Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Determination of absorption cross-section in suspended single-walled carbon nanotubes XIAOPING HONG, KAIHUI LIU, SANGKOOK CHOI, STEVEN LOUIE, FENG WANG, University of California, Berkeley, FENG WANG GROUP TEAM — Quantitative determination of optical absorption cross-section at single tube level was performed for over 50 suspended single-walled carbon nanotubes (SWCNTs). The structures of the nanotubes are independently identified by electron diffraction, which allows a chirality-dependent study of the nanotube absorption cross-section. We will discuss the absorption strength as well as the linewidth of the optical resonances in both semiconducting and metallic nanotubes of different diameters.

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Date submitted: 08 Nov 2012 Electronic form version 1.4