

RIVAL MECHANISMS OF HYSTERESIS
IN THE RESISTIVITY OF GRAPHENE CHANNEL

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S u m m a r y

A model for rival mechanisms of hysteresis that appears in the dependence of the resistivity of graphene channels created on substrates of various nature on the gate voltage has been developed. Two types of hysteresis were distinguished: direct (associated with the presence of adsorbates with dipole moments on the surface and the interface) and inverse (associated with the capture of charge carriers from the graphene layer by the localized states at the interface graphene–substrate). A capability of discerning between those channels by varying the rate of gate voltage sweep was discussed. A good agreement is obtained between our theoretical predictions and the experimental data available in the literature.