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Author Correction: Exploring room temperature spin transport under band gap opening in bilayer graphene

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The original version of this Article contained an error in Figure 1 and 2. In Figure 1 the revised figure was not used in the article and in Figure 2b there was a typo in the y axis legend where “ $n \times 10^{-12} \text{ (cm}^{-2}\text{)}$ ” was changed to “ $n \times 10^{12} \text{ (cm}^{-2}\text{)}$ ”.

The original Figures 1 and 2 accompanying legends appear below.

In addition, in the Results section, under the subheading ‘Spin transport measurements’,

“These are measurements where we sweep an in-plane magnetic field, which reverses the magnetisation of the 1D contacts and enables us to obtain either a parallel or antiparallel magnetic alignment between the injector and detector contacts.”,

now reads

“These are measurements where we sweep an in-plane magnetic field, $B_{||}$, applied along the direction of contacts, which reverses the magnetisation of the 1D contacts and enables us to obtain either a parallel or antiparallel magnetic alignment between the injector and detector contacts.”

Also,

“In doing so, we sweep a perpendicular magnetic field strength across a range of $\pm 200 \text{ mT}$, which causes the diffusing electronic spins to experience Larmor precession, and fit the spin signal with the Hanle equation²².”

now reads

“In doing so, we sweep magnetic field strength perpendicular to the plane of the graphene (see Figure 1b), B_{\perp} , across a range of $\pm 200 \text{ mT}$, which causes the diffusing electronic spins to experience Larmor precession, and fit the spin signal with the Hanle equation²².”

The original Article has been corrected.

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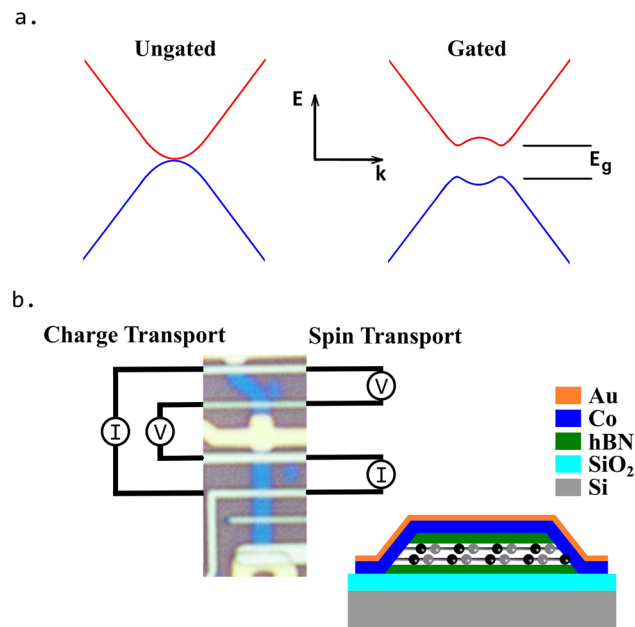


Figure 1. Bilayer graphene transport channel and device. (a) Band structure of pristine BLG without (left) and with (right) an applied perpendicular electric displacement field. (b) Optical micrograph of our $\sim 1\ \mu\text{m}$ wide BLG graphene transport channels (blue) with contacts and top gate (in the measurement region). The charge (spin) transport current injection, I , and local (non-local) potential difference, V , measurement configuration. Inset: Schematic of the device heterostructure showing the Co/Au 1D edge contacts, with the graphene represented by the balls and sticks.

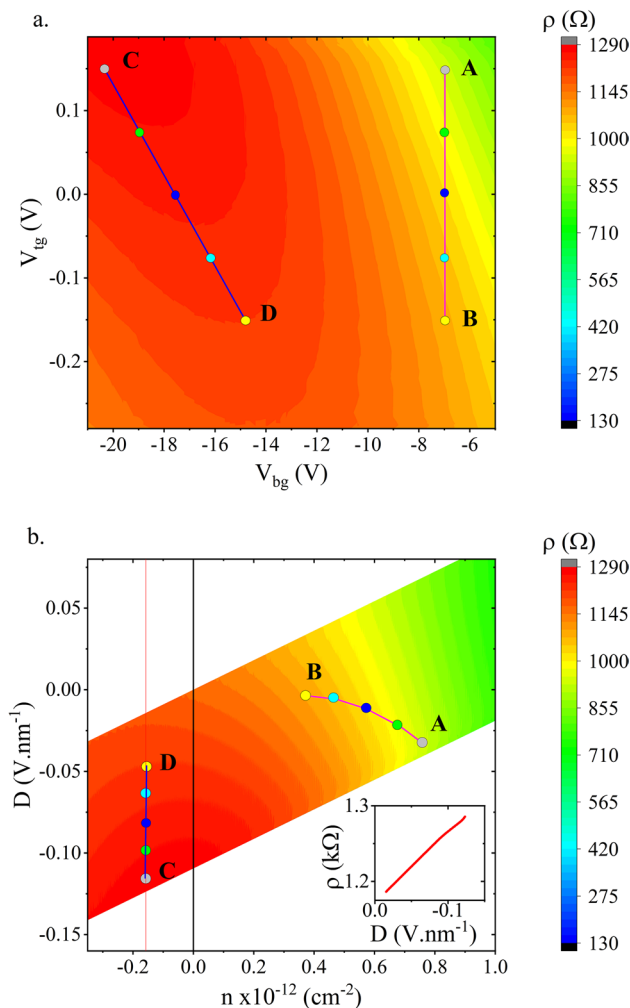


Figure 2. (a) A 2D charge transport measurement map at RT showing the effect on the sheet resistance, ρ , of applying a back gate voltage, V_{bg} , and top gate voltage, V_{tg} . (b) The same charge transport measurements transformed into a map as a function of carrier density, n , and electric displacement field, D . In both maps the symbols are shown where the spin transport measurements were made. b(inset) Sheet resistance close and parallel to the Dirac ridge ($n \approx 0$).



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