Short Communication

Investigation of Growth kinetics of the Electrochemical Germanium Nanowire Array Deposition in Galvanostatic Regime Using Indium Nanoparticles

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The features of growth kinetics of the electrochemical Ge nanowires deposition from GeO₂ aqueous solutions using indium nanoparticles as crystallization centers are reported. The use of the galvanostatic regime makes it possible to identify sections on the obtained potential-time curves that corresponds to the beginning and completion of the Ge nanowires growth process. It has been established that the Ge nanowires formation efficiency does not depend on the indium mass deposited on the substrate. However, the increase of current density leads to a decrease of the indium mass which participates in the Ge nanowires formation.

Keywords: Ge nanowires, galvanostatic regime, cathodic deposition, nanoparticles.

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