Simulation Of Silicon Window Layers For Solar Cells Based Sige

Authors : Boukais Meriem, B. Dennai, A. Ould-Abbas

Abstract : The efficiency of SiGe solar cells might be improved by a wide-band-gap window layer. In this work we were simulated using the one dimensional simulation program called analysis of microelectronic and photonic structures (AMPS-1D). In the simulation, the thickness of silicon window was varied from 80 to 150 nm. The rest of layer's thicknesses were kept constant, by varying thickness of window layer the simulated device performance was demonstrate in the form of current-voltage (I-V) characteristics and quantum efficiency (QE).