

Supplementary Information

Floating Catalyst CVD Synthesis of Single Walled Carbon Nanotubes from Ethylene for High Performance Transparent Electrodes

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Keywords

Single walled carbon nanotubes, hydrocarbon feedstock, transparent conductive films, floating catalyst, chemical vapor deposition

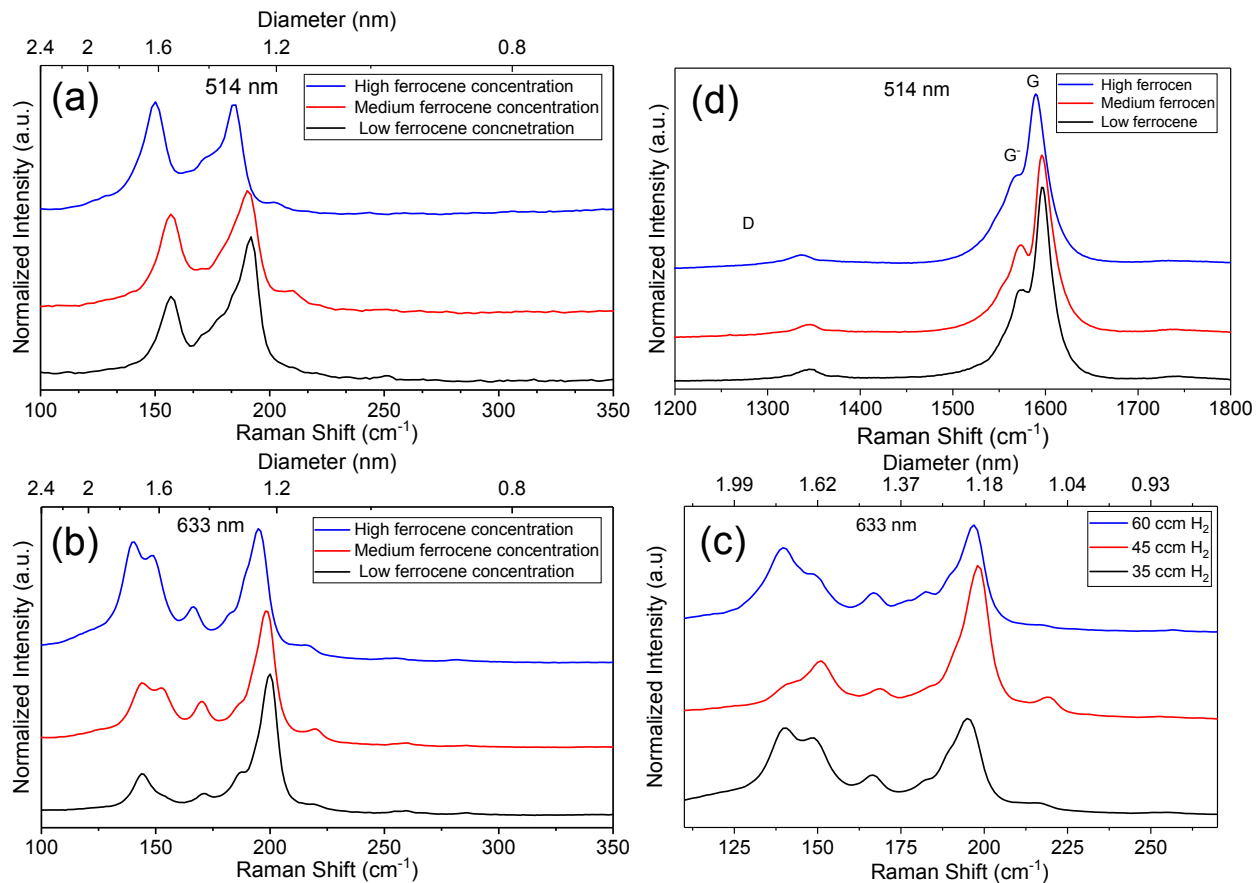


Fig. S1. Raman Spectra of SWCNT film on quartz substrate for higher feed position H. (a) The RBM spectra with variation in ferrocene concentration at 541 nm and (b) 633 nm. The low, medium and high ferrocene concentration is represented by 60 ccm, 75 ccm and 100 ccm N₂ flow through ferrocene cartridge. (c) The RBM spectra for H₂ variation at 633 nm laser for SWCNTs (d) The G and D band for variation in ferrocene concentrations using 514 nm laser.

