

Electronic Supplementary Material (ESI) for Green Chemistry.
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Electronic Supplementary Information (ESI) for:

**TiO₂-photocatalytic Acceptorless Dehydrogenation Coupling of Primary Alkyl
Alcohols into Acetals**

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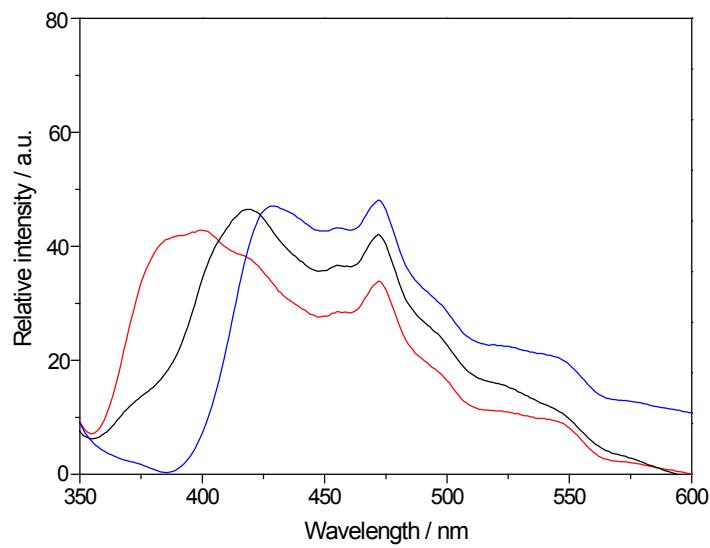


Fig. S1 The photoluminescence spectra of P25-TiO₂ (black line), rutile (blue line) and brookite (red line) excited by 320 nm.

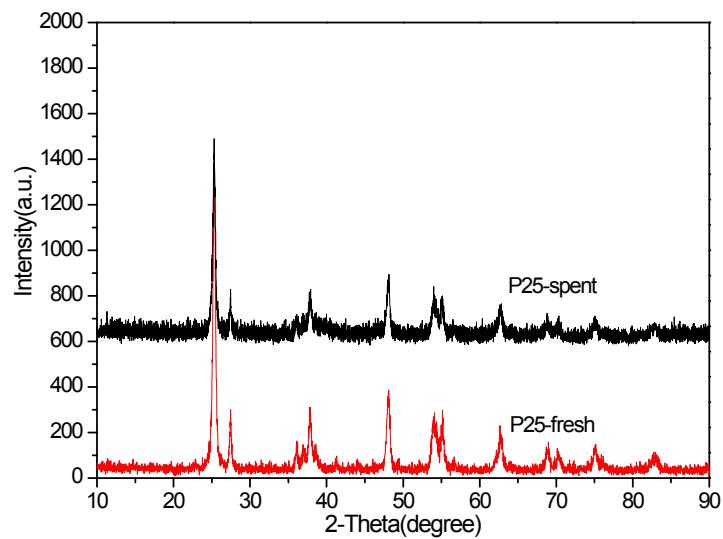


Fig. S2 XRD patterns of fresh TiO₂ (P25) and spent TiO₂ (P25) after photocatalytic dehydrogenation coupling reaction.

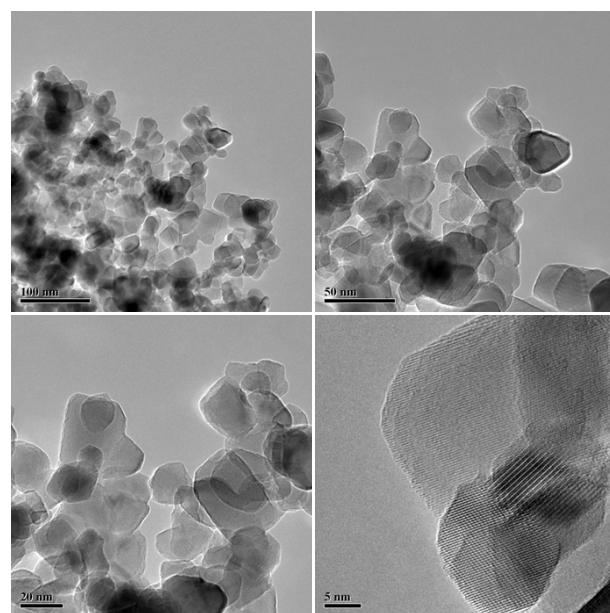


Fig. S3 TEM images of fresh TiO₂ (P25)

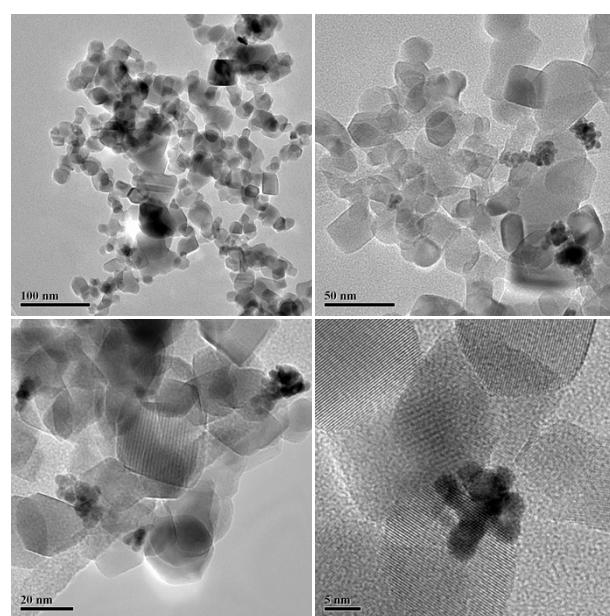


Fig. S4 TEM images of spent TiO₂ (P25) after photocatalytic dehydrogenation coupling reaction.