

Supporting Information

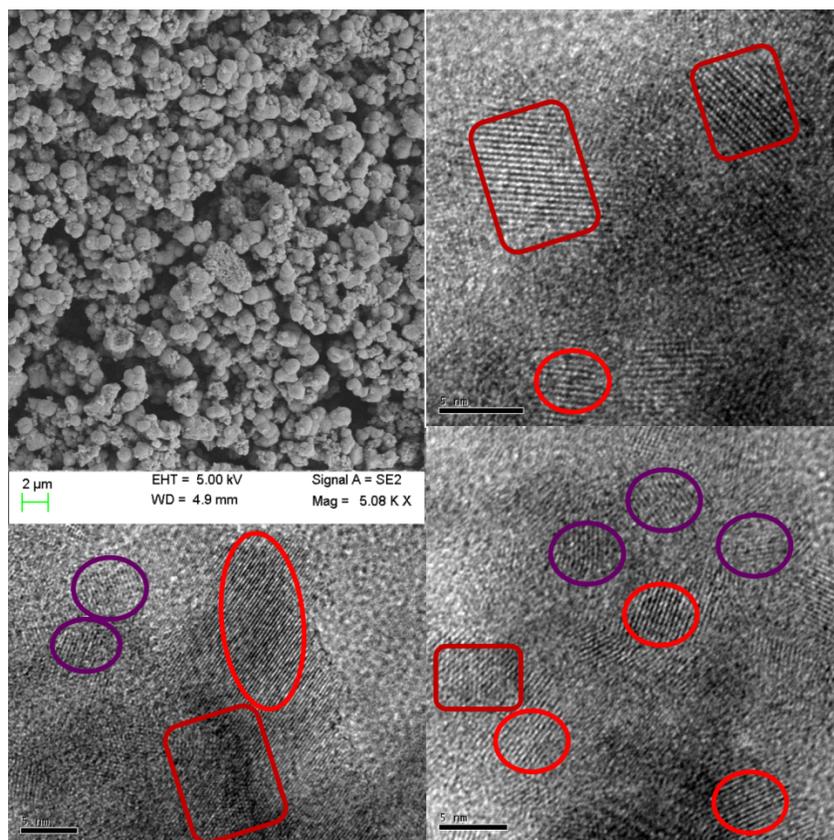


Figure S1: HRTEM images of regions randomly selected from microspheres. In all cases the anatase TiO_2 , wurtzite CdS and Moiré patterns are formed due to their overlap. These are shown in red oval (TiO_2), purple oval (wurtzite CdS) and red rounded rectangle (Moiré patterns) respectively.

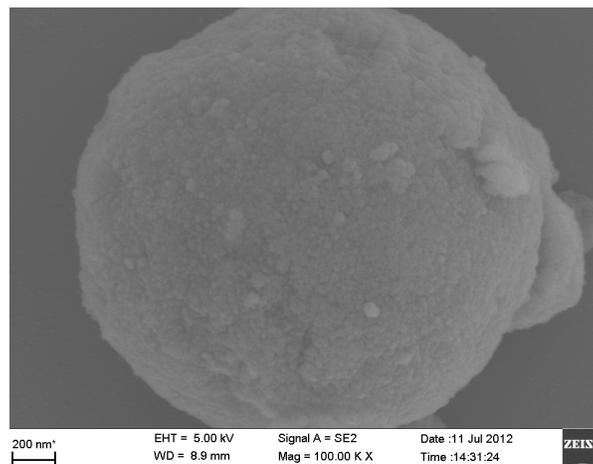


Figure S2: SEM image of sample obtained from a reaction mixture where water/ethanol was not used, only DMF was used.

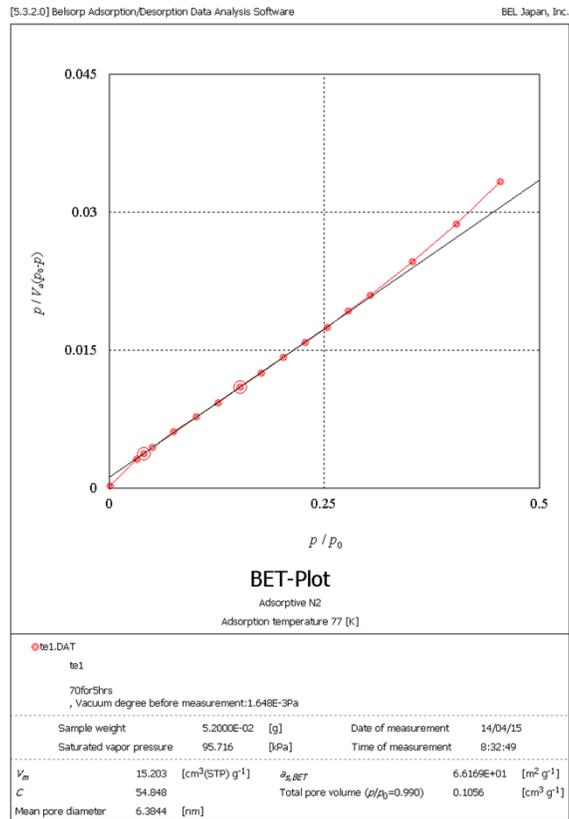


Figure S3. BET plot of the TiO₂-CdS microsphere assembly.

