

Abstract Submitted
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Charge transport in ballistic multiprobe bilayer graphene dots.¹

IGOR ROMANOVSKY, CONSTANTINE YANNOULEAS, UZI LANDMAN, Georgia Institute of Technology, Atlanta, GA 30332 — We present a numerical analysis of the transport properties of the bilayer graphene quantum dots attached to multiple leads. In the framework of the tight binding model and using the nonequilibrium Green's function technique, we study numerically effects due to: magnetic fields, bias voltage between the layers, geometrical shape, and the arrangement of the attachments of the leads to the device. The results are compared to those obtained for similar quantum dot structures made from a graphene monolayer.

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