

Supporting Information for

Photocatalytic Reduction of CO₂ Coupling with Alcohol Selectivity Oxidation under Ambient Conditions

Liuji Wang^{a,b}, Xiaoliang Zhang^{b}, Longhua Yang^a, Chao Wang^a, and Hongming
Wang^{a*}*

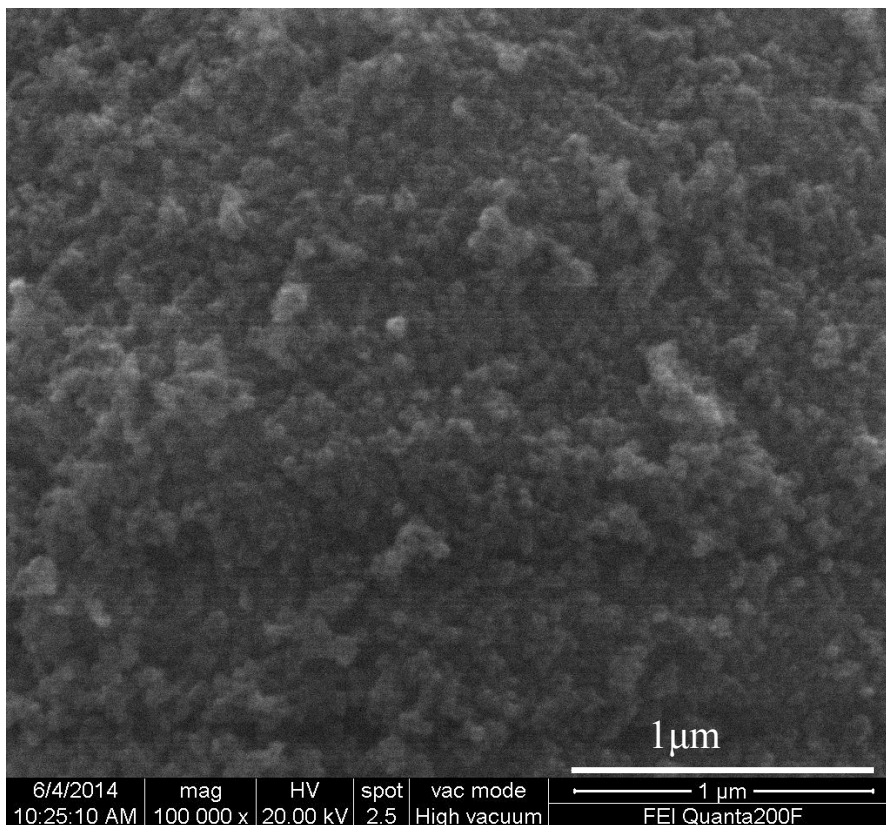
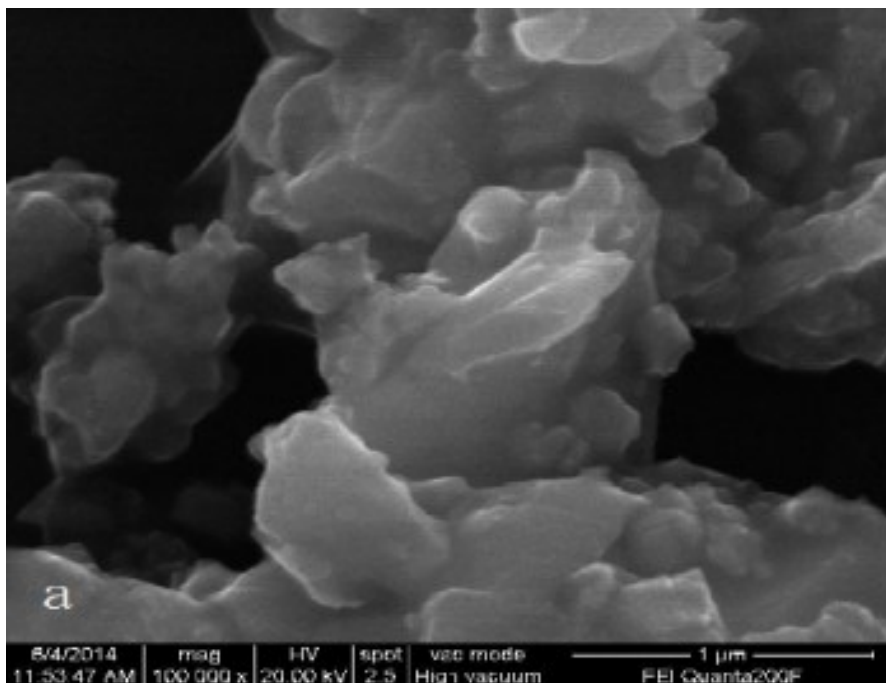