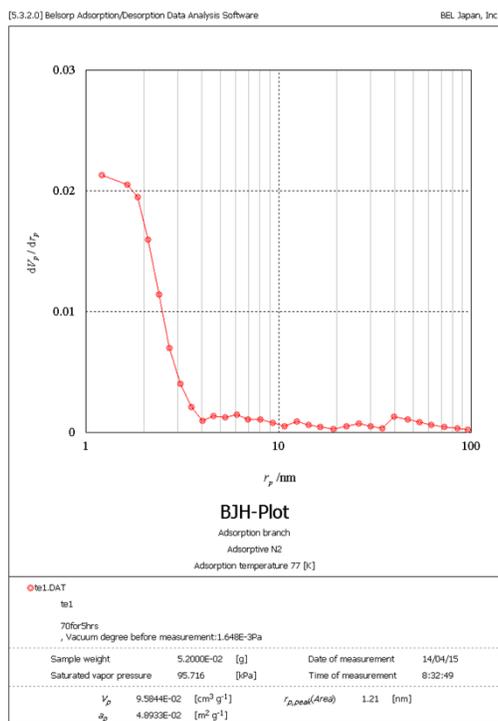


Figure S4. BJH pore size distribution plot of the TiO₂-CdS microsphere assembly.

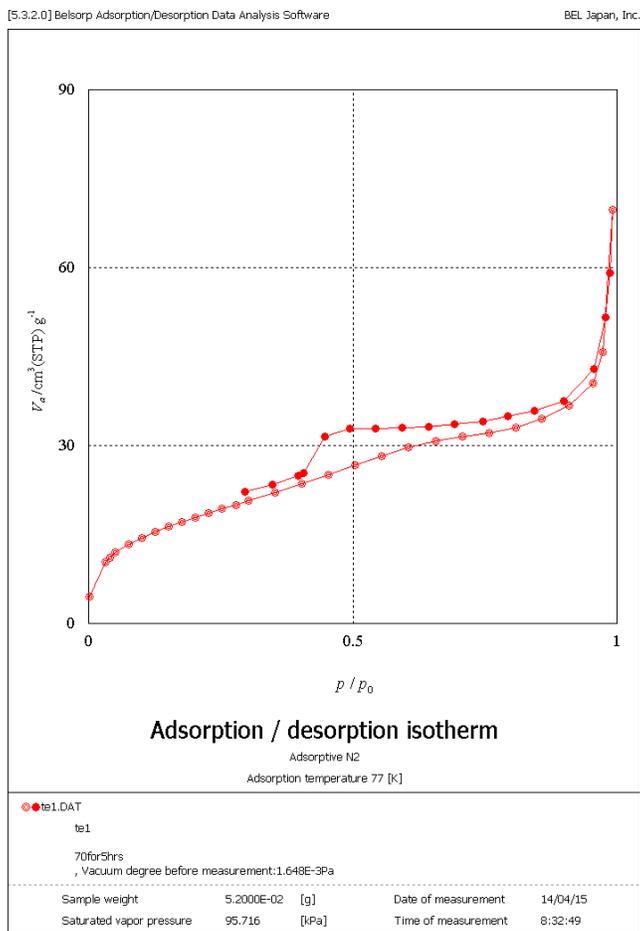


Figure S5. N₂ adsorption/desorption isotherm of the TiO₂-CdS microsphere assembly.

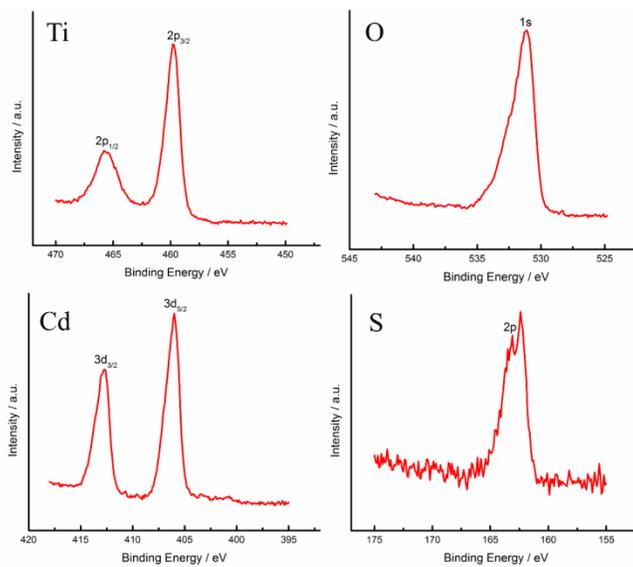


Figure S6: XPS spectra of the as synthesized TiO₂-CdS microsphere assembly.

