

Supporting Information

for

Methanol Conversion on ZSM-22, ZSM-35 and ZSM-5 zeolites: Effects of 10-membered Ring Zeolite Structures on Methylcyclopentenyl Cations and Dual Cycle Mechanism

Contents

Scheme S1. MCP⁺ cations and their deprotonated forms, methylcyclopentadienes.

Fig. S1. XRD patterns of ZSM-22, ZSM-35 and ZSM-5.

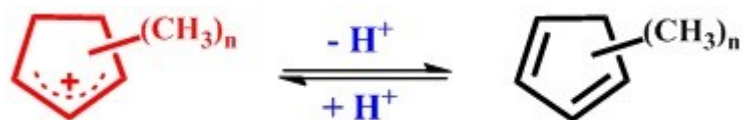
Fig. S2. SEM images of ZSM-22, ZSM-35 and ZSM-5.

Fig. S3. ²⁹Si MAS NMR spectra of ZSM-22, ZSM-35 and ZSM-5.

Fig. S4. ²⁷Al MAS NMR spectra of ZSM-22, ZSM-35 and ZSM-5.

Fig. S5. N₂ adsorption and desorption isotherms of ZSM-22, ZSM-35 and ZSM-5.

Fig. S6. ¹H MAS NMR spectra of ZSM-22, ZSM-35 and ZSM-5.



Scheme S1. MCP⁺ cations and their deprotonated forms, methylcyclopentadienes.

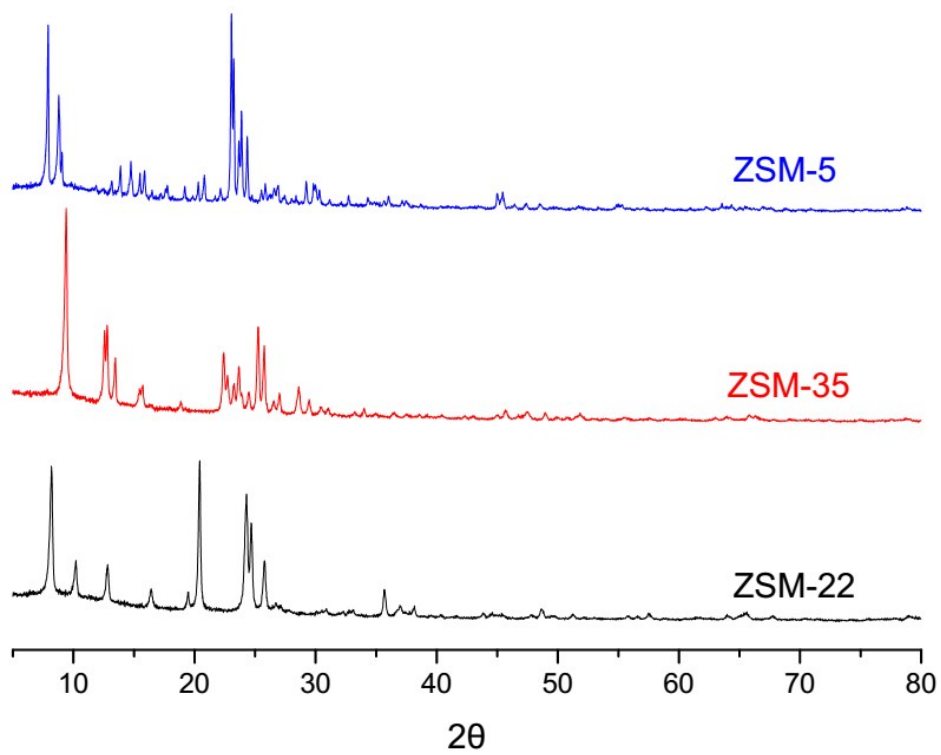
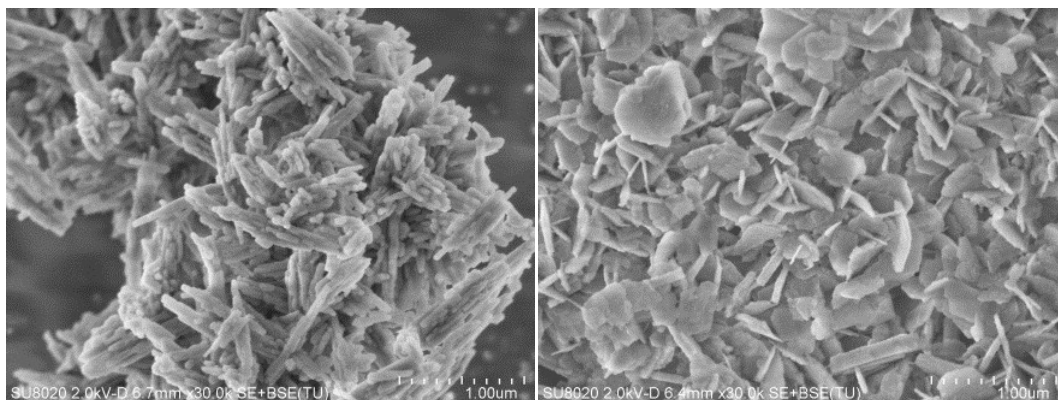
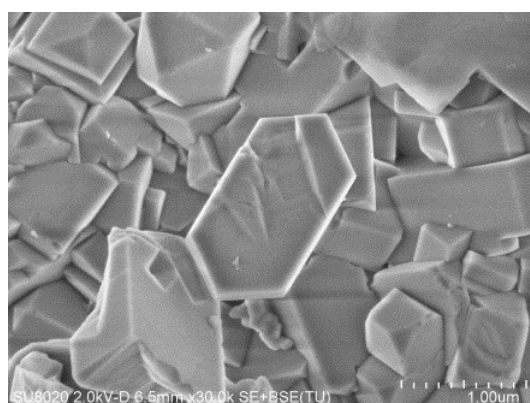


