

Abstract Submitted  
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**Four-probe resistivity measurement on a Bi Nanowire**<sup>1</sup> MIN-GLIANG TIAN, The Pennsylvania State University, JIAN WANG, THOMAS MALLOUK, MOSES CHAN — While bulk Bi is a semimetal down to at least 50 mK, its electronic properties in a confined geometry are more complex. Here, we carry out four-probe measurements of electrical transport properties on individual single-crystal Bi nanowires of different diameter ranging from 100 nm down to 20 nm. The nanowires were fabricated by electrodeposition in porous membranes and contacted by focus ion beam technique. The wires show a superconducting transition near 1.5 K. Little-Parks-like oscillations in parallel field were seen in larger diameter wires but disappeared when the diameter of the wire is less than 30 nm.

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