Supporting Information

General Synthesis of Mesoporous Spheres of Metal Oxides and Phosphates

Angang Dong, Nan Ren, Yi Tang*, Yajun Wang, Yahong Zhang, Weiming Hua, and Zi Gao

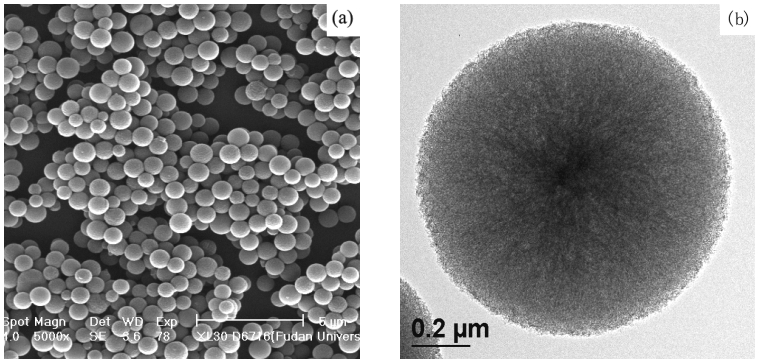

Figure S1. SEM (a) and TEM (b) images of mesoporous carbon spheres templated from spherical mesoporous silica. The BET surface area of carbon spheres is 1201 m^2/g.

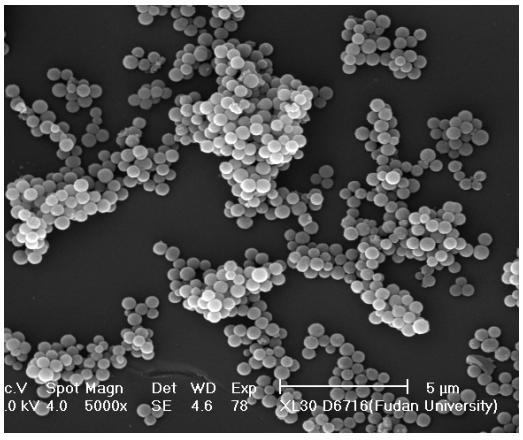

Figure S2. SEM image of mesoporous anatase-type TiO_2 spheres, showing that this templating process is true on a large scale

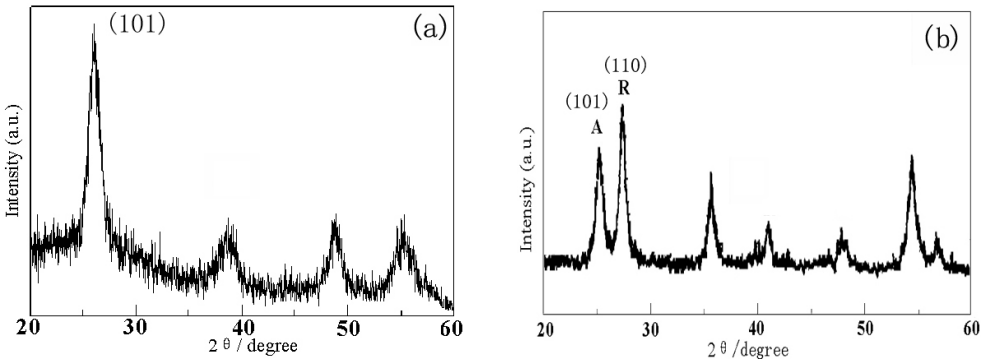

Figure S3. XRD patterns of mesoporous anatase-type (a) and anatase/rutile-type (b) TiO_2 spheres. The weight fraction of rutile phase (W_R) in anatase/rutile-type TiO_2 spheres is 60%, which is calculated from the integrated XRD intensities of rutile (110) (A_R) and anatase (101) (A_A) peaks using the formula (ref. 12): $W_R = A_R / (0.884A_A + A_R)$

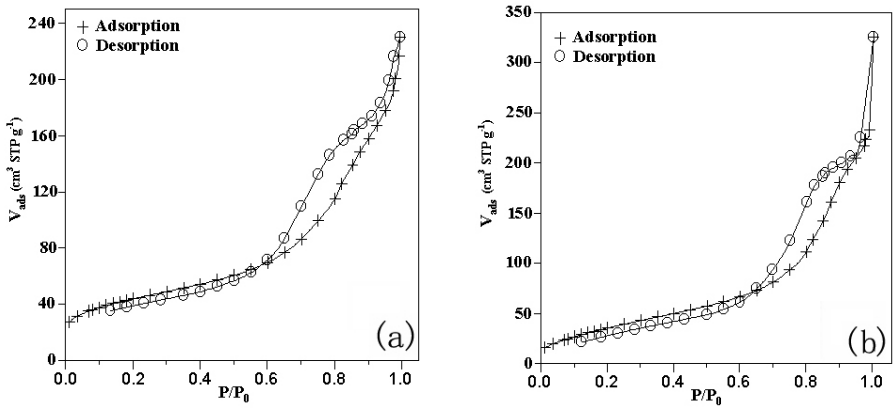

Figure S4. N_2 adsorption/desorption isotherms of mesoporous anatase-type (a) and anatase/rutile-type (b) TiO_2 spheres.

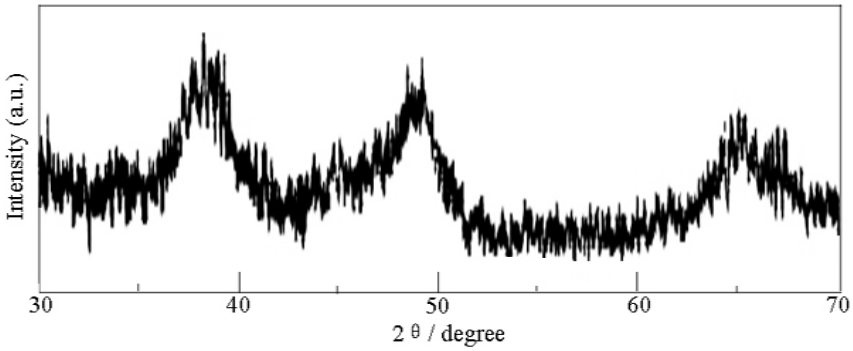

Figure S5. XRD pattern of mesoporous γ-Al_2O_3 spheres.

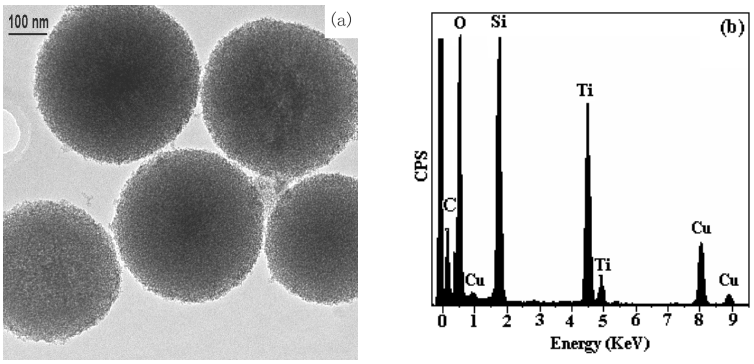

Figure S6. TEM image (a) and energy-dispersive X-Ray (EDX) spectrum (b) of mesoporous $Ti_2Si_3O_y$ spheres. The strong Ti and Si signals in the EDX spectrum indicate that the pore walls consist of mixed oxides. The presence of elements C and Cu are due to the grid used in TEM apparatus.