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Title: "Spin and Charge transport in Ferromagnetic Graphene"

Abstract: We study spin dependent transport through a magnetic bilayer graphene nanojunction configured as normal/ferromagnetic/normal structure in infinite sheet and also in nanoribbon form. In special configuration of ferromagnetic layers deposited on central part of the system, fully spin polarized current is controllable by using perpendicular electric field applied as top gated electrodes. Furthermore, we investigate ac-transport through monolayer graphene nanoribbons. In non-adiabatic regime, electrical control of spin and charge pumped current is also achievable by tuning driven frequency of electrostatic gate voltages when there is no source-drain bias. An interesting case is the situation in which there is a net spin current with no charge transport.