عنوان مقاله:

Quantum Current Modeling on Graphene Nanoribbons

محل انتشار:

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خلاصه مقاله:

Graphene has amazing carrier transport property and high sensitivity at the single molecule level. This leads them as promising materials for nanoelectronic application. In order to develop the new device types same as graphene nanoribbon , Carbon Nanotube Field Effect Transistor (CNTFET) and Naonowire, it is essential to investigate of quantum limit in low dimensional devices.. In this paper transmission coefficient of the schotcky structure in the graphen based transistor is modeled based on the width of semiconducting channel and then its quantum properties due to the dependence on structural parameter are analyzed. In addition 1D quantum current based on the approximation of the wave vector relation for MGNS is presented. Also, degenerate and degenerate approximation .quantum current of the proposed structure is obtained and then evaluated

کلمات کلیدی:

quantum transmission, quantum current, degenerate limit, non-degenerate approximation, monolayer graphene nanoribbons