

Supplementary Materials: In-Situ Deposition of Plasmonic Gold Nanotriangles and Nanoprisms onto Layered Hydroxides for Full-Range Photocatalytic Response towards the Selective Reduction of p-Nitrophenol

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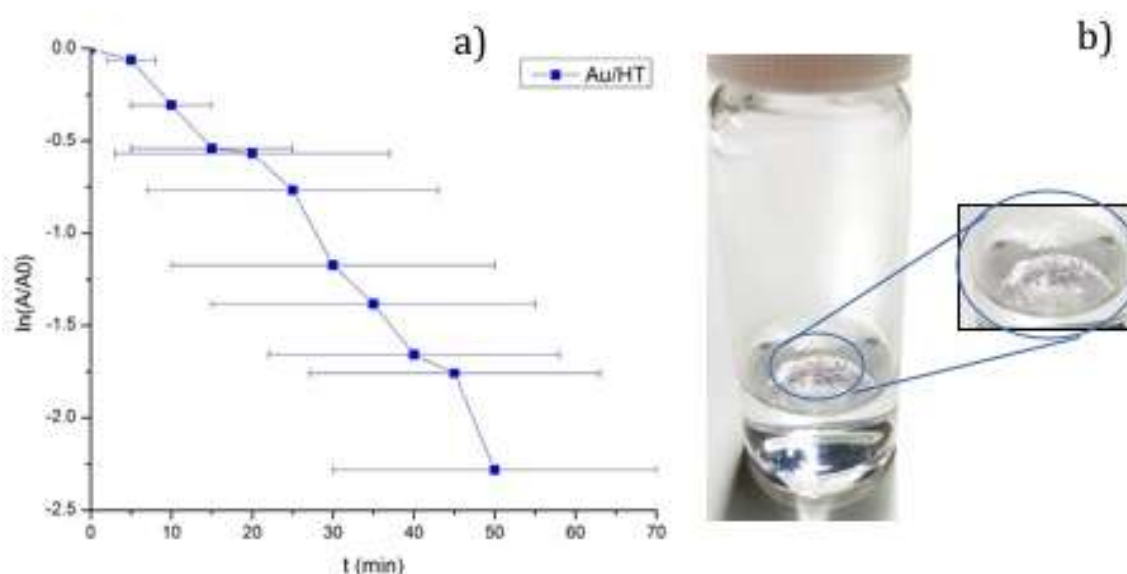


Figure S1. Catalytic tests of the Au-HT system: (a) 4-NP reduction kinetics experiment with Au/HT catalyst in the dark monitored by UV-VIS. (b) Digital image of an aqueous suspension of Au/HT catalyst at pH = 9.5 after several sonication cycles and 2 weeks of storage.