Fig. S1 XRD patterns of ZSM-22, ZSM-35 and ZSM-5



ZSM-22

ZSM-35



ZSM-5

Fig. S2 SEM images of ZSM-22, ZSM-35 and ZSM-5

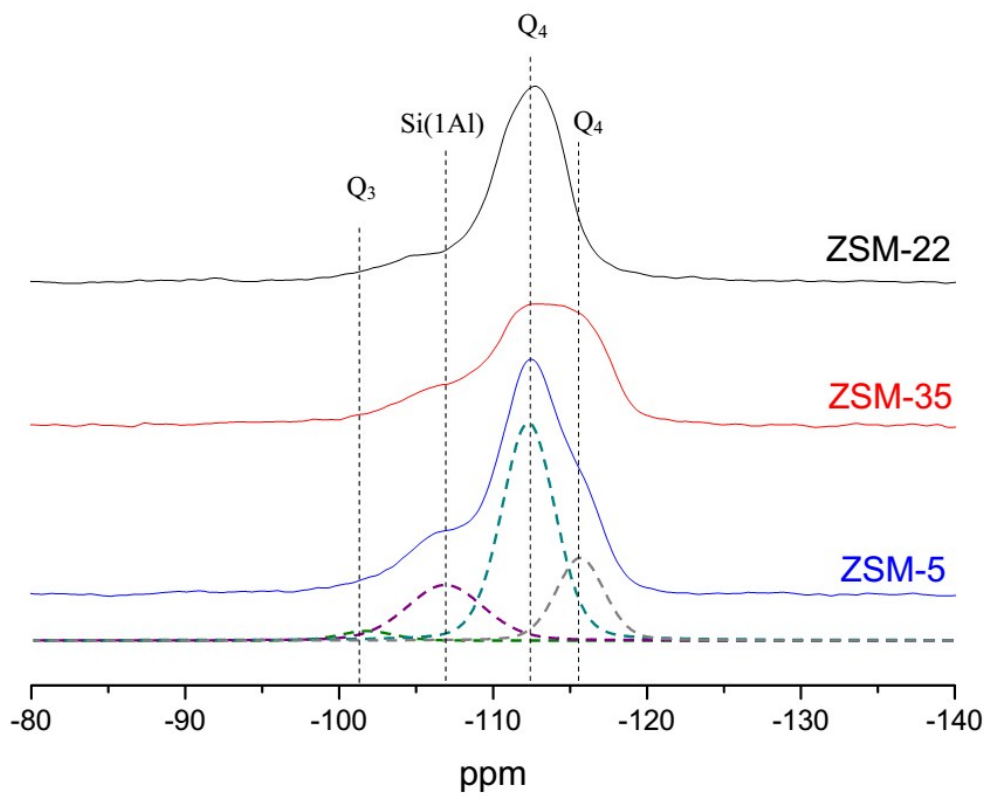


Fig. S3 ^{29}Si MAS NMR spectra of ZSM-22, ZSM-35 and ZSM-5

