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Electronic and Transport Properties of Waved Graphene Nanoribbons[1] MAHMOUD HAMMOURI, IGOR VASILIEV, New Mexico State Univ — First principles *ab-initio* calculations are employed to study the electronic and transport properties of waved graphene nanoribbons. Our calculations are performed using the SIESTA and TRANSIESTA density functional electronic structure codes. We find that the band gaps of graphene nanoribbons with symmetrical edges change very slightly with the increasing compression, whereas the band gaps of nanoribbons with asymmetrical edges change dramatically. The computed IV-characteristics of the waved graphene nanoribbons with different compression ratios reveal the effect of compression on the transport characteristics of graphene nanoribbons.

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