

Supplementary Data

Synthesis of easily shaped ordered mesoporous titanium-containing silica

Chao Yu^{#,a}, Huaqin Chu^{#,a}, Ying Wan^{*,a}, Dongyuan Zhao^b

^aDepartment of Chemistry, Shanghai Normal University, Shanghai 200234, P. R.

China; ^b Department of Chemistry and Shanghai Key Laboratory of Molecular
Catalysis and Innovative Materials, Fudan University, Shanghai 200433, P. R. China

* To whom correspondence should be addressed. Tel: 86-21-6432-2516;

Fax: 86-21-6432-2511; E-mail: ywan@shnu.edu.cn

The two authors contribute the same.

Fig. S1 *t*-plot analysis for (a) as-prepared Ti-containing mesoporous silicates TiCl-MS(AP) and (b) calcined TiCl-MS materials with different Si/Ti ratios prepared from TiCl₃ and as-prepared SBA-15 mesoporous silica by grafting.

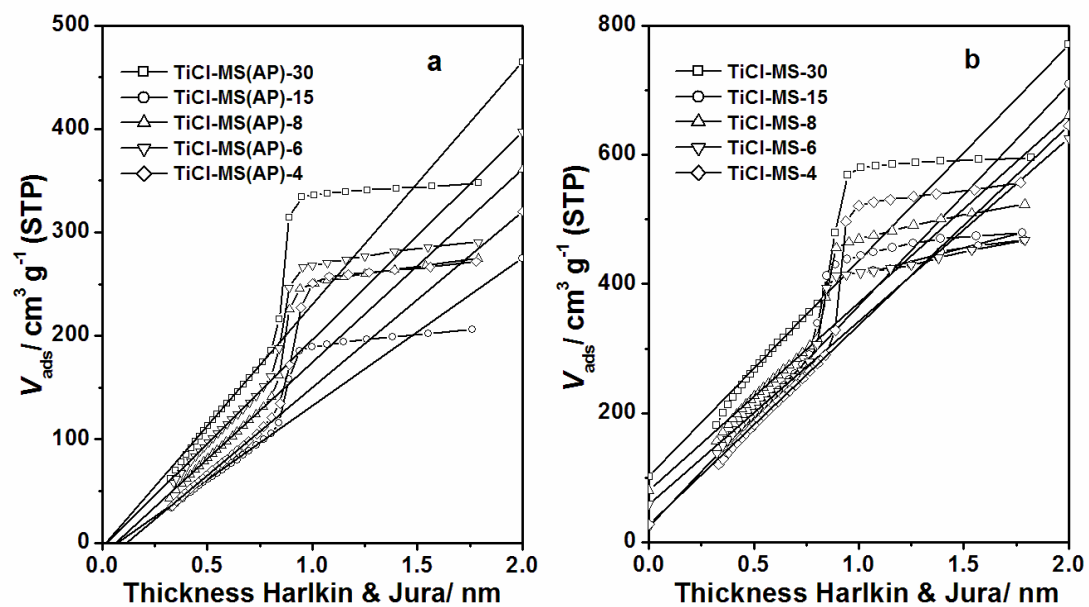


Fig. S2 Optical photos for (a) as-prepared mesoporous silica, (b) as-prepared Ti-containing mesoporous silica synthesized with TiOSO_4 (TiSO-MS(AP)-15) and (c) calcined TiSO-MS-15.

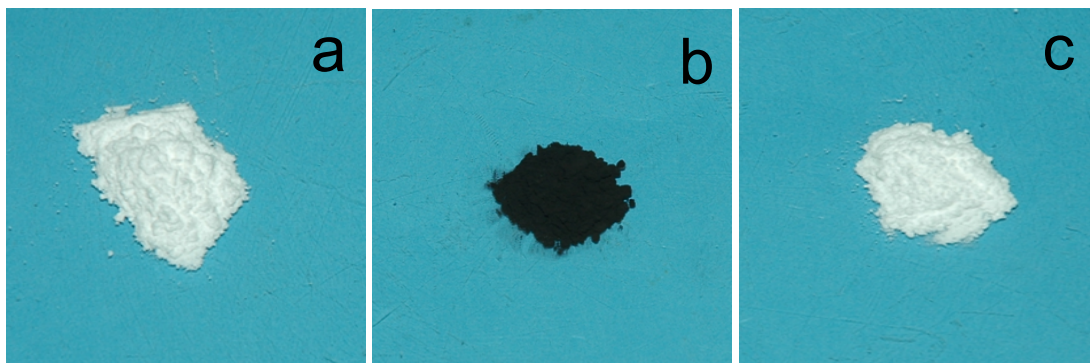


Fig. S3 (a) Small-angle XRD pattern and (b) N₂ sorption isotherms for calcined Ti-containing mesoporous silicates TIPOT-MS-30 materials with the Si/Ti ratio of 30 prepared with TIPOT and as-prepared mesoporous silica *via* grafting. Inset (b) is corresponding pore-size distribution curve.

