

Abstract Submitted
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The G^* (2450 cm^{-1}) Double Resonance Raman Peak in single-, few-layer graphene and DWNTs ALFONSO REINA, HYUNGBIN SON, FEDERICO VILLALPANDO-PAEZ, HOOTAN FARHAT, JING KONG, MIT, MILDRED DRESSELHAUS, MATERIALS SCIENCE AND ENGINEERING TEAM, ELECTRICAL ENGINEERING AND COMPUTER SCIENCE TEAM, PHYSICS TEAM, UC, BERKELEY TEAM — The dispersion and skewness of the 2450 cm^{-1} peak in the raman spectra of carbon structures was analyzed. The dispersion of this peak for graphene is smaller in magnitude and of opposite sign than that for the G' ($\sim 2700\text{ cm}^{-1}$). This dispersion is independent on number of layers. The peak shows asymmetry (skewness) which increases with E_{laser} . The observations can be explained by viewing this double resonance process arising by the scattering with both an iTO and a iLA phonon. The peak becomes more symmetric in DWNTs and it shows a stronger curvature dependence than the G' peak.

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