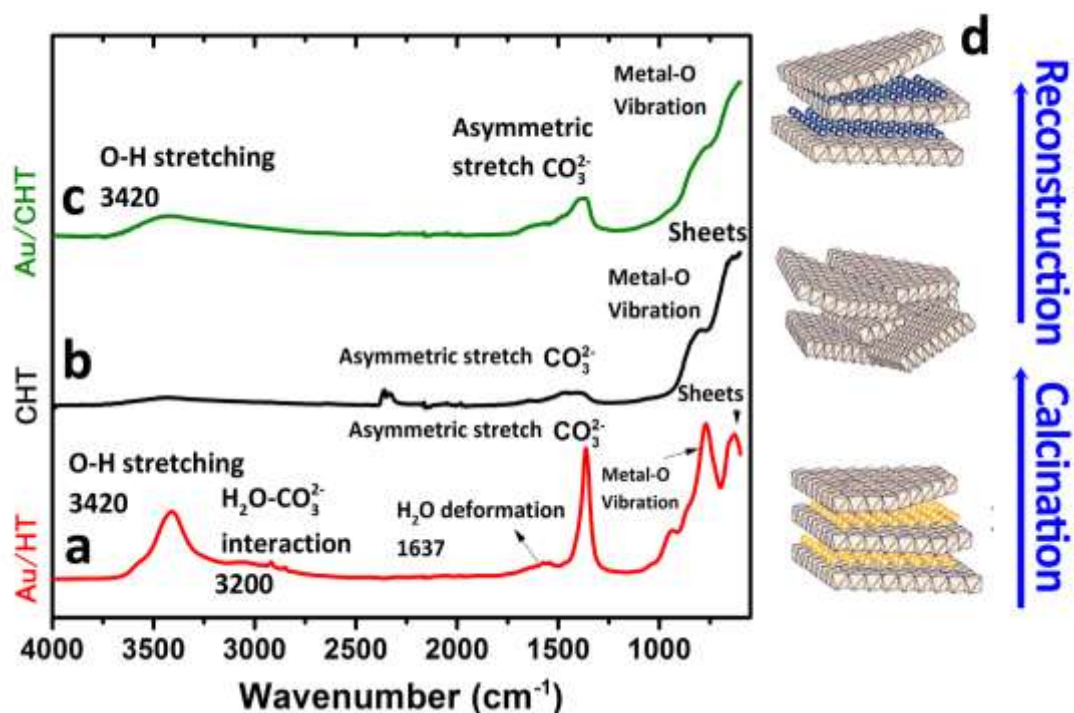


Figure S2. FTIR spectra of: a) Au/HT samples before calcination; b) CHT support after calcination of HT in air at 550 °C for 5 h; c) Au/CHT samples; d) Schematic evolution of the original HT where the OH and carbonate groups disappear and the structure collapses after calcination (CHT) and how the rehydrated structure partially recovers the original HT structure with hydroxyl and water interlayering groups to favor the Au DR process (Au/CHT).

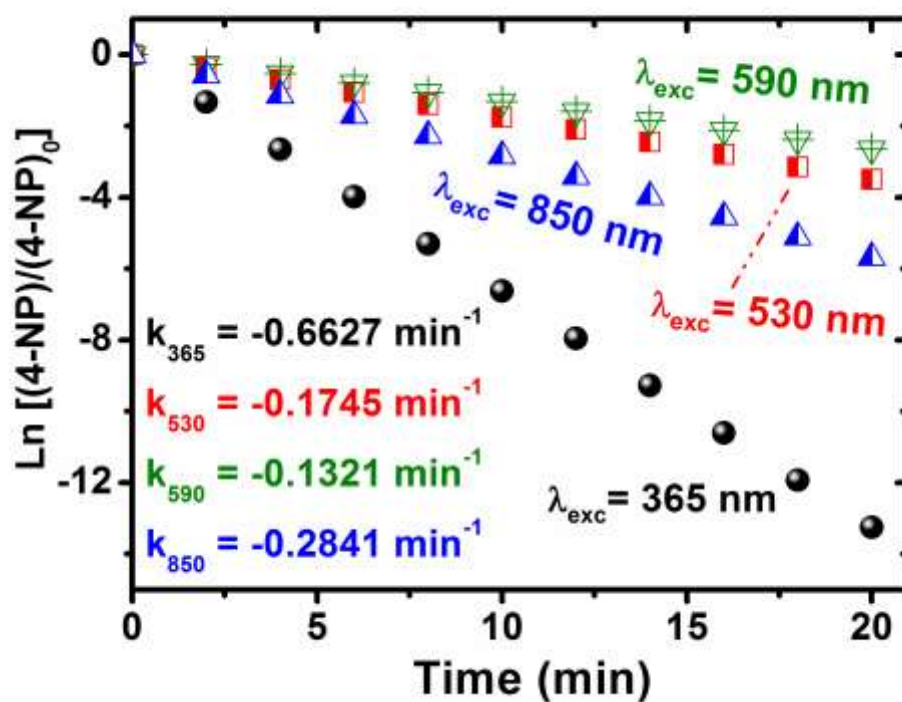


Figure S3. Kinetic rate constant of Au/CHT M experiments k (min^{-1}) after irradiation with different LEDs: $k_{365\text{nm}} = -0.6627$, $k_{530\text{nm}} = -0.1745$, $k_{590\text{nm}} = -0.1321$, $k_{850\text{nm}} = -0.2841$.