

Gold and gold-palladium alloy nanoparticles on heterostructured TiO₂ nanobelts as plasmonic photocatalysts for benzyl alcohol oxidation

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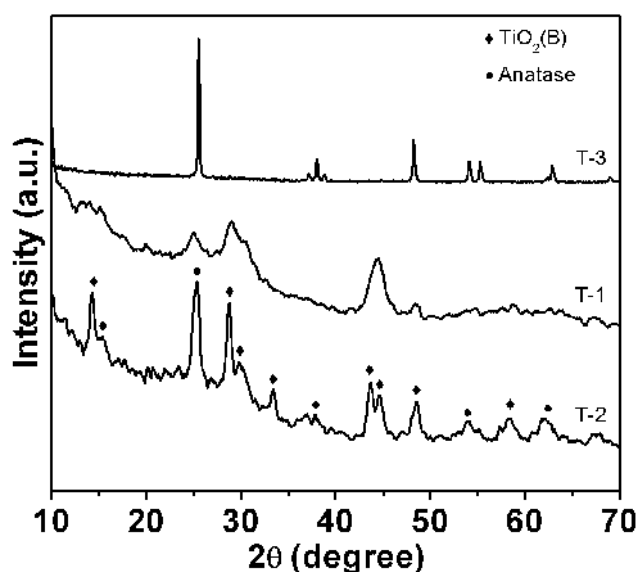


Fig. S1 XRD patterns of TiO₂ nanobelts.

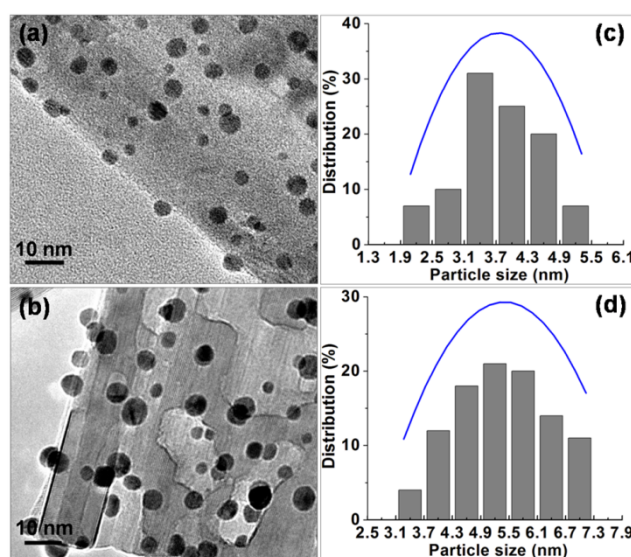


Fig. S2 Representative TEM images of (a) Au_{3.5}/T-2 and (b) Au_{4.5}/T-2, and the corresponding particle size distributions of (c) Au_{3.5}/T-2 and (d) Au_{4.5}/T-2.

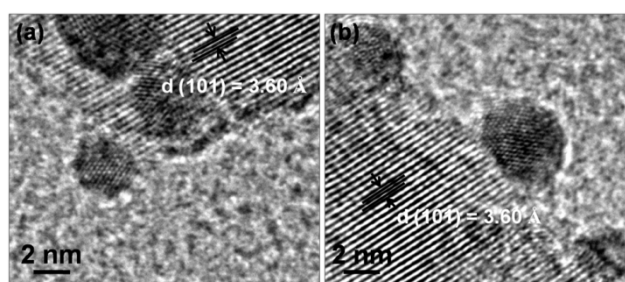


Fig. S3 Representative HR-TEM images of Au/T-2 nanostructures.

