The Growth Mode of ZnO on Porous HZSM-5 Substrates by Atomic Layer Deposition and Its Catalytic Property in the Synthesis of Aromatics from Methanol

Fei Wang, Weiyin Xiao, Lijing Gao, Guomin Xiao

SUPPLEMENTARY DATA

Fig. S1 The N\textsubscript{2} adsorption-desorption isotherms of ZnO modified HZSM-5 catalysts compared with the blank HZSM-5
Fig. S2 The pore size distribution of blank HZSM-5 and ZnO ALD modified samples: 
a) mesopore size distribution which is determined by the BJH analysis of adsorption
isotherm data; b) micropore size distribution which is evaluated by the HK method
Fig. S3 a) fresh 40-ZnO/HZSM-5 (ALD); b) 40-ZnO/HZSM-5 (ALD) after three reaction-regeneration cycles; c) fresh ZnO/HZSM-5 (IWI); d) ZnO/HZSM-5 (IWI) after three reaction-regeneration cycles; e) fresh Zn/HZSM-5 (IE); f) Zn/HZSM-5 (IE) after three reaction-regeneration cycles
Fig. S4 XRD patterns of fresh and regenerated ZnO/HZSM-5 catalysts

Fig. S5 FT-IR spectra of fresh and regenerated ZnO/HZSM-5 catalysts
Fig. S6 Al 27 NMR spectra of fresh and regenerated ZnO/HZSM-5 catalysts
Fig. S7 NH$_3$-TPD spectra of fresh and regenerated ZnO/HZSM-5 catalysts