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Topological Insulating States in Semiconductor Based Artificial Graphene

Monday, 26 August 2019 15:00 (30 minutes)

We propose that ordinary semiconductors with large spin-orbit coupling, such as GaAs, can host stable, robust, and tunable topological states in the presence of quantum confinement and superimposed potentials with hexagonal symmetry.
We show that the electronic gaps which support chiral spin edge states can be as large as the electronic bandwidth in the heterostructure miniband.

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