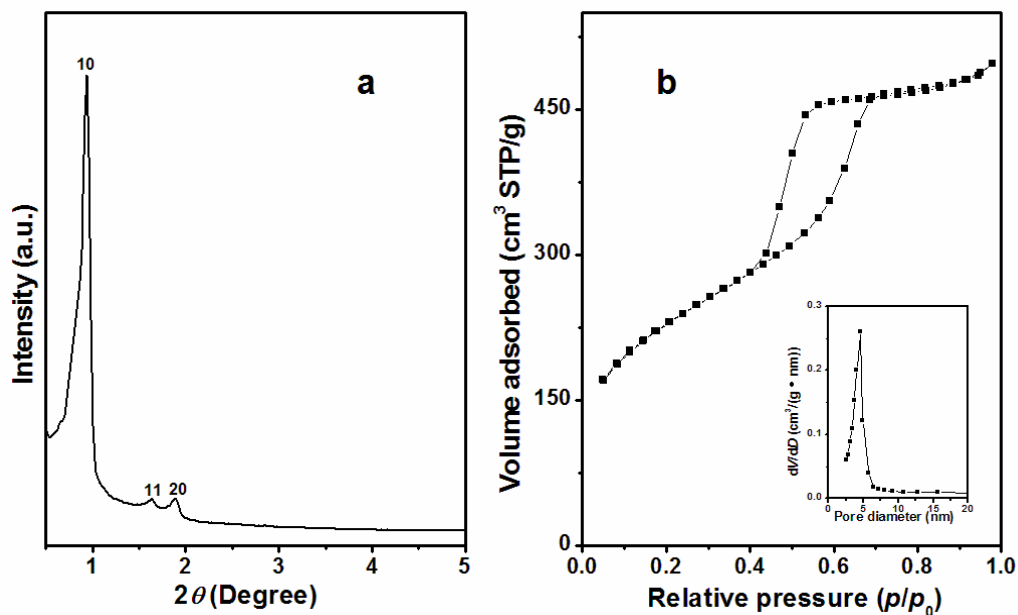


Fig. S4 FT-IR spectra for as-prepared and calcined mesoporous silica.

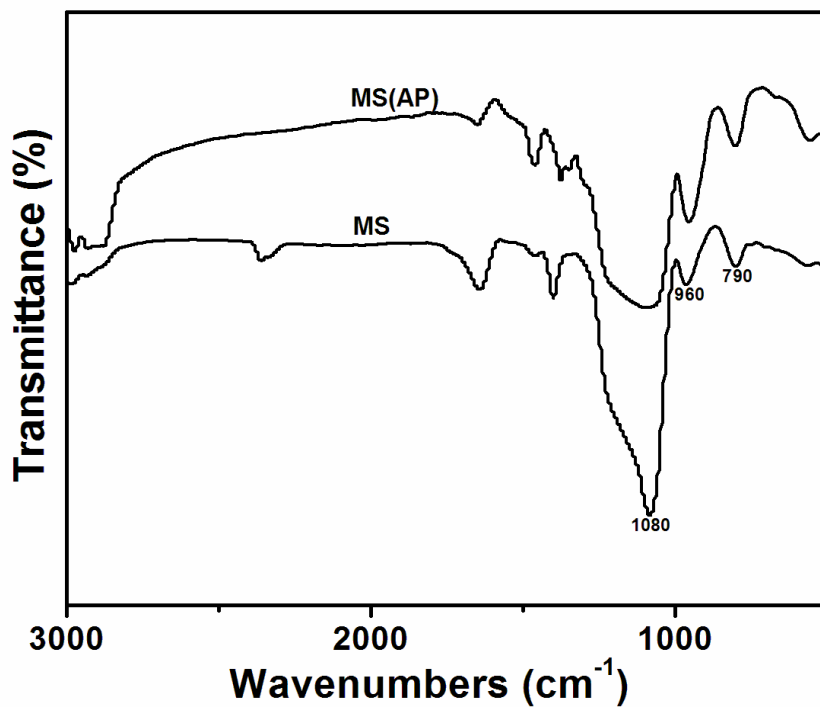


Fig. S5 TG curve for as-prepared mesoporous silica SBA-15 which is carried out in air.

