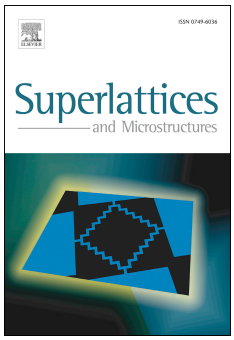
Accepted Manuscript



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PII: S0749-6036(16)31441-0

DOI: 10.1016/j.spmi.2017.03.005

Reference: YSPMI 4872

To appear in: *Superlattices and Microstructures*

Received Date: 9 November 2016

Revised Date: 3 March 2017

Accepted Date: 3 March 2017

Please cite this article as: H. Rezania, A. Abdi, The effects of gap parameter and spin polarization on electronic Hartree and correlation energies of doped graphene nanoribbon, *Superlattices and Microstructures* (2017), doi: 10.1016/j.spmi.2017.03.005.

The effects of gap parameter and spin polarization on electronic Hartree and correlation energies of doped graphene nanoribbon

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Abstract

We study the behaviors of both Hartree and correlation energies of undoped gapped armchair graphene nanoribbon using random phase approximation in the context of Hubbard model Hamiltonian. Specially, the effects of spin polarization and gap parameter on electron density dependence of Hartree and correlation energies of armchair graphene nanoribbon has been addressed. Our results show the variation of gap parameter leads to considerable effect on correlation and Hartree energy behavior of spin unpolarized gapped graphene in the middle electron density region. However local Hubbard interaction parameter affects the behaviors of

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