Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

**Thermal transport in suspended and supported monolayer graphene grown by chemical vapor deposition** WEIWEI CAI, Xiamen University, ARDEN MOORE, SHANSHAN CHEN, YANWU ZHO, Univ. of Texas at Austin, LI SHI, RODNEY S. RUOFF, Univ. of Texas at Austin — Although electron transport in graphene has been studied extensively and graphene is predicted to have very high thermal conductivity near room temperature, there is only limited experimental data in the literature on phonon transport in graphene because of experimental challenges. We report results based on micro-Raman spectroscopy for the measurement of the thermal conductivity of large-area, monolayer graphene grown by CVD on copper and subsequently suspended over a circular hole. The obtained optical absorption is measured directly by measuring the transmission through the graphene covered hole. Based on the thermal interface conductance of (28+2.8/-3.8) $MW/m^2$ K, the contact thermal resistance is determined to be considerably smaller than the measured thermal resistance of the suspended graphene. The obtained thermal conductivity of the supported graphene is (370 +490/-300) W/m K, which is considerably smaller than that of suspended graphene in agreement with recent measurements of mechanically exfoliated graphene supported on $SiO_2$.

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Date submitted: 19 Nov 2010 Electronic form version 1.4