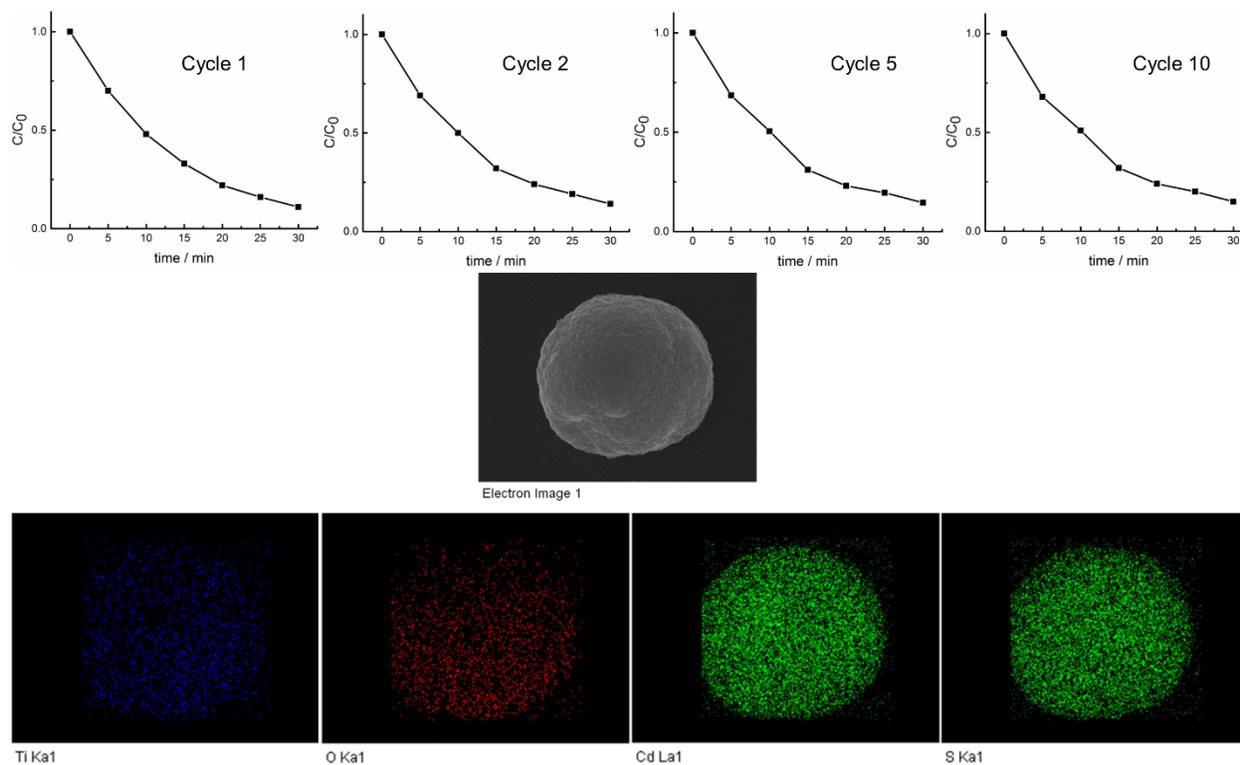


Figure S7: Comparison of photocatalytic stability over cycles. SEM imaging along with elemental mapping were done after ten cycles.

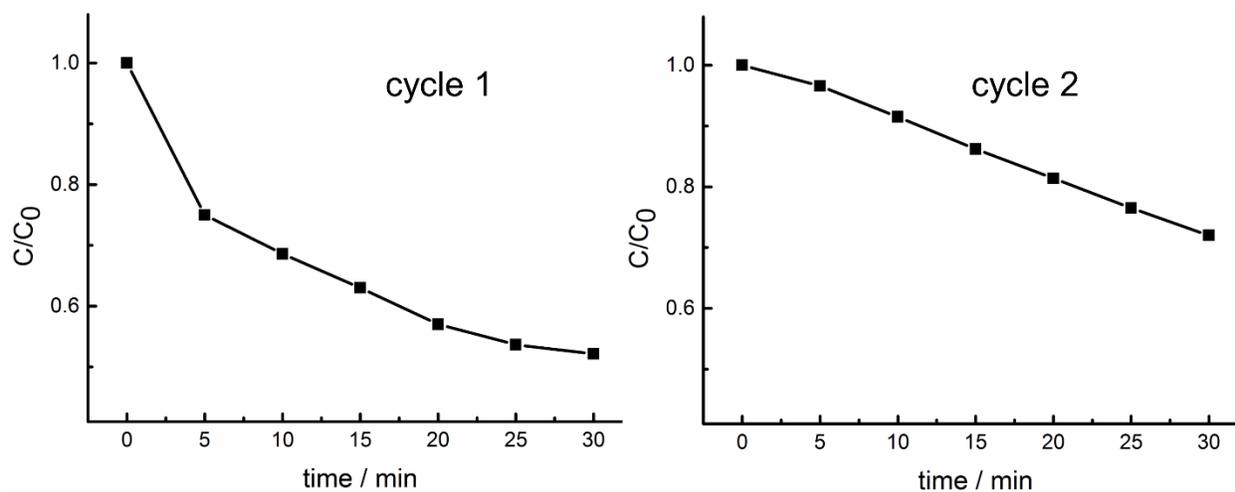


Figure S8: Comparison of photocatalytic stability over cycles for the P25-TiO₂: CdS mixture.