北京大学量子材料科学中心

International Center for Quantum Materials, PKU

Seminar

Quantized signature of chiral Majorana fermions

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Time: 16:00am, November 7, 2017 (Tuesday)

时间：2017年11月7日 （周二）下午 16:00

Venue: Room W563, Physics Building, Peking University

地点：北京大学物理楼 西563

Abstract

In a quantum anomalous Hall insulator coupled to an s-w[illegible] surface [illegible]ac f[illegible]ion at the interface forms a px+ipy type of superconductor, w[illegible] co[illegible]date [illegible] chiral Majorana fermion modes propagating along the edges when the topological order is carefully controlled. Experimental signatures of this mode is captured by the magneto-electric transport measurements in a hybrid system of a quantum anomalous Hall insulator [Cr-doped $(Bi,Sb)_2Te_3$] thin film partially capped by a superconductor layer (Nb). The external magnetic field serves as a k b to tune the system into different topological regimes that allow the degenerate and non-degenerate propagation of Majorana edge modes. This tuning was signified as quantized conductance transitions among

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superconductor.