

Abstract Submitted
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Debundle of Single-Walled Carbon Nanotubes with Exfoliated Nanoplatelets¹ DAZHI SUN, WILLIAM EVERETT, CHIEN-CHIA CHU, HUNG-JUE SUE, Texas A&M University, PROF. SUE'S TEAM — We report a simple and effective colloidal method to disperse single-walled carbon nanotubes (SWNTs) down to individual-tube level by utilizing exfoliated nanoplatelets in various solutions and polymer matrices. This approach yields a substantial amount of individual tubes without compromising their physical properties. The de-bundling and dispersion of SWNTs are confirmed by high-resolution transmission electron microscopy, UV-vis-NIR and Raman spectroscopy. After incorporated into polymers, SWNTs maintain individual dispersion. The dispersion mechanisms and implications of this approach are also discussed.

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