

# Fluorescence Spectroscopy and Structure Control of SWNTs

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Near-infrared fluorescence measurements were performed on single-walled carbon nanotubes (SWNTs), which were catalytically synthesized from alcohol under various experimental conditions. The chirality distribution was determined by measuring the fluorescence emitted from dispersed SWNTs as a function of excitation wavelength. Compared with HiPco SWNTs, the alcohol CCVD samples had higher chiral angles, indicating a more armchair-like structure. The chiral angle distribution of small diameter tubes was distributed predominantly in the higher chiral angle region. Centrifuge-based separation of small diameter SWNTs was performed to prepare samples rich in near-armchair type.

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