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Quantum devices in graphene

Todays transistor are made of silicon. Also spin qubits in silicon are among the contenders for a future quantum information processor. Graphene has emerged as a unique material in terms of tunability and electronic properties. How can the thinness of graphene be utilized for quantum devices? What can we learn from the peculiar bandstructure of graphene, in particular topological properties such as Berry curvature? In what way does twisting of graphene layers open completely new avenues?