Supplementary Material (ESI) for Journal of Materials Chemistry


# Supplementary Data

## Synthesis of Ordered Mesoporous Bifunctional Ti-$SiO_2$-Polymer Nanocomposite

**HuaQin Chu,[a] Chao Yu [a] ,Ying Wan,*[a] Dongyuan Zhao[b]**

[a] Department 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: 86-21-6432-2272; E-mail: ywan@shnu.edu.cn

Fig. S1. *V-t* plot analysis for mesoporous Ti-$SiO_2$-polymer composites with various Si/Ti ratios and polymer contents MTSP-*n*-50 (a) and MTSP-*n*-35 (b) (*n* = 50 – 10), which are prepared from the triblock-copolymer-templating route using TIPOT as a titanium source, TEOS as a silica source, preformed resin as a polymer source and triblock copolymer F127 as a template.

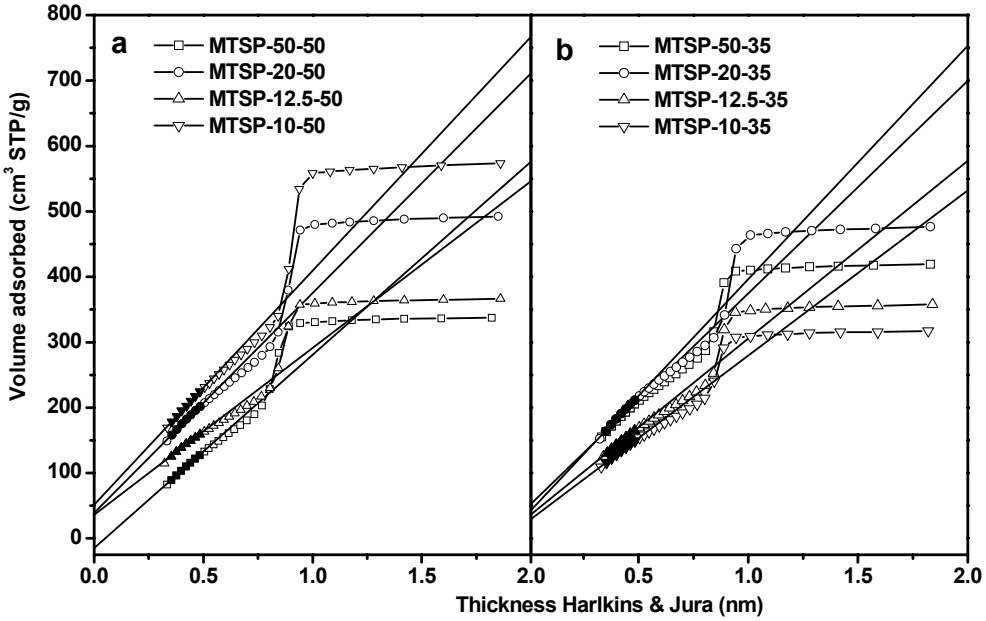

Fig. S2. $N_2$ sorption isotherms (a) and pore-size distribution curves (b) for the mesoporous Ti-$SiO_2$ derivation which is obtained from the bifunctional composite MTSP-20-50 after combustion at 500 °C in air.

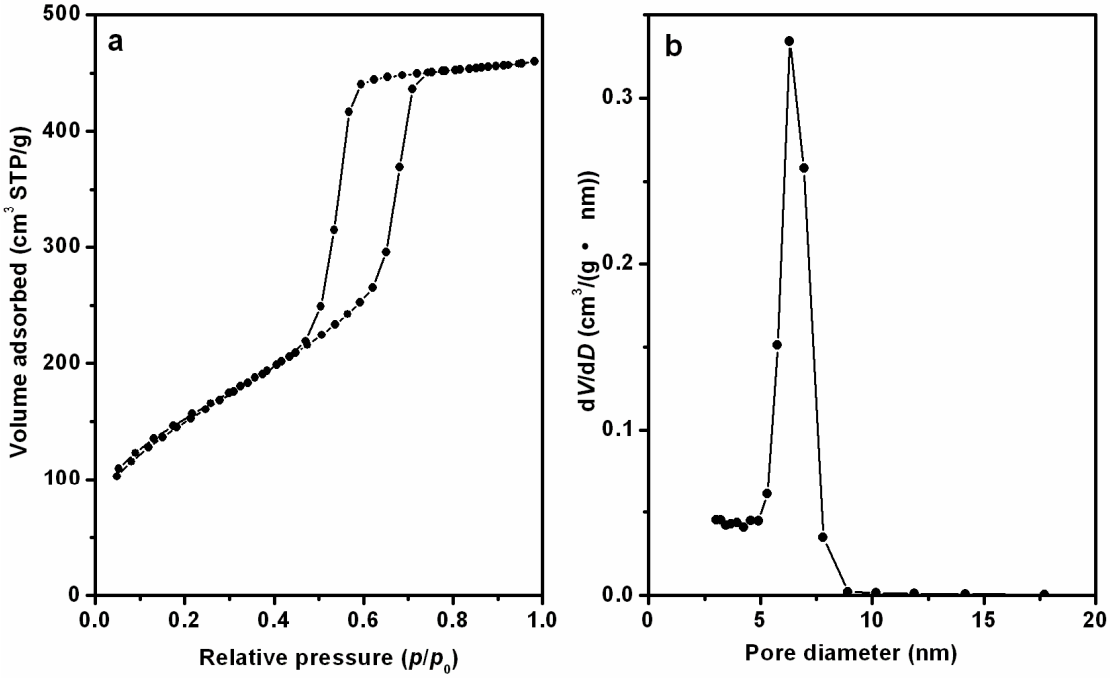

Fig. S3. Small-angle XRD patterns for MTSP-20-50 after calcination at 600 °C in nitrogen, and the inorganic solid and carbon descendants after further combustion at 500 °C in air and acidic treatment, respectively.