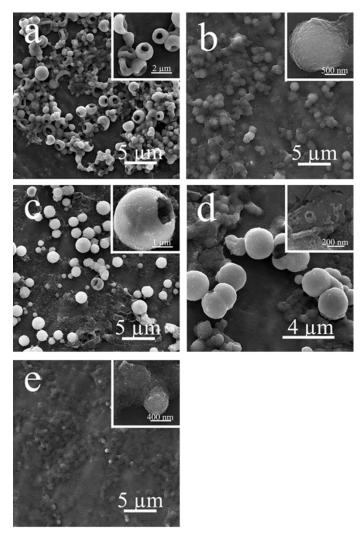
## **Supporting Information**

## Template-free Synthesis of Mesoporous Anatase Titania Hollow Spheres and Their Enhanced Photocatalysis

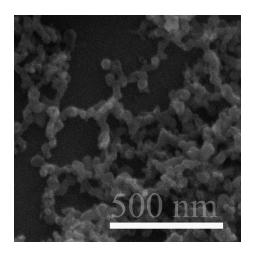
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**Figure S1.** SEM images of  $TiO_2$  spheres prepared under different reaction conditions: a), using TGA and TBT in a reverse order (sample 15); b), in the absence of TGA (sample 16); c), in the absence of H<sub>2</sub>O (sample 17); d), TAA instead of TGA (sample 18); e), acetic acid instead of TGA (sample 19).



**Figure S2.** SEM image of loose reticular structure of nanoparticles (Ti-oxo molecular clusters).

**Debye–Scherrer equation:**  $D = K\lambda / \beta \cos \theta$ , where  $\lambda$  is the wavelength of the Cu K $\alpha$  radiation ( $\lambda = 0.15406$  nm), *K* is the Scherrer constant (K = 0.9),  $\beta$  is the full width at half-maximum (fwhm) of the (101) plane for anatase TiO<sub>2</sub>, and  $\theta$  is the position of XRD peak ( $2\theta = 25.281^{\circ}$ ).