

RHEOMETRY OF COVALENTLY FUNCTIONALIZED SINGLE WALLED CARBON NANOTUBES DISSOLVED IN POLY(4-METHYL-1-PENTENE) Butch Knudsen,

Department of chemistry, University of South Florida, 4202 E. Fowler Ave CHE205, Tampa, FL 33620.

Raw carbon nanotubes are covalently functionalized using reductive alkylation with a dodecyl group to render them easily soluble in the same organic solvents as low molecular weight poly(4-methyl-1-pentene). The polymer and the functionalized nanotubes are dissolved together in carbon tetrachloride then the solvent is removed leaving the functionalized nanotubes uniformly dispersed in the polymer matrix. The physical characteristics are then probed with rheometry.