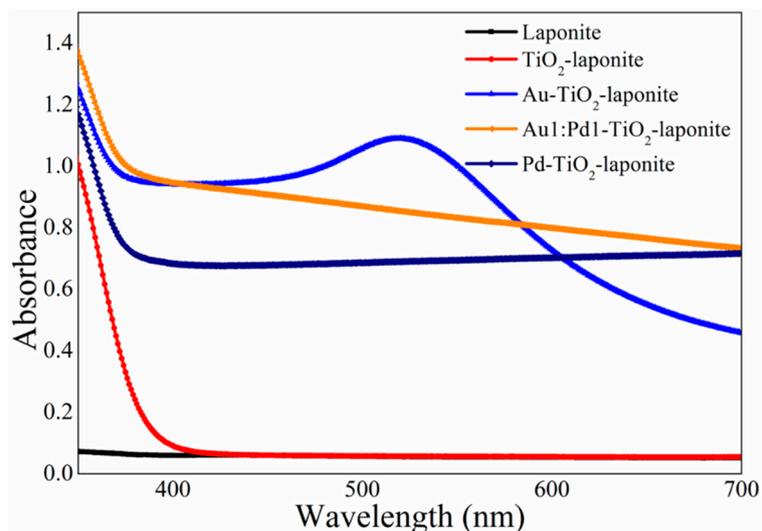
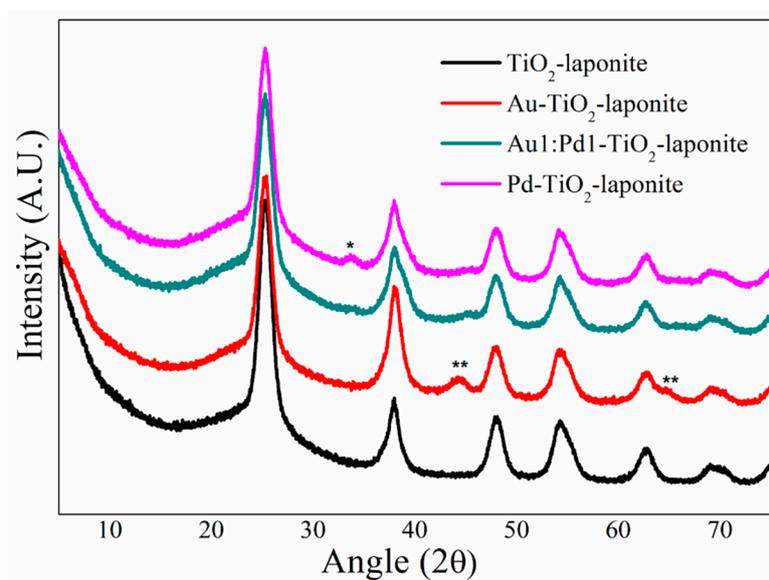


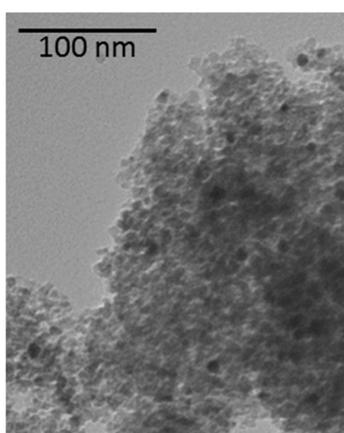
## Supporting Information



**Figure S1.** UV-Visible diffuse reflectance spectra of the metal loaded photocatalyst samples.



**Figure S2.** XRD peak patterns of the metal loaded photocatalyst samples. \*—peak related to Pd ( $2\theta = 34^\circ$ ), \*\*—peaks related to Au [002], [022].



**Figure S3.** TEM image of 3% Au@TiO<sub>2</sub>-S.