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Investigation of Wave Propagation in Multiwall

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Abstract: The wave propagation in individual multiwall carbon nanotubes subjected to transverse disturbing, modeled a multiple-elastic-shell model is studied in this paper. The present model predicts when the disturbing frequency is below all critical frequency, the vibration models are almost coaxial. However, when the frequency is higher than at least one of the critical frequencies, non-coaxial vibration model emerges and the waves propagate at various speeds. Hence, tetrahertz disturbing waves in multiwall carbon nanotubes exhibit complex hpenomena and are essentially non-coaxial. In particular, tetraherz waves in multiwall carbon nanotubes propagate depending not only on the frequency, but also on the non-coaxial vibration model. Keywords: carbon naotube, wave propagation, vibration frequencies

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