One-pot synthesis of secondary amines from alcohols and nitroarenes on TiO_2 loaded with Pd nanoparticles under UV irradiation

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Electronic Supplementary Information (ESI†)

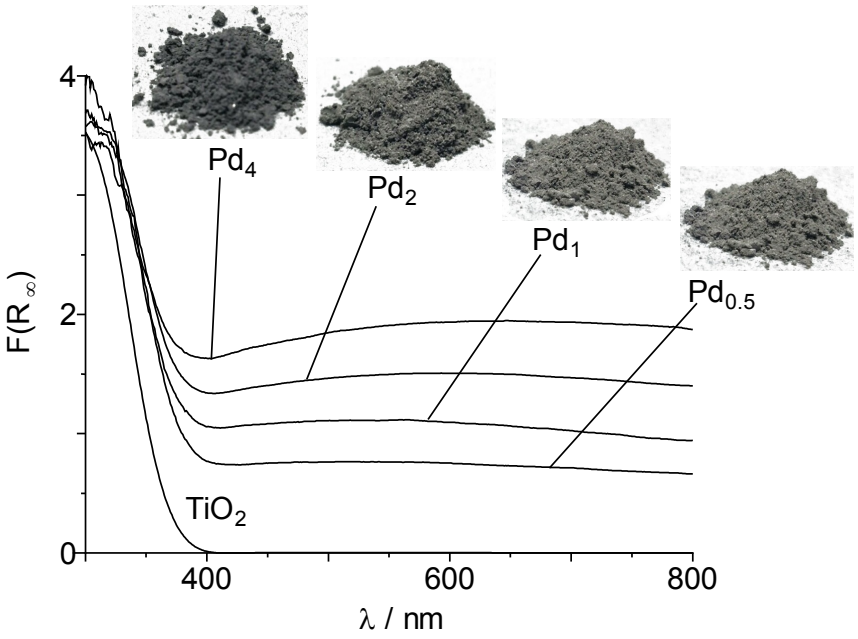
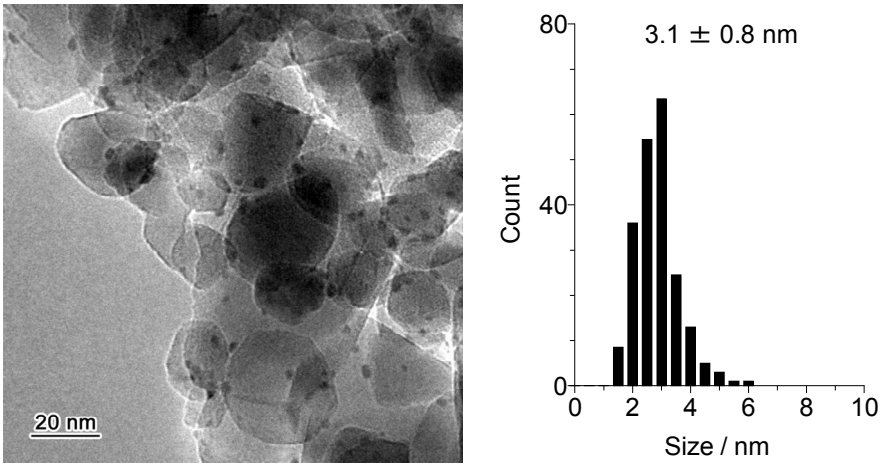
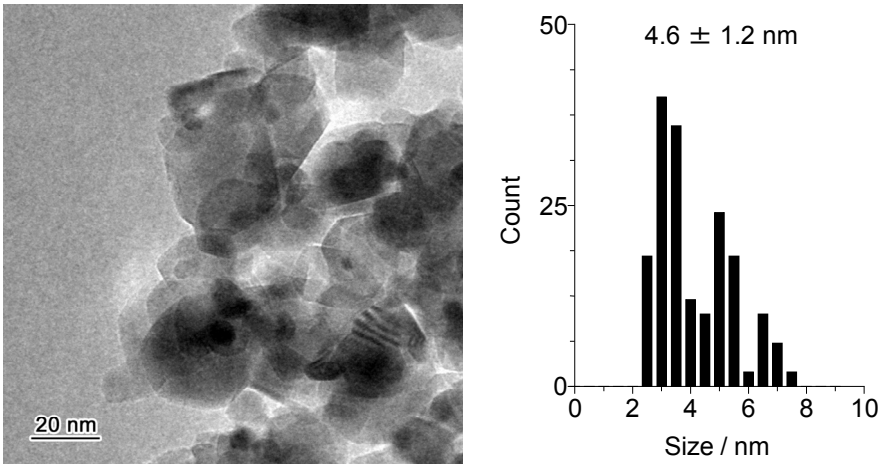


Fig. S1 Diffuse-reflectance UV-vis spectra of Pd_x/TiO_2 catalysts.