Figure S1. (a) SEM image of TiO_2 calcined at 500°C for 2 hours. (b) Representative SEM image of Ag/ TiO_2 nanocomposite.

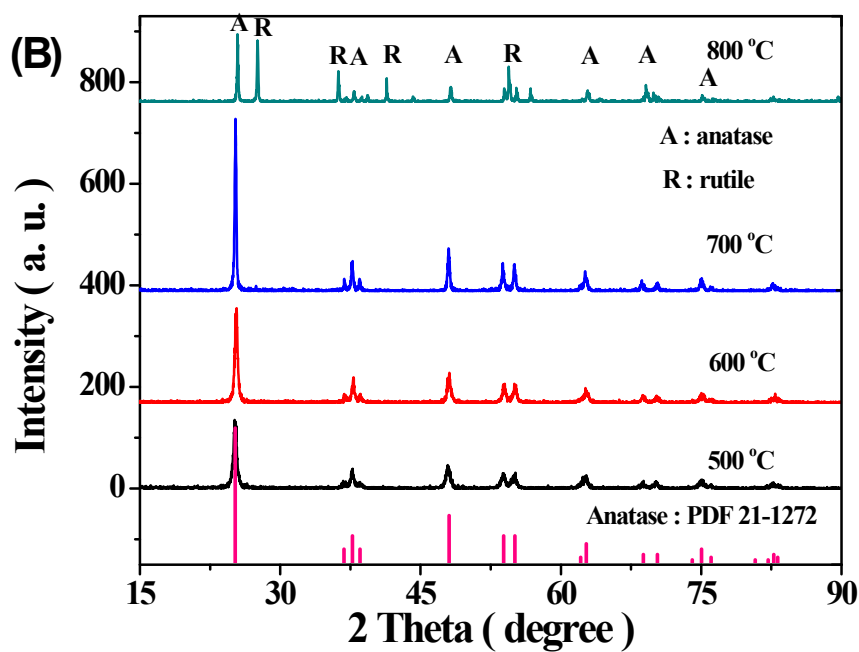
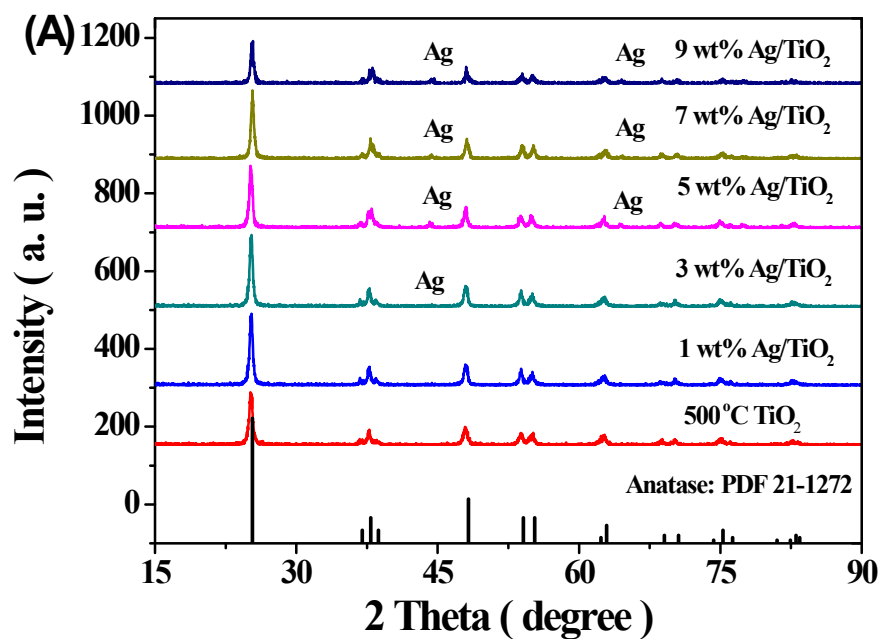


