

Figure 1. XRD pattern of the ~50 nm single dispersed ceria particles synthesized via hydrothermal process, which are cubic CeO<sub>2</sub>. Inset shows their morphology observed by TEM.

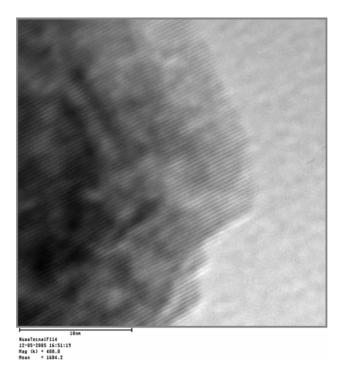


Figure 2. HRTEM image of one  $CeO_2$  nanoparticle. The crystalline strips correspond to  $CeO_2$  <111> planes with interval of 0.318 nm.

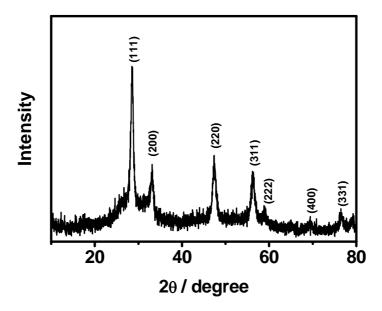


Figure 3. XRD profile of as-prepared titania nanotubes with ceria nanoparticle seeds, only diffraction peaks attributed to crystalline ceria are observed, indicating the titania is amorphous.