Electronic Supplementary Information

GC-MS analysis

All the GC analyses were carried out using an Agilent 7890A series chromatograph equipped with a MS detector (5975C) on a Agilent HP-5 column. For the catalytic hydrogenation reaction, aliquots of 0.5 mL were withdrawn at different times of reaction and extracted in chloroform. To a known volume (400 μL) of organic phase, an external standard solution was added (50 μL of a 0.022 M 4-methylcyclohexanol solution) and the samples were analyzed by gas chromatography (GC). For the Heck coupling, aliquots of 50 μL were withdrawn and diluted with 450 μL of an external standard solution (0.003 M phenol) and 1000 μL CH_3CN.

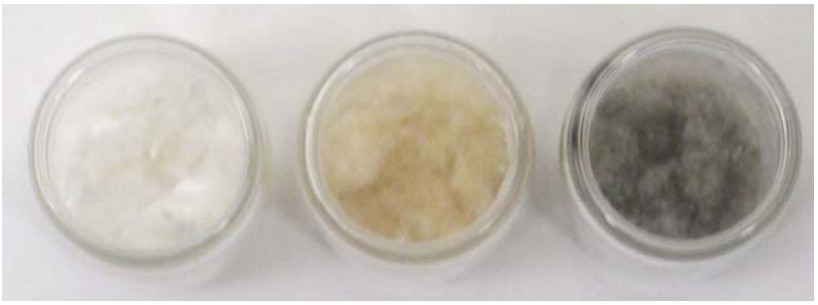

Figure S1. Digital camera images of CNCs freeze-dried powder before impregnation (left), after impregnation, before reduction (middle) and after impregnation and reduction (right)

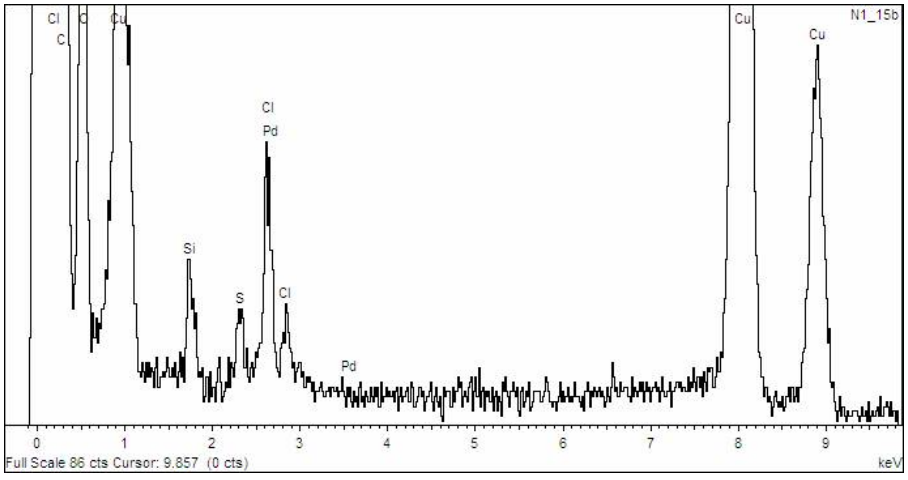

Figure S2. EDX analysis of Pd@CNCs nano-composite

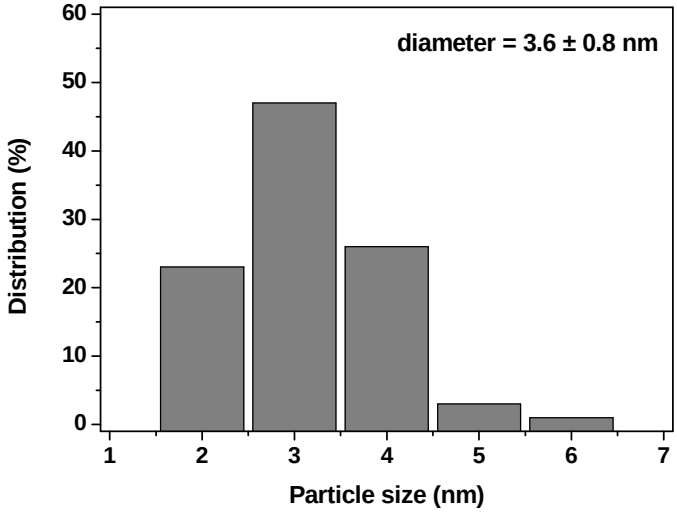

Figure S3. Nanometer-scale size distribution for Pd nanoparticles deposited onto CNCs as obtained from TEM picture of Figure 4

