Electronic Supplementary Material (ESI) for RSC Advances.

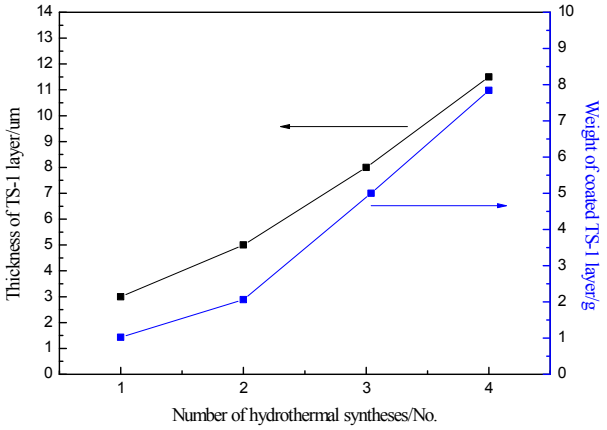

Fig. S1. Thickness and weight of TS-1 layer versus step number of hydrothermal syntheses

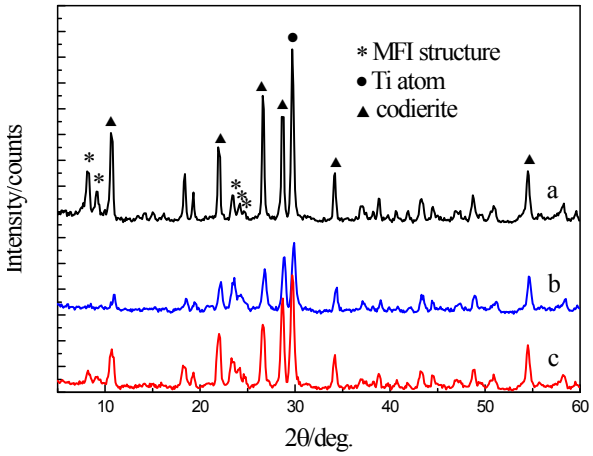

Fig. S2. XRD patterns of (a) fresh TS-1 layer, (b) deactivated TS-1 layer, and (c) deactivated TS-1 layer calcined in air at 823K for 6h

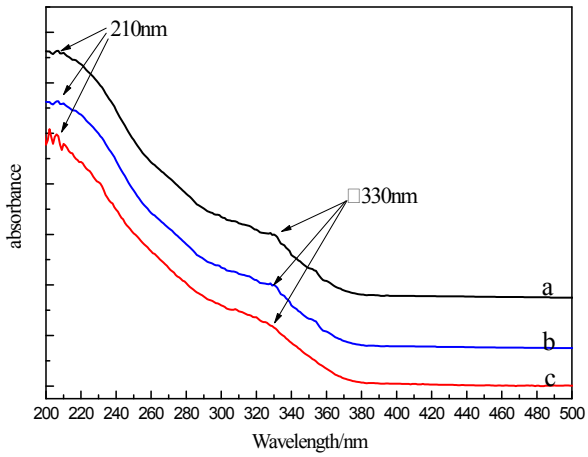

Fig. S3. UV-vis spectra of (a) fresh TS-1 layer, (b) deactivated TS-1 layer obtained from continuous ammoximation without TBA, and (c) the same deactivated TS-1 layer calcined in air at 823K for 6h

