Supplementary Information

S1: Laser CVD system: The Nuvonyx diode laser (wavelength 810nm) and deposition chamber were located inside a metallic safety enclosure. The laser consists of two laser heads containing four high power (60W) laser diodes each, for a total power of 480W (see Supporting Information S2). Two pairs of lenses providing horizontal and vertical beam control and a diffuser plate were used to disperse the beam to a rectangular diverging pattern designed to illuminate a 5×15 cm² area inside a cylindrical CVD chamber via single plane quartz windows. The nickel carbonyl gas was introduced into the chamber and the laser power was set to 100W to provide a deposit on the top of VCNTs for 20 seconds. More details about laser CVD deposition technique can be viewed at http://uwspace.uwaterloo.ca/handle/10012/4381
S2: EDS spectrum of nickel coated MWCNT. The spectrum was generated with incident energy 25keV, measure time 101 s and pulse rate 1721 cps