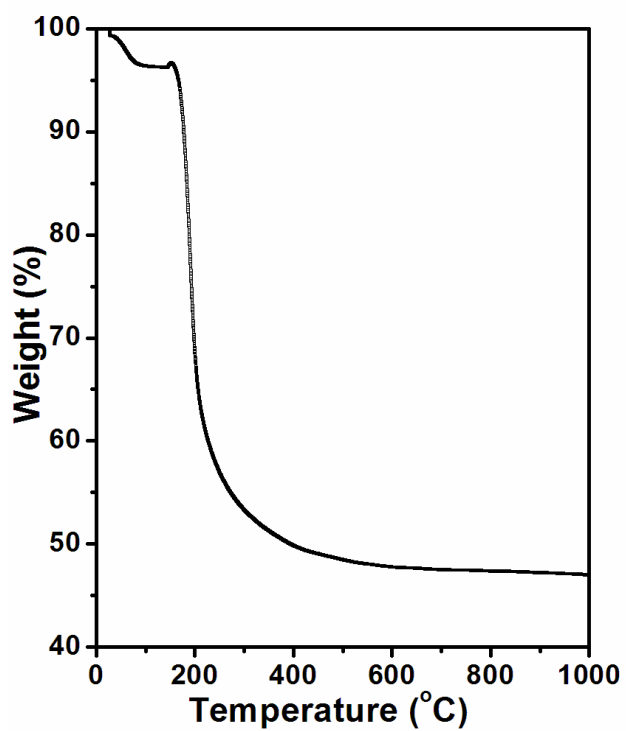


Fig. S6 (a) Small-angle and (b) wide-angle XRD patterns for as-prepared (MS(AP)) and calcined mesoporous silica (MS).

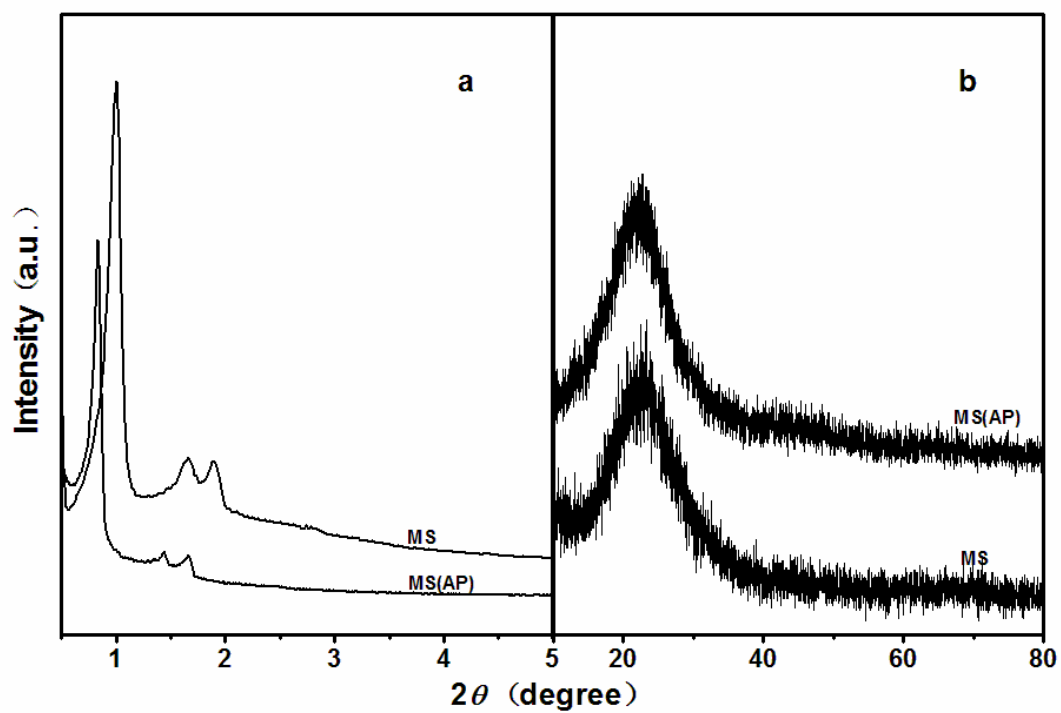


Fig. S7 (a) N₂ sorption isotherms and (b) pore-size distribution curves for as-prepared and calcined mesoporous silica.

