High-Z Pixel Detector Workshop 2019



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Macroscopic and microscopic ingomoginities in HR GaAs: Cr wafers

Thursday, 21 March 2019 10:00 (1 hour)

The report provides an overview of investigations of HR GaAs: Cr wafer characteristics dependencies on the properties of raw material (n-GaAs). Wafers with a diameters of 76, 100 mm produced by LEC and VGF technologies were investigated. It has been established that macroscopic inhomogeneities of resistivity and photosensitivity distributions in HR GaAs: Cr wafers are determined, in particular, by the macroscopic inhomogeneity of the impurity allocation in n-GaAs wafers. It is shown that microscopic inhomogeneity in HR GaAs: Cr is basically determined by the growth technology and the conditions of post-growth annealing of n-GaAs ingots.

Presenter: Prof. TYAZHEV, Anton (Functional Electronics Laboratory of Tomsk State University Tomsk, Russia)