Supporting Information for

Sandwich-like Titania Thin Films with One/Three-Dimensional Nanostructures for Photocatalytic Applications

By

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The average grain size d_{hkl} and the fraction of anatase w_A = 1-w_R as listed in Table 1 were estimated from the corresponding XRD patterns using the followed Eq. (1) and Eq. (2), respectively.

$$d_{hkl} = k\lambda/(B\cos(2\theta)) \qquad \text{Eq. (1)}$$

$$w_R = 1/(1+0.8I_A/I_R) \qquad \text{Eq. (2)}$$

In Eq. (1),[1] λ is the wavelength of the Cu Kα radiation, θ the Bragg's diffraction angle, B the full width at half maximum intensity of the peak, and k = 0.94. In Eq. (2),[2] I_A and I_R are X-ray integrated intensities of the (101) peaks of anatase and rutile, respectively.

References

1. E. Sanchez and T. Lopez, *Mater. Lett.*, 1995, **25**, 271.
2. R.A. Spurr and H. Myers, *Anal. Chem.*, 1957, **29**, 760.

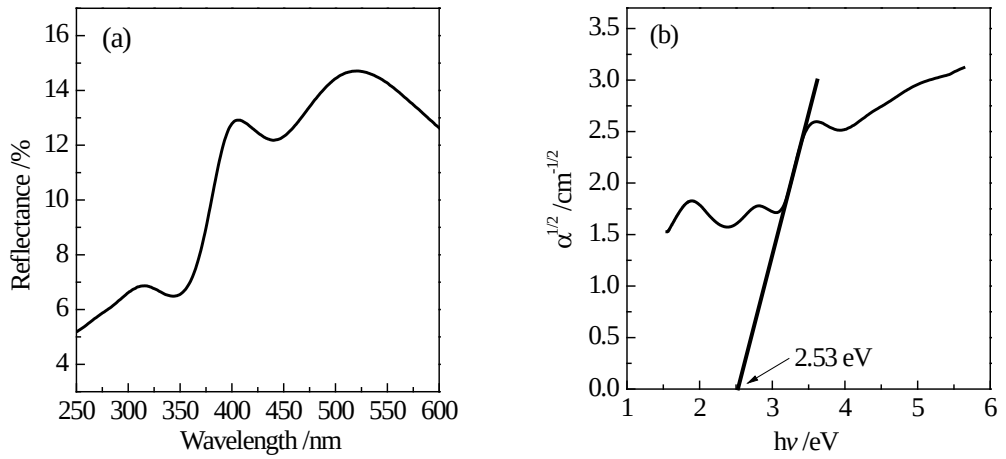

Figure S1 (a) UV-vis diffuse reflectance spectra of rutile nanoflowers precipitated on sol-gel anatase layer (SG/NF). (b) Re-plotting of (a) in the $\alpha^{1/2}$ ~ hν coordinate to evaluate the corresponding band gap, assuming an indirect transition between bands for titania.

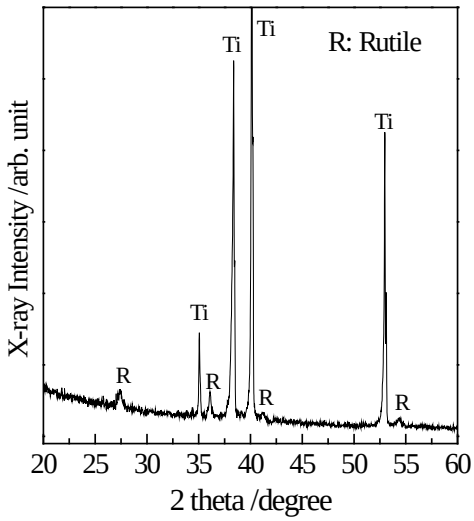

Figure S2 XRD patterns of rutile nanoflowers precipitated on sol-gel anatase layer (SG/NF).