

CUNY NANO DAY

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CUNY ASRC



2.40 pm

Tunneling Current Measurement Scheme to Detect Majorana Zero Mode Induced Crossed Andreev Reflection

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We propose a scheme to detect the Majorana zero mode induced crossed Andreev reflection by measuring tunneling current directly. In this scheme a metallic ring structure is utilized to separate electron and hole signals. Since the tunneling electron and the tunneling hole have different wave vectors, the conditions for them to be constructively coherent in the ring are different. We find that when we vary the magnetic flux threaded through the ring, we are able to observe positive and negative current peaks separately.