Growth of Single-Walled Carbon Nanotube in the Direction of Gas Flow by Plasma-Enhanced CVD

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Straight forms of single walled carbon nanotubes have been synthesized by plasma enhanced chemical vapor deposition (PECVD). In this study, we employed a local laminar flow in the plasma assisted CVD chamber. Fe film and Fe nano particles were applied as the catalyst. We observed straight forms of SWNTs at the beginning of growth. After 20 minutes for growing time nanotube lengths were 15-20um. Raman spectroscopy reveals that the nanotubes were single wall structure.