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Quantum dots in graphene PETER SILVESTROV, K.B. EFETOV, Ruhr-Universitat Bochum — We suggest a way of confining quasiparticles by an external potential in a small region of a graphene strip. Transversal electron motion plays a crucial role in this confinement. Properties of thus obtained graphene quantum dots are investigated theoretically for different types of the boundary conditions at the edges of the strip. The (quasi)bound states exist in all systems considered. At the same time, the dependence of the conductance on the gate voltage carries an information about the shape of the edges.

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