

Abstract Submitted
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Thermoelectric properties of a trilayer graphene nanoribbon¹ PEDRO ORELLANA, NATALIA CORTES, LUIS ROSALES, MONICA PACHECO, Universidad Tecnica Federico Santa Maria, LEONOR CHICO, CSIC — In this work the electronic and thermoelectric properties of a three-layer graphene with AAA stacking type are studied. By using a tight-binding model analytical expressions for the transmission and density of states are obtained. Thermoelectric properties are analyzed by numerical integration and results for thermopower and figure of merit, electronic conductance and thermal conductance are obtained. The results show that the interference effects present in this system, like Fano effect, directly affect the behavior of these thermoelectric properties [1] and as well as the Wiedemann-Franz law [2]. There is an enhancement of the thermopower of the system and a violation of the Wiedemann-Franz law in the region of energies close the Fano antiresonances and this has as a consequence an enhancement of the figure of merit of the system.

[1] G. Gómez-Silva, O. Ávalos-Ovando, M. L. Ladrón de Guevara and P. A. Orellana, *J. Appl. Phys.* **111**, 053704 (2012).

[2] D. Boese and R. Fazio, *Europhys. Lett.* **56**, 576 (2001).

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