

## **Particle physics on a chip; The search for Majorana Fermions**

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Predicted in 1937 but never detected, particles that are equal to their own antiparticles. Could neutrino's be Majorana Fermions? What about dark matter? I don't know, but now Majorana's have also been predicted to exist in specially designed nanoscale devices. So instead of detecting new particles at higher and higher energies, one can alternatively design more and more carefully quantum states in condensed matter in which the low-energy (quasi)-particles obey certain symmetries. We will outline and present experiments geared towards demonstrating Majorana's based on superconductors and semiconductor nanowires.

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