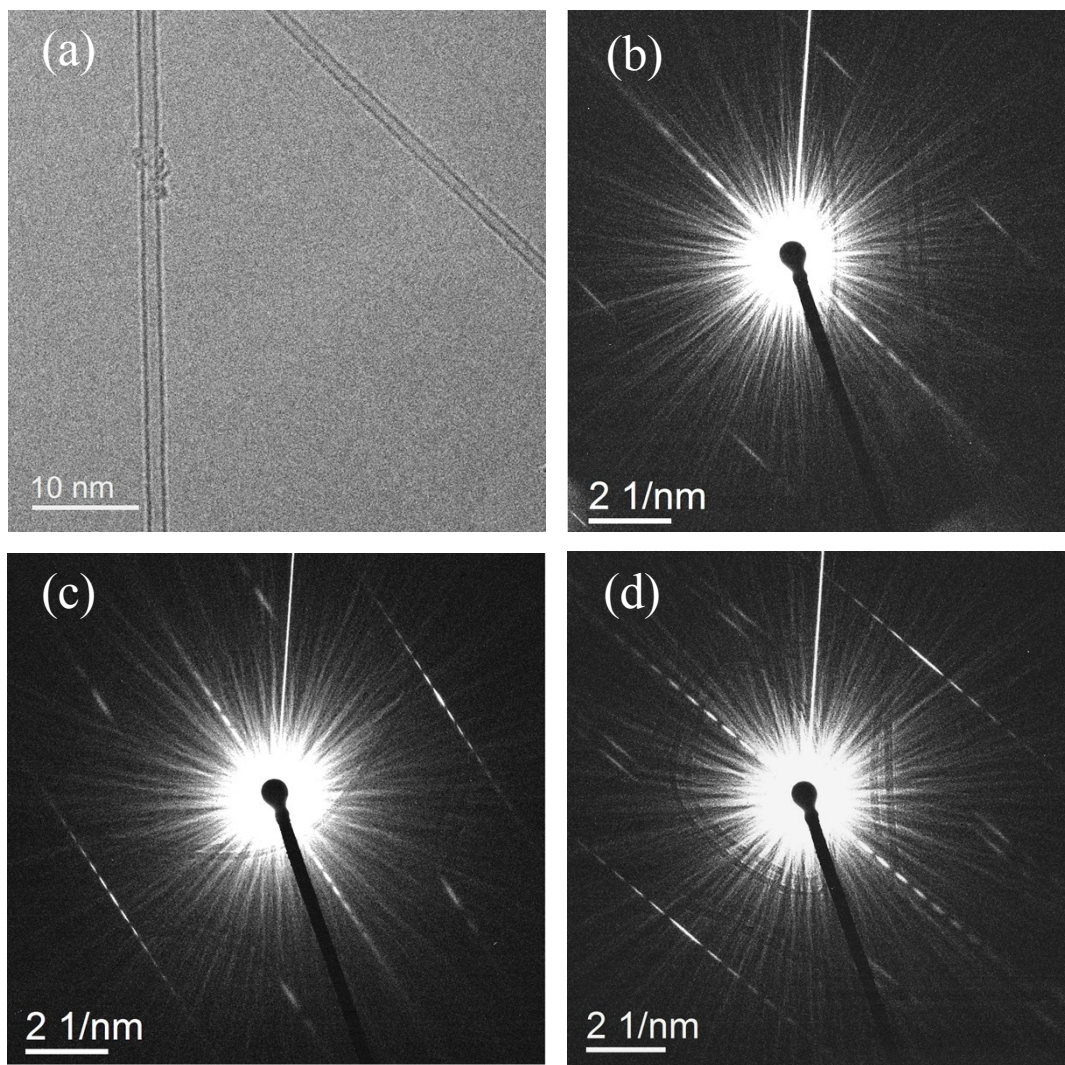


Fig. S2 The electron diffraction pattern of SWCNTs for determination of tube structure. (a) High resolution TEM image of SWCNTs. (b) Diffraction pattern of armchair, (c) Zigzag and (d) chiral SWCNTs.

