Tunneling spectroscopy of graphene boron nitride heterostructures\textsuperscript{1}

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We report on the fabrication and measurement of a graphene tunnel junction using hexagonal boron nitride as a tunnel barrier between graphene and a metal gate. The tunneling behavior into graphene is altered by the interactions with phonons and the presence of disorder. We extract properties of graphene and observe multiple phonon-enhanced tunneling thresholds. Finally, differences in the measured properties of two devices are used to shed light on mutually-contrasting previous results of scanning tunneling microscopy in graphene.

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