

Majorana Fermions in Atomic Chains: Spin and Charge Signatures

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I will review the platform for realization of topological superconductivity and Majorana fermions in chains of magnetic atoms on the surface of a superconductor. I will describe high resolution studies of spatial mapping of spectroscopic signature of Majorana fermions in spectroscopic experiments with the STM. These will include experiments at lowest possible temperature with the STM, with superconducting tips, as well as those using spin-polarized STM techniques. In each case Majoranas are predicted to leave a distinct signature than other in gap states of a superconductor, which can be diagnosed experimentally.

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[3] B. Feldman et al. *Nature Physics* to appear (2016).