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# Confinement in 2D materials

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## Abstract

Quantum devices realized in graphene and other 2D materials usually rely on etching which often leads to localized states dominating the electronic properties of the system. Here we show how a stacked gate arrangement in bilayer graphene can be used to define a constriction for current flow which can be completely pinched off and in addition displays plateau-like features in the conductance. We also show that spil-gate geometries on high-mobility MoS2 allow for the realization of an electronic constriction. These developments pave the way for electronically tunable quantum devices in 2D materials.

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