

Fig. 4-16 Raman spectra of 100 nm Co-assisted CNTs grown with different  $H_2/CH_4$  ratio (sccm/sccm) (a) 10/20 (b) 10/10 (c) 20/10.



Fig. 4-17 Raman spectra of 150 nm Co-assisted CNTs grown with different  $H_2/CH_4$  ratio (sccm/sccm) (a) 10/20 (b) 10/10 (c) 20/10.

**(a)** 



Figs. 4-18 (a) J-E curves of the as-grown CNTs (Curve 1) and CNTs post-treated by 1 min H-plasma etching (Curve 2), 1 min H-plasma etching + 3 min chemical etching (Curve 3) and 10 min H-plasma etching (Curve 4). (b) The corresponding F-N plots of (a). (Specimen C1)