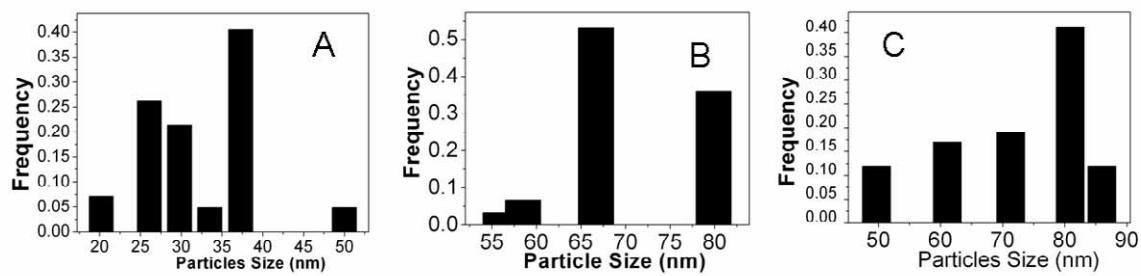


Figure S1 Higher-magnification images of as-prepared Pt NFs



**Figure S2: Histogram of the Pt NFs size distribution on PSS-CNTs for the A: Fig 1A , B: Fig 1C, and C: Fig 1D.**

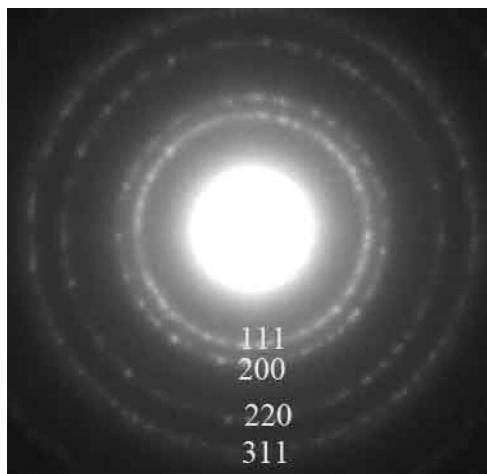
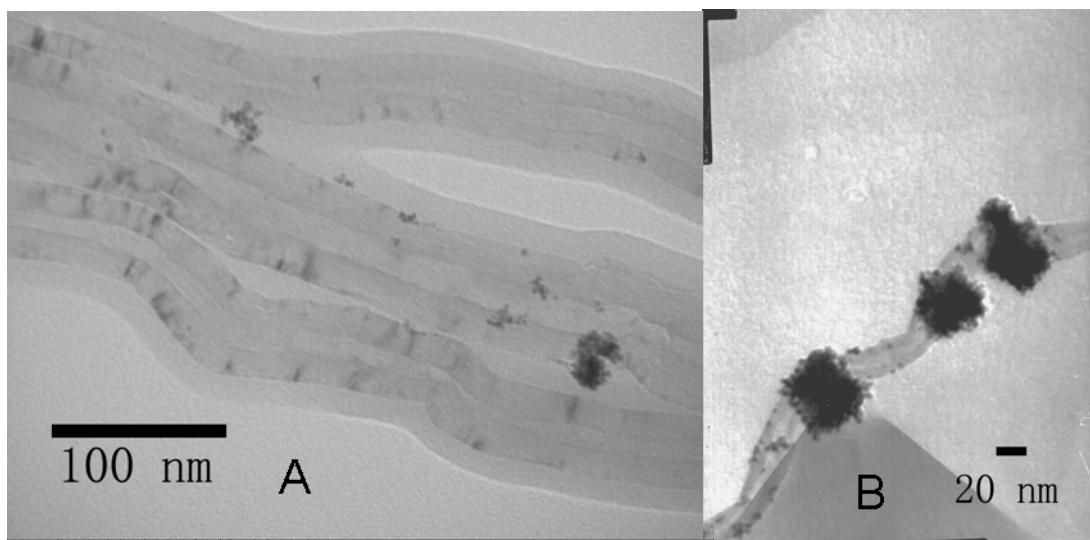
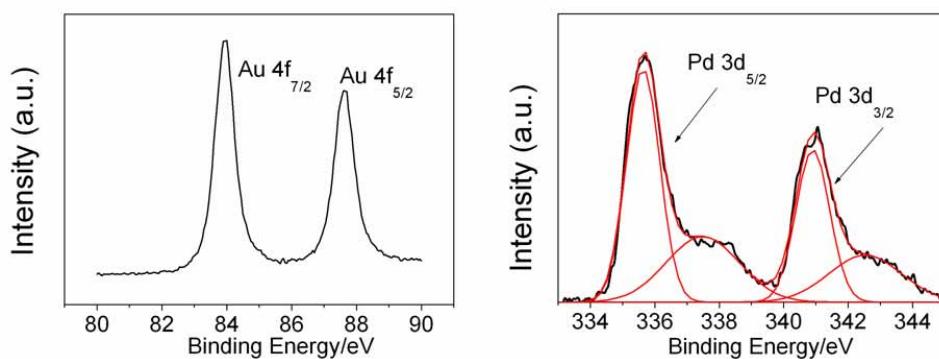


Fig S3 Selected-area electron diffraction have of Pt NFs



**Figure S4:** TEM images of the products obtained from different reducing agents  $\text{NaBH}_4$  (A), and formic acid (B)



**Figure S5:** XPS data of Au 4f(A), and Pd 3d (B)