Figure S2. (A) XRD patterns of the samples calcined at different temperatures. (B) XRD patterns of Ag/TiO₂ calcined at 500°C for 2 hours loading with different silver.

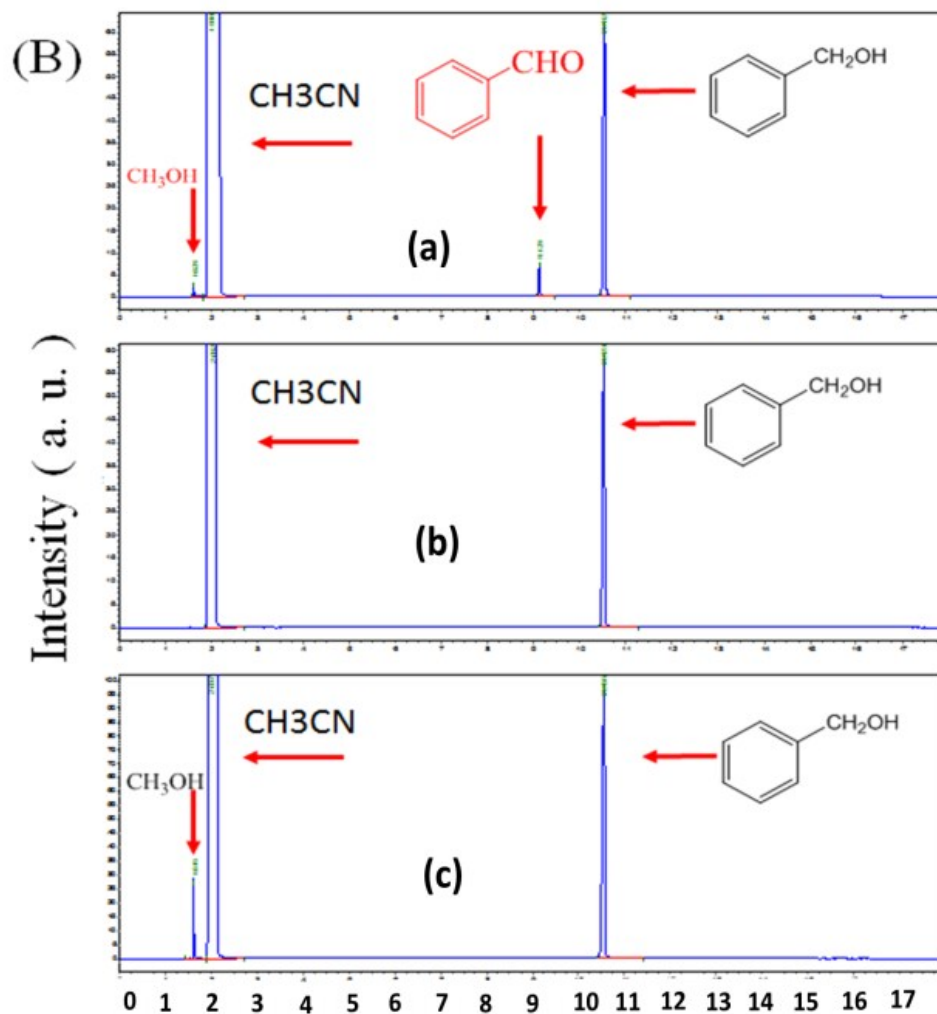


Figure S3. GC chromatograms of (a) product (MeOH) after irradiation for 18 hours and (b) before irradiation and (c) the stand CH₃OH and benzyl alcohol in CH₃CN.

