

Abstract Submitted
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Tunneling measurements of clean metal/graphene junctions

CHRIS MALEC, FELIPE BIRK, DRAGOMIR DAVIDOVIC, Georgia Tech — The tunneling density of states of graphene offers valuable information to understand its transport properties. Hall bars fabricated from graphene can only probe the states at the fermi level, while STM studies are subject to tip effects, and have greater limits on temperature and magnetic field than a similar experiment that can be done with a device. Here, we present magnetotransport measurements on clean, micron scale junctions between metal and graphene at cryogenic temperatures. In our fabrication process, the tunneling lead is made to contact an exfoliated graphene flake without the use of lithography and accompanying polymer residues. These experiments compliment similar efforts with STM local probes, and comparisons will be made with these systems.

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