

Abstract Submitted
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Transport in Suspended Ultraclean Carbon Nanotube Double Dots CHENG PAN, MARC BOCKRATH, University of California, Riverside — Using split gates, we modulate the charge density along the length of suspended ultraclean single-wall carbon nanotubes to produce pp , pn , np and nn configurations. With pn junctions present, the nanotubes act as a double quantum dot system. We perform transport experiments to investigate Kondo physics in this coupled tunable system. In polarized pp configurations, we observe conductance modulations that we attribute to backscattering induced by a potential step within the nanotube. We estimate the step spatial size from the electron wavelength cutoff of the scattering. We will discuss our latest results.

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