Supporting information

Green Decoration of multiwalled carbon nanotubes with polyoxometalate-encapsulated gold nanoparticles: visible light photocatalytic activities

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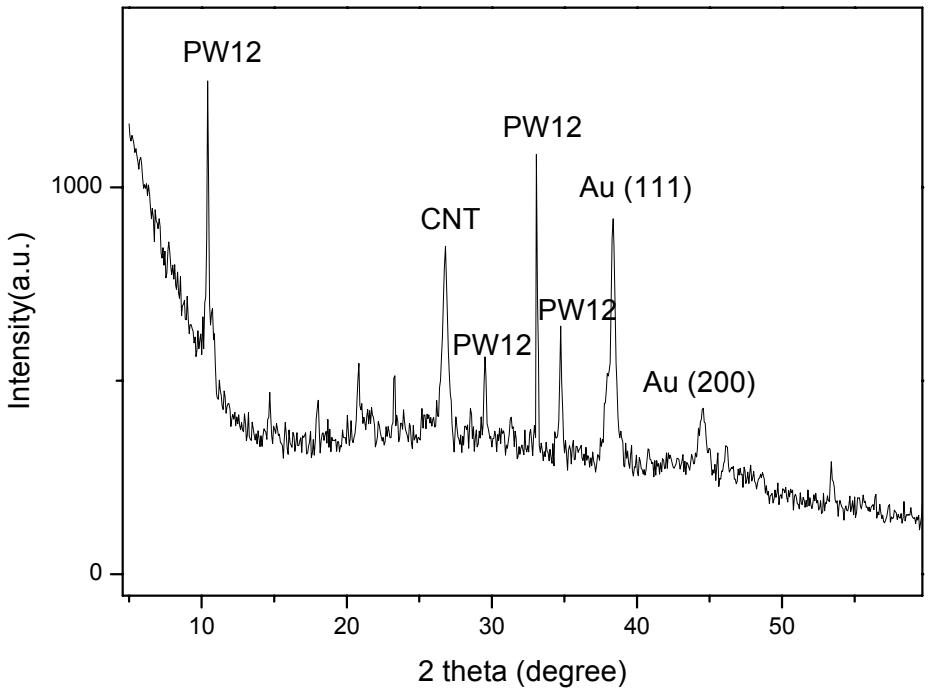

Figure S1. The XRD patterns of the Au NP@POM-CNT composites.

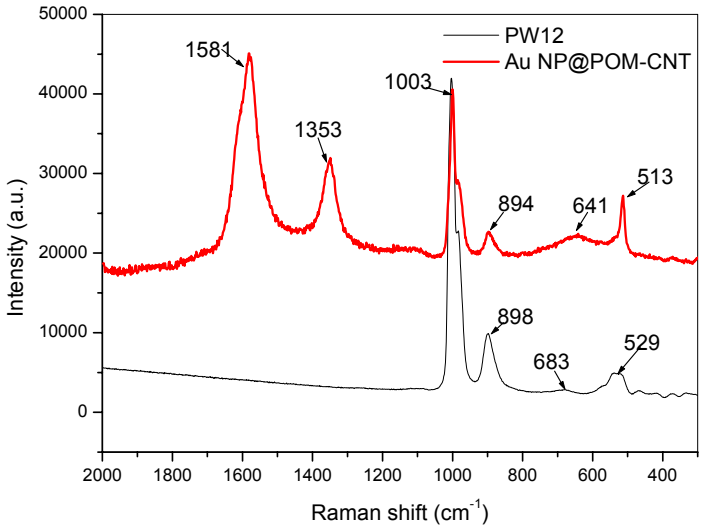

Figure S2 Raman spectra of the prepared nanohybrids as well as the polycrystalline of PW12. The main peaks corresponding to the vibration of W-O have showed a red shift after been assembled in the nanohybrids, which proved the formation of hydrogen bonds between POMs and the hydroxyl groups on carboxylic headgroup.

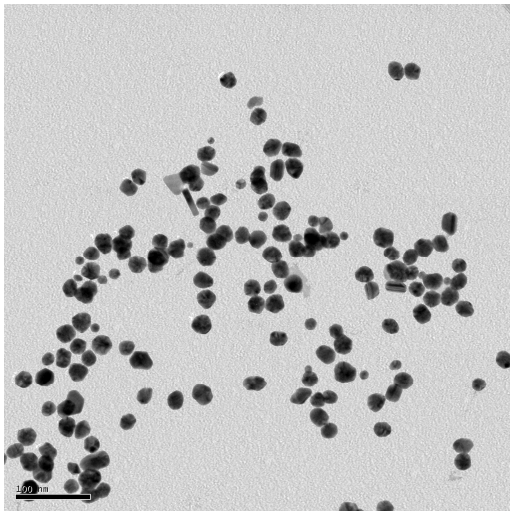

Figure S3 TEM image of prepared Au NP@POM by using the same procedure as used for the tri-component nanohybrids but without assembling it on CNTs

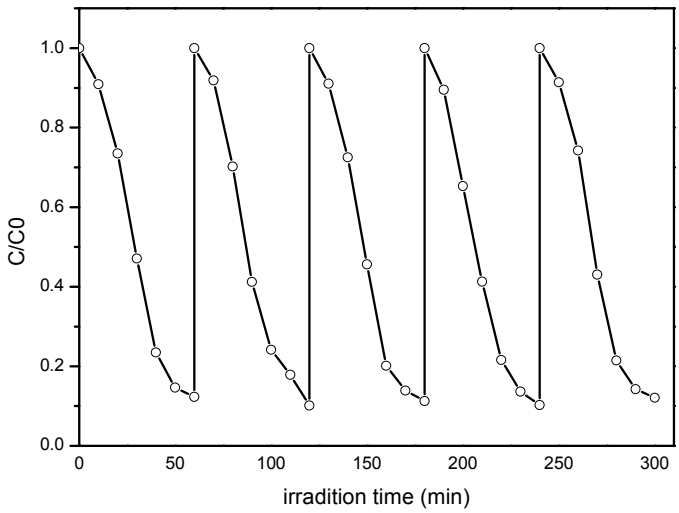

Figure S4 Catalyst recycle in repetitive degradation of RhB (1.0×10^{-5} M) in the presence of nanohybrids.

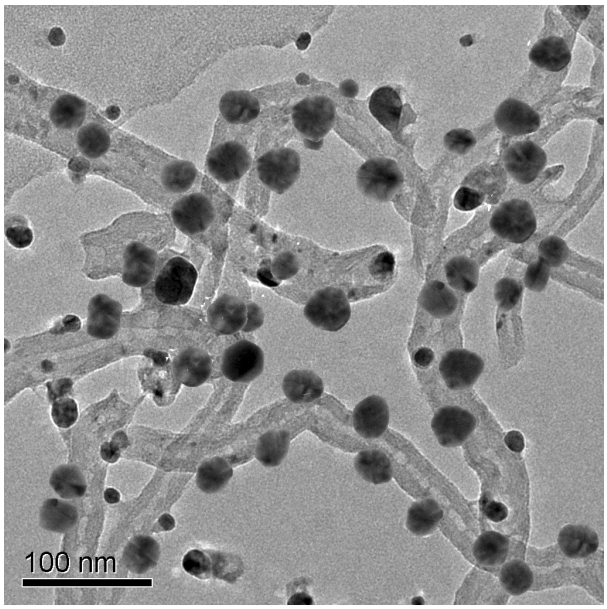

Figure S5 TEM image of the Au NP@POM-CNT nanohybrids after five runs of photocatalysis of RhB.