Supporting Information

Control of the crystallinity in TiO_2 microspheres through silica impregnation

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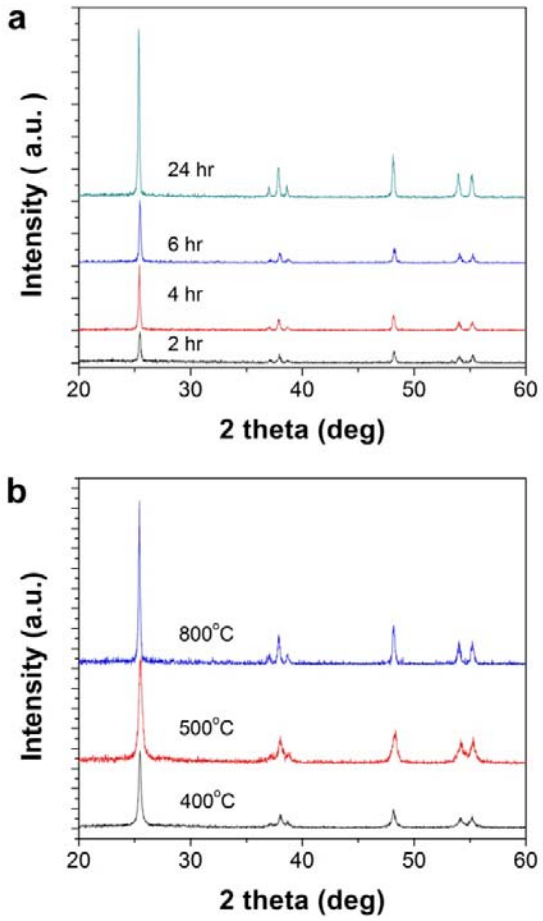

Fig. S1 a) X-ray diffraction patterns for the calcination of TiO_2 microspheres without silica impregnation at 800°C for different lengths of time showing an increase in crystallinity. b) X-ray diffraction patterns for the calcination of TiO_2 microspheres without silica impregnation for four hours at different temperatures.

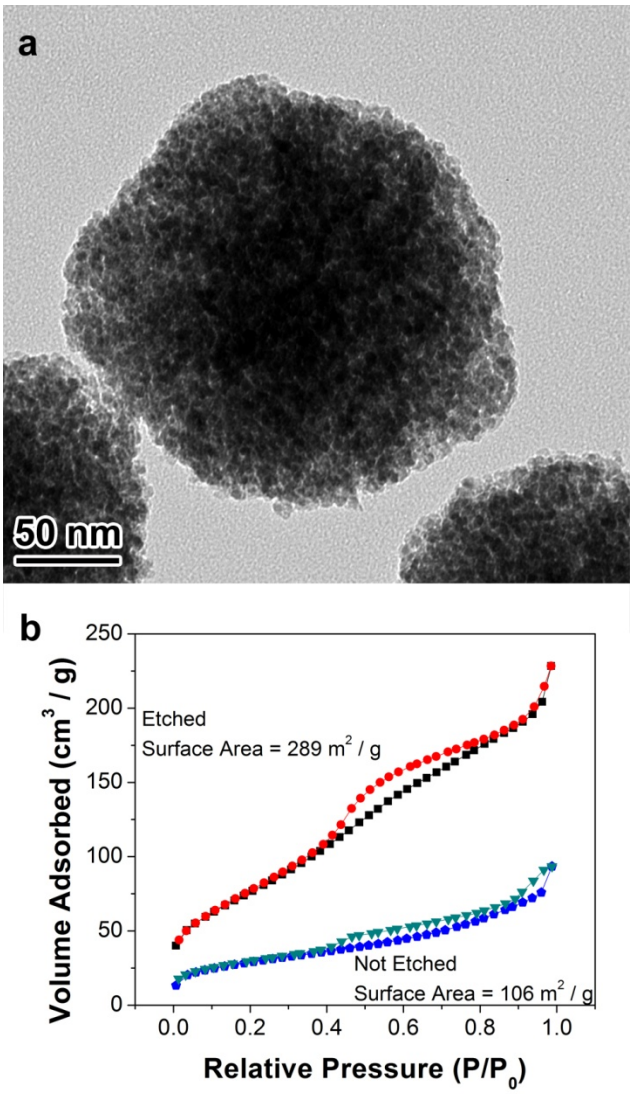

Fig. S2 a) TEM image of TiO_2 sample T-3 after SiO_2 impregnation and calcination. Image is representative of impregnation without a full coating. b) N_2 adsorption-desorption isotherms for T-3 before and after SiO_2 removal.

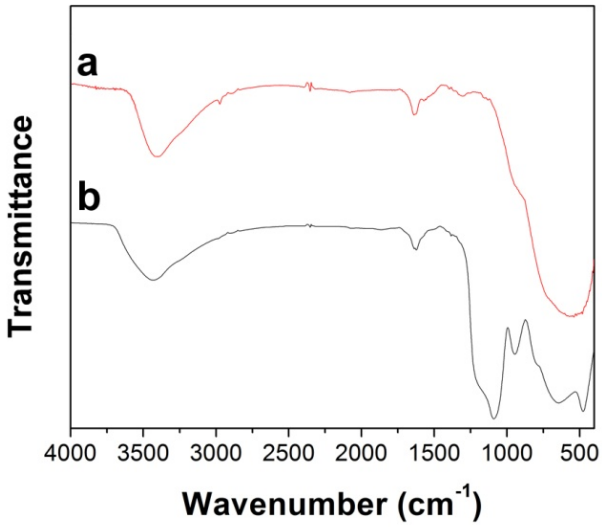

Fig. S3 FTIR spectra of a) T-3 after etching and b) T-3 before etching showing the disappearance of characteristic Si-O-Si IR bands after etching.

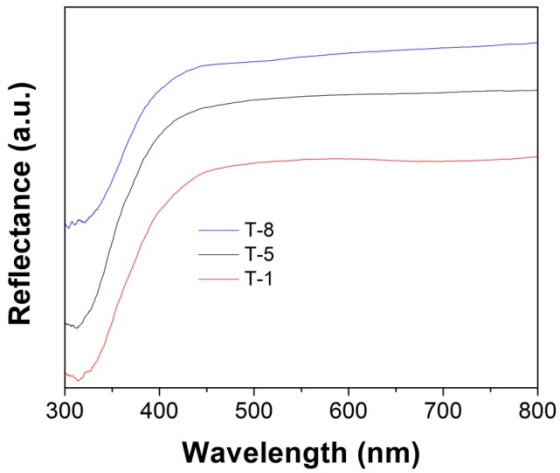

Fig. S4 UV-Vis diffuse reflectance spectra of samples T-1, T-5 and T-8.