Pt_2/TiO_2



Ag_2/TiO_2



Au_2/TiO_2

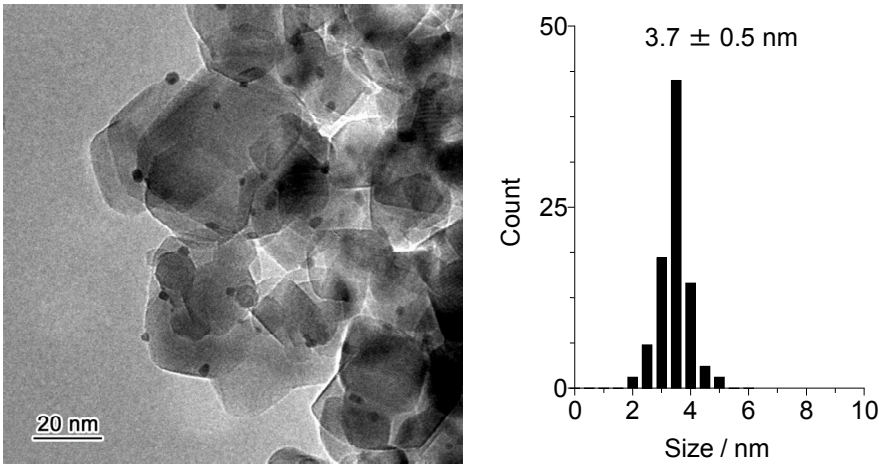


Fig. S2 Typical TEM images of Pt_2/TiO_2, Ag_2/TiO_2, and Au_2/TiO_2 catalysts and size distribution of metal particles.

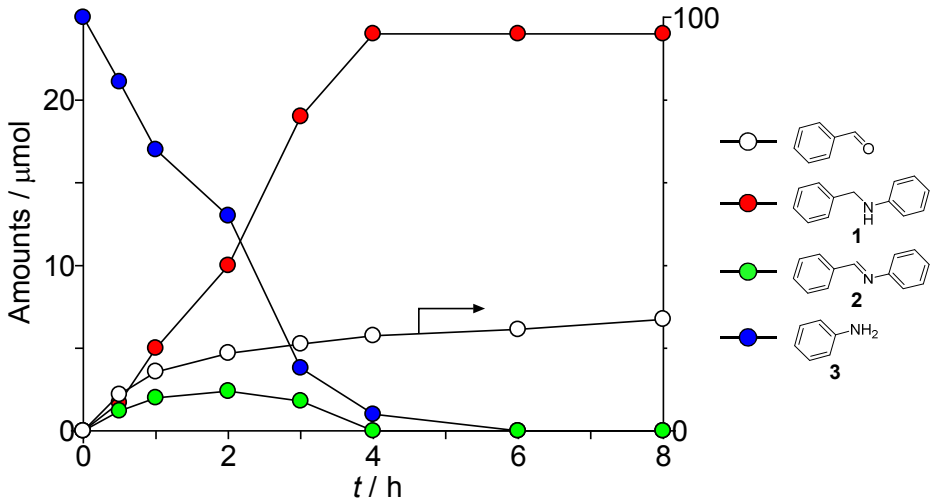


Fig. S3 Time-dependent change in the amounts of substrate and products during photoreaction of benzyl alcohol and aniline on Pd_2/TiO_2. Reaction conditions: water (4.5 mL), alcohol (0.5 mL), aniline (25 μmol), Pd_2/TiO_2 catalyst (10 mg), temperature (298 K), N_2 (1 atm), λ > 300 nm.

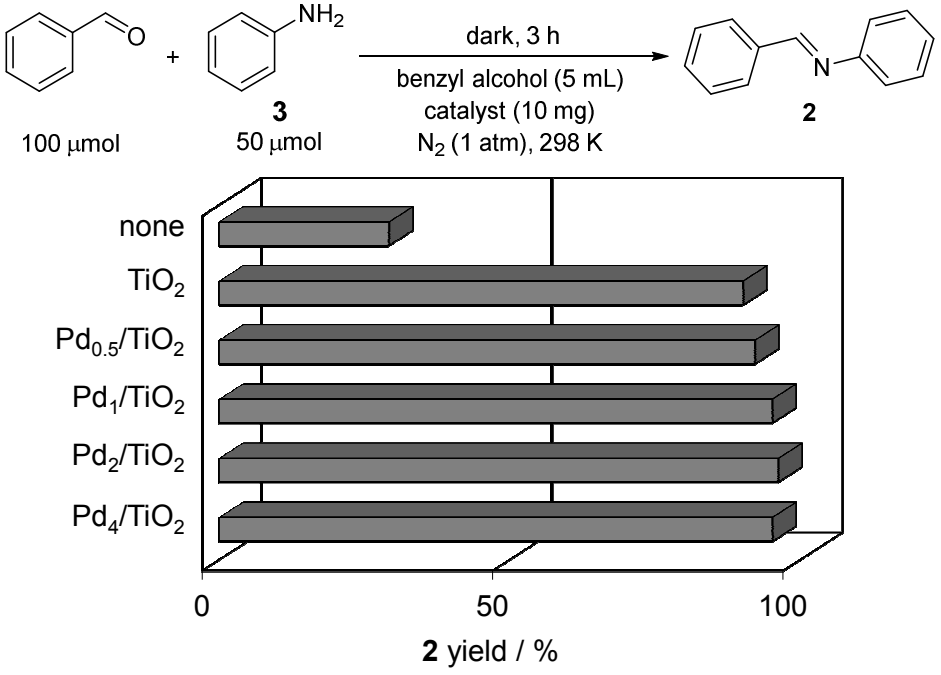


Fig. S4 Catalytic condensation of benzaldehyde and aniline on the respective catalysts in the dark condition.