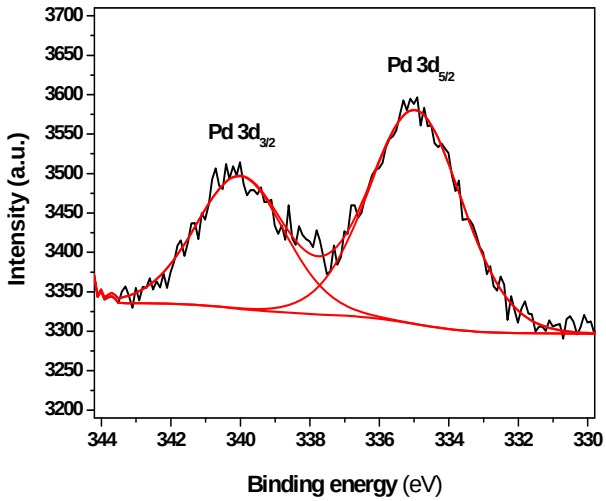

Figure S4. XPS spectrum of Pd3d in PdNPs@CNCs

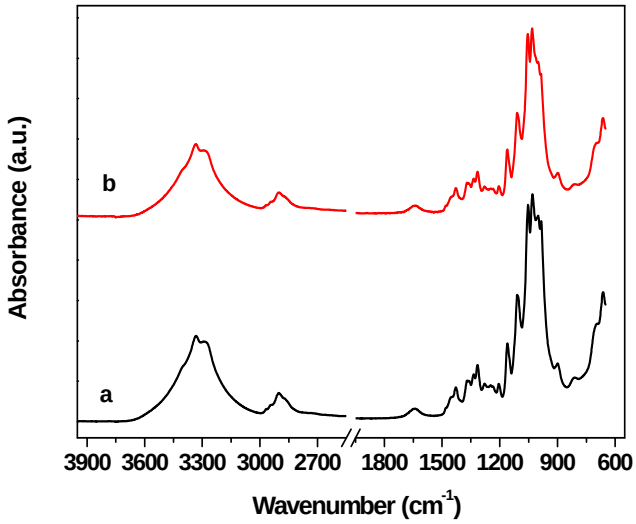

Figure S5. FTIR spectra obtained from CNCs before (a) and after deposition of PdNPs

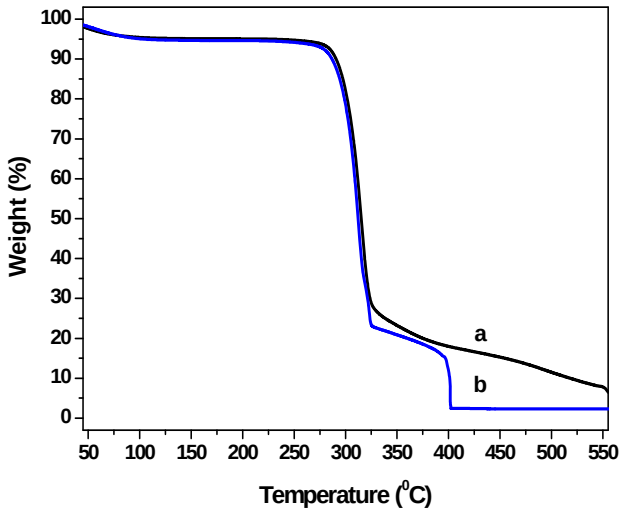

Figure S6. TGA spectra of CNCs under N_2 (a) and air (b) atmosphere