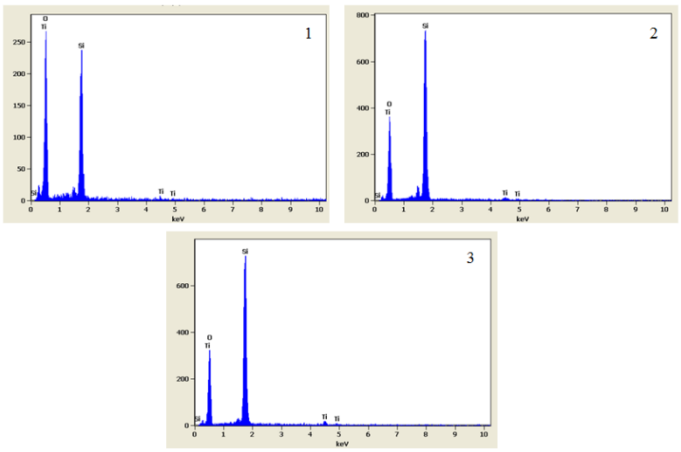

Fig. S4. EDS spectra of (1) fresh TS-1 layer, (2) deactivated TS-1 layer obtained from continuous ammoximation without TBA (TOS 124 h), and (3) Deactivated TS-1 layer obtained from continuous ammoximation without TBA (TOS 130 h)

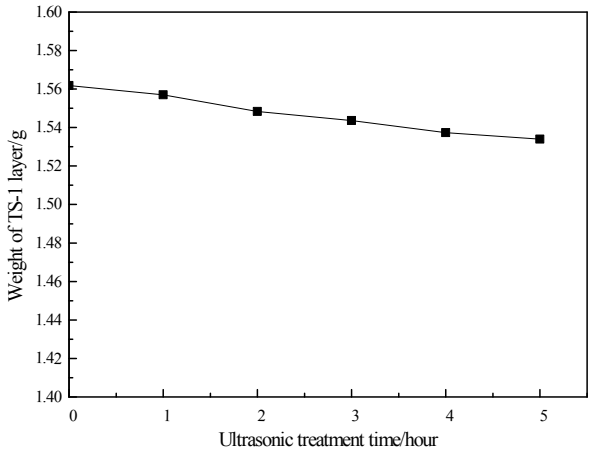

Fig.A. The effect of ultrasonic treatment on the mechanical stability of the monolithic TS-1 layer

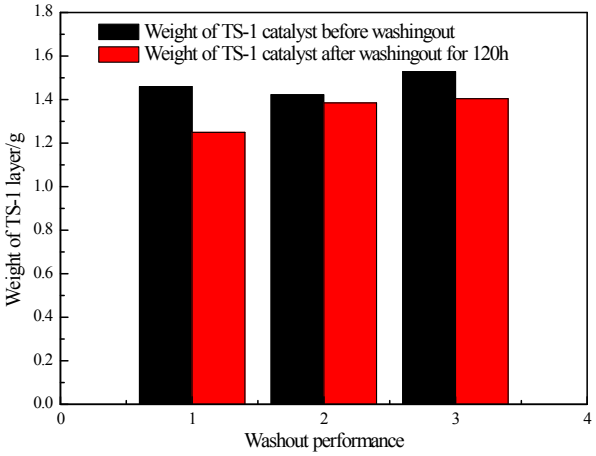

Fig.B. The effect of washout on the mechanical stability of the monolithic TS-1 layer

Washout flow rate, 250ml/min; temperature, 343K; cpsi250;

1 $NH_3 \cdot H_2O$, 12.5wt%, 2 H_2O, 3 TBA 85wt%

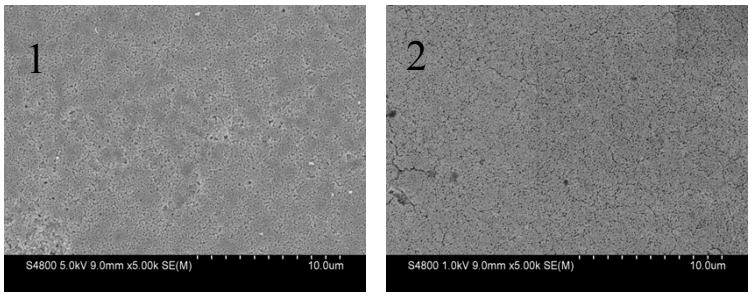

Fig. C. SEM images of (1) the fresh monolithic TS-1 layer and (2) the used monolithic TS-1 layer obtained from continuous ammoximation without TBA (TOS 130 h)