parameters of material.