

Abstract Submitted
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Chirality, Metallicity, and Transition Dependent Asymmetries in Resonance Raman Excitation Profiles of Chirality-Enriched Carbon Nanotubes STEPHEN DOORN, JUAN DUQUE, HAGEN TELG, ERIK HAROZ, Los Alamos National Laboratory, XIAOMIN TU, MING ZHENG, NIST — Access to carbon nanotube samples enriched in single chiralities allows the observation of new photophysical behaviors obscured or difficult to demonstrate in mixed-chirality ensembles. Recent examples include the observation of strongly asymmetric G-band excitation profiles resulting from non-Condon effects¹ and the unambiguous demonstration of Raman interference effects.² We present here our most recent results demonstrating the generality of the non-Condon behavior to include metallic species (specifically several armchair chiralities). Additionally, the E_{ii} dependence in non-Condon behavior with excitations from E_{11} thru E_{44} for both RBM and G modes will be discussed. 1. J.G. Duque, et. al., ACS Nano, 5, 5233 (2011). 2. J.G. Duque, et. al., Phys. Rev. Lett. 108, 117404 (2012).

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