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Kitaev model with quantum dot chains I: Andreev transport

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Chains of quantum dots in semiconductor nanowires can be used to emulate important one-dimensional Hamiltonians such as the topological p-wave superconductor. We build a coupled triple dot chain in an InSb nanowire where each dot is tuned to be strongly coupled to a superconducting NbTiN lead. We use an array of closely spaced bottom gates to tune the Andreev bound states in each dot and observe Andreev state hybridization. We measure transport through Andreev bound states on individual dots, dot pairs and through the triple dot. We explore the influence of Coulomb energy on the Andreev spectra of the chains.