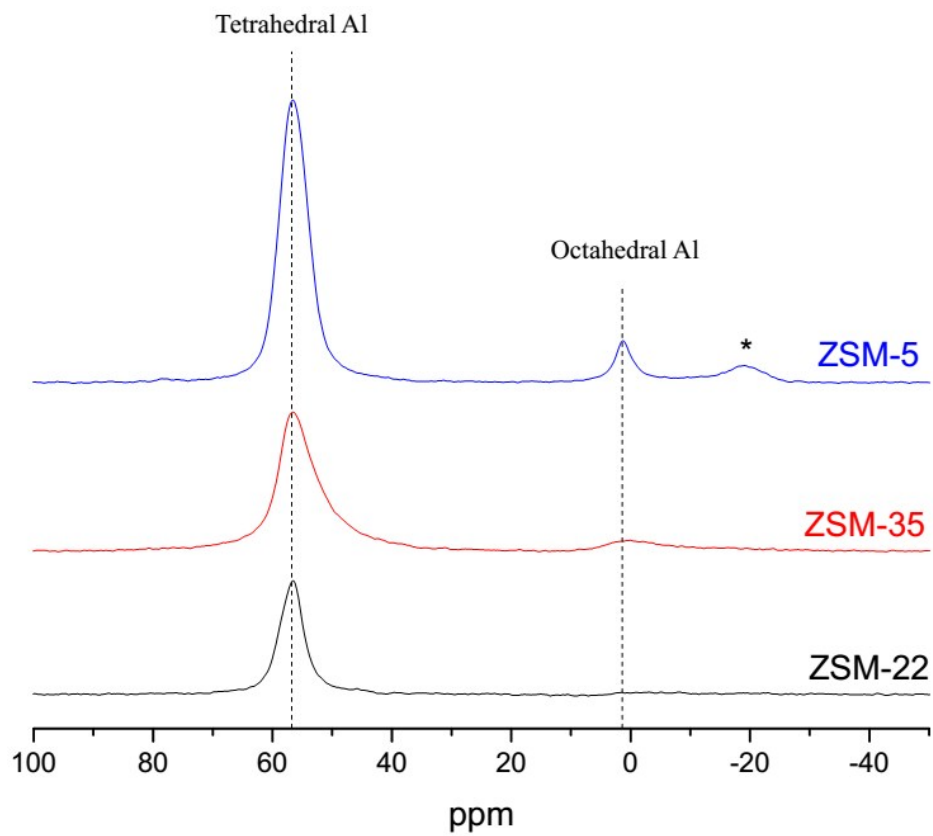


Fig. S4 ^{27}Al MAS NMR spectra of ZSM-22, ZSM-35 and ZSM-5

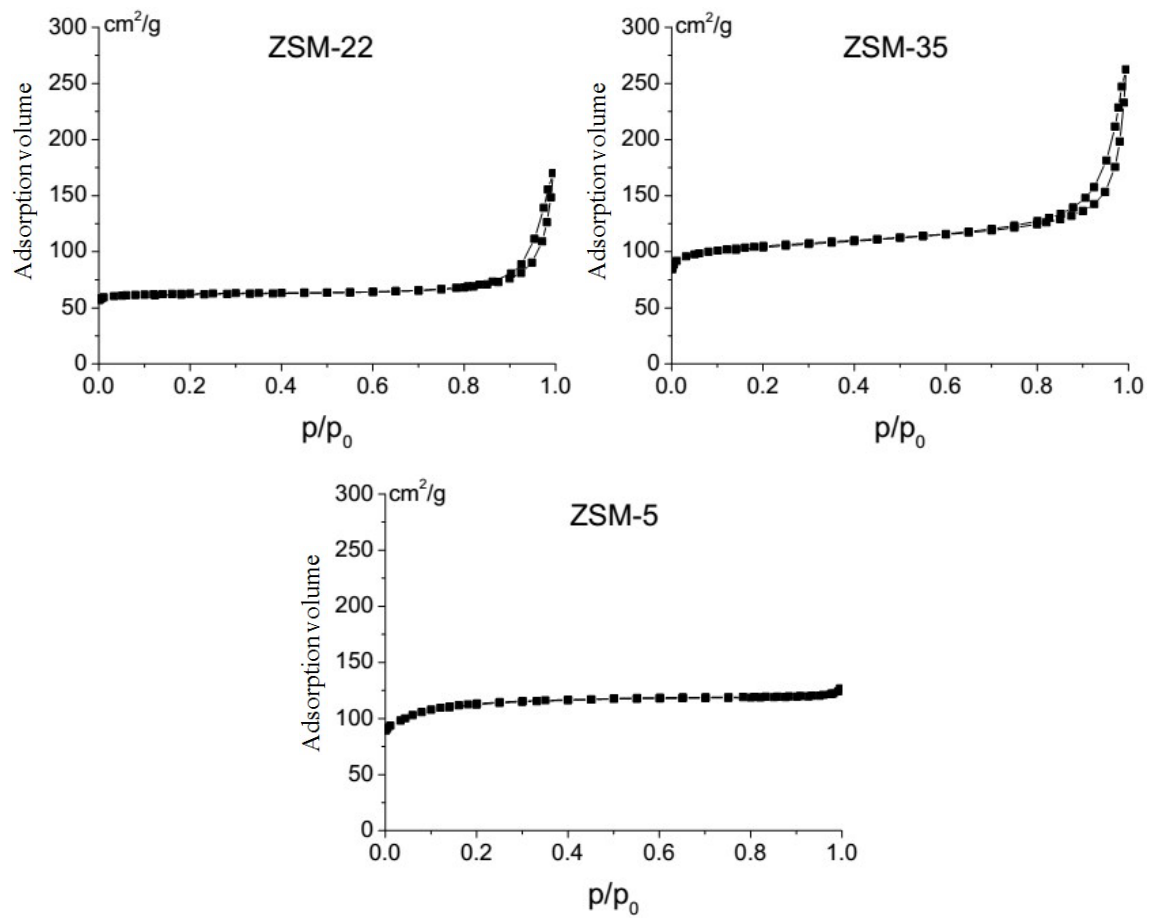


Fig. S5 N_2 adsorption and desorption isotherms of ZSM-22, ZSM-35 and ZSM-5