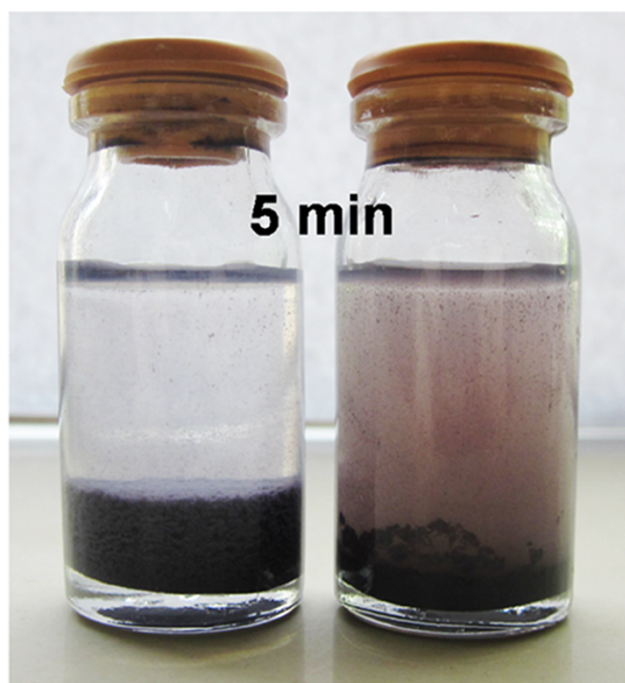


Fig. S4 Sedimentation test of Au₁/T-2 and Au₁/P25.

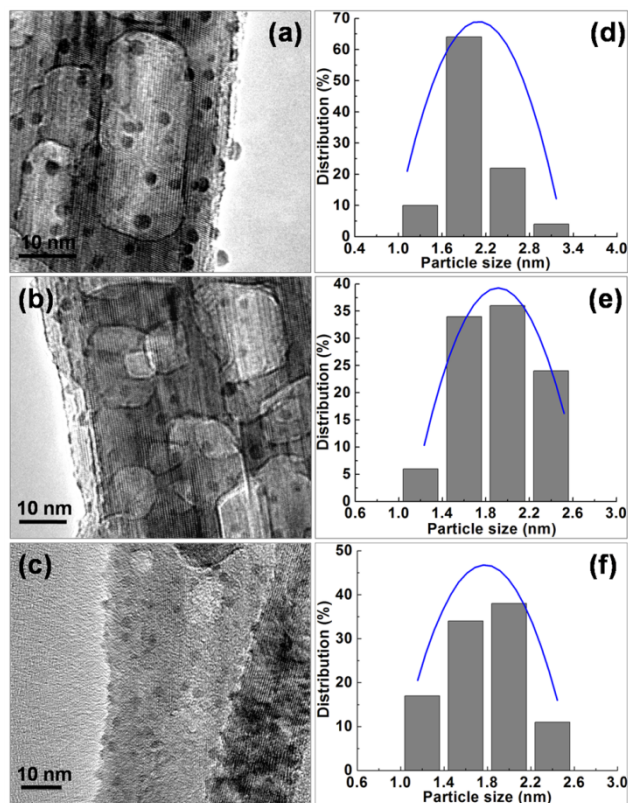


Fig. S5 Representative TEM images of (a) $\text{Au}_{0.5}\text{Pd}_{0.5}/\text{T-2}$, (b) $\text{Au}_{0.25}\text{Pd}_{0.75}/\text{T-2}$ and (c) $\text{Pd}_1/\text{T-2}$, and the corresponding particle size distributions of (d) $\text{Au}_{0.5}\text{Pd}_{0.5}/\text{T-2}$, (e) $\text{Au}_{0.25}\text{Pd}_{0.75}/\text{T-2}$ and (f) $\text{Pd}_1/\text{T-2}$.

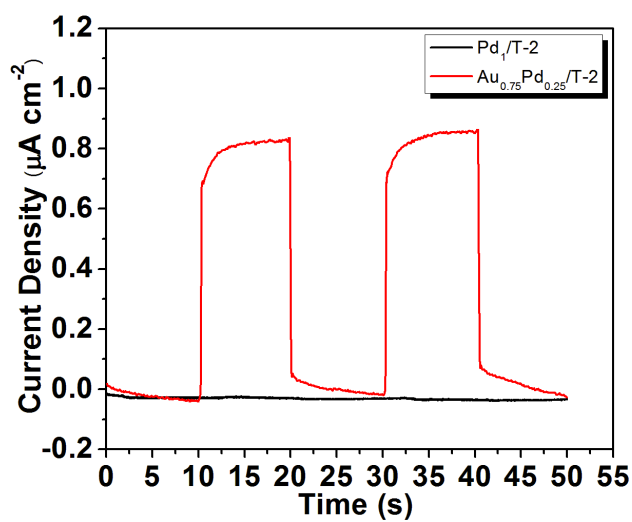


Fig. S6 The photocurrent responses of $\text{Au}_{0.75}\text{Pd}_{0.25}/\text{T-2}$ and $\text{Pd}_1/\text{T-2}$ under visible light irradiation.