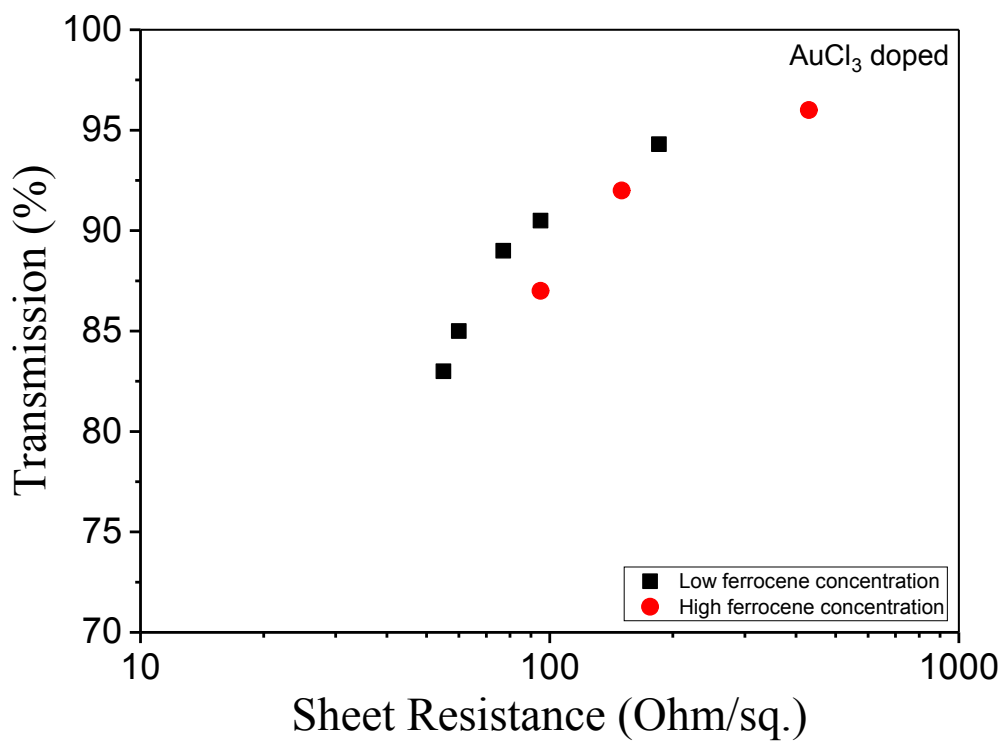


Fig. S3. The sheet resistance versus optical transparency for Feed Position L.

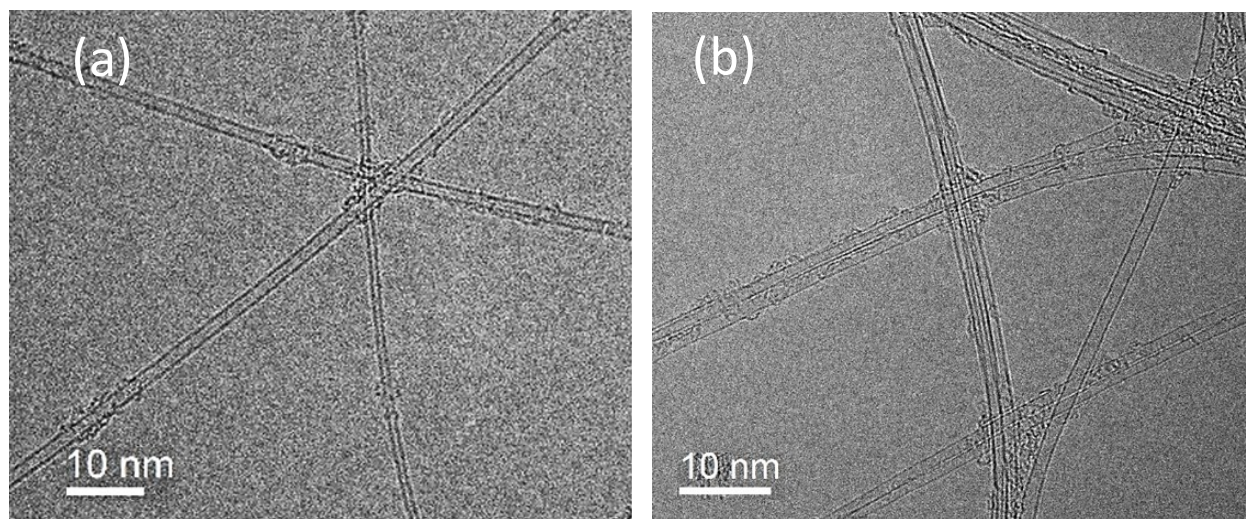


Fig. S4 (a) Isolated individual SWCNTs (b) Bundled SWCNTs.