

Publication

Adiabatic quantum pumping of chiral Majorana fermions

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We investigate adiabatic quantum pumping of chiral Majorana states in a system composed of two Mach-Zehnder type interferometers coupled via a quantum point contact. The pumped current is generated by periodic modulation of the phases accumulated by traveling around each interferometer. Using scattering matrix formalism we show that the pumped current reveals a definite signature of the chiral nature of the Majorana states involved in transport in this geometry. Furthermore, by tuning the coupling between the two interferometers the pump can operate in a regime where finite pumped current and zero conductance are expected.

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