

PECULIARITIES OF DARK CONDUCTIVITY IN IRRADIATED SILICON (not Friday)

Wednesday 13 November 2013 10:10 (20 minutes)

The electrical properties of the irradiated by neutrons Si are analyzed by means of the Hall effect and magnetoresistance temperature dependence in a few series of Si samples. It is demonstrated that the electron mobility decrease with temperature as a power law with index less than in the nonirradiated silicon and can become near to one in the highly irradiated silicon. The analyze of contribution of the local levels showed a possibility to approximate the temperature dependence by V2 and V3 contribution in the samples irradiated up to $3e14$ cm⁻². In a higer irradiated samples the activation energy depended on the fluence and a modified model of the cluster and its environment is proposed.

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Session Classification: Defect and Pad Detector Characterization