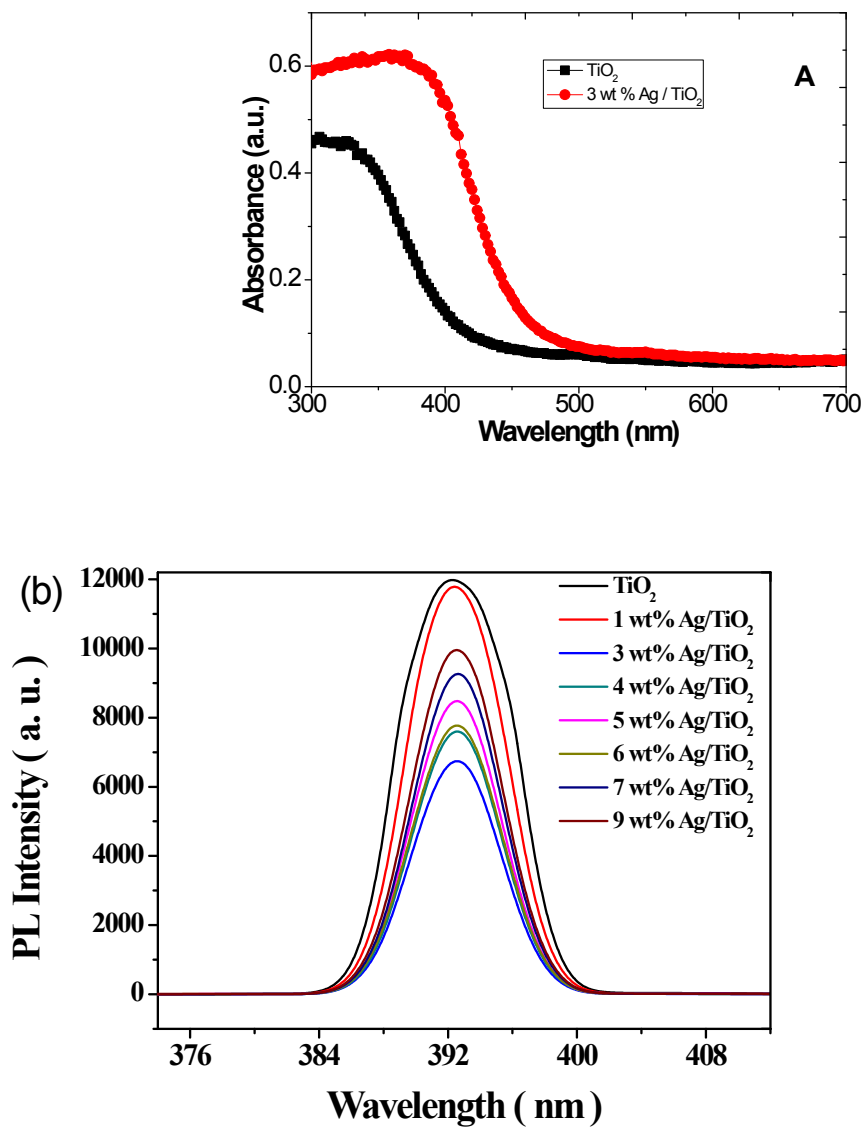


Figure S4. (A)UV-vis DSR spectra of TiO₂ with different Ag loading content catalysts and (B) photoluminescence spectra of TiO₂ with different Ag loading content catalysts : Ex : 265 nm.