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Controlling Optimal Excitation Wavelength of Energy Transfer from Photo-Excited Polymers to Single-Walled Carbon Nanotubes. LAIN-JONG LI, FUMING CHEN, Nanyang Technological University, MINGLI JIA, Chinese Academy of Sciences, LI WEI, YUAN CHEN, M. B. CHAN-PARK, Nanyang Technological University, ANDONG XIA, Chinese Academy of Sciences — The optimal excitation wavelength for the energy transfer from aromatic polymers poly(9,9-dioctylfluoreny- 2,7-diyl) (PFO) to single-walled carbon nanotubes (SWNTs) is tunable in a wide wavelength range (from 388 to 480 nm) depending on the concentration of excess PFO polymers. The concentration governs the aggregation state and chain conformation of the polymers proximate to SWNT surfaces, which in turn alters the optimal excitation wavelength. This study suggests an exciting and convenient method of adjusting the desired optical wavelengths for the energy conversion, useful for polymer-SWNT composites in optoelectronic applications.

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