

## Conductance of Silicene and Graphen Based Superlattices

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We study the conductance of charge carriers through silicene and graphene based superlattices consisting of monolayer graphene and silicene by means of transfer matrix method. The system consists of a sequence of the silicene based barriers and graphene based wells. We consider the ordered superlattices and calculate the transmission probability of dirac fermions. We show that there is resonance peaks in transmission probability and the number of resonance peaks increases with increasing the number of superlattice barriers. Also, the effect of structural parameters on the conductance of the system are studied. We compute numerically the conductance of the system and plot versus the height of the potential barriers and show that it has the oscillatory behavior. This behavior is in contrast to the schrodinger equation that conductance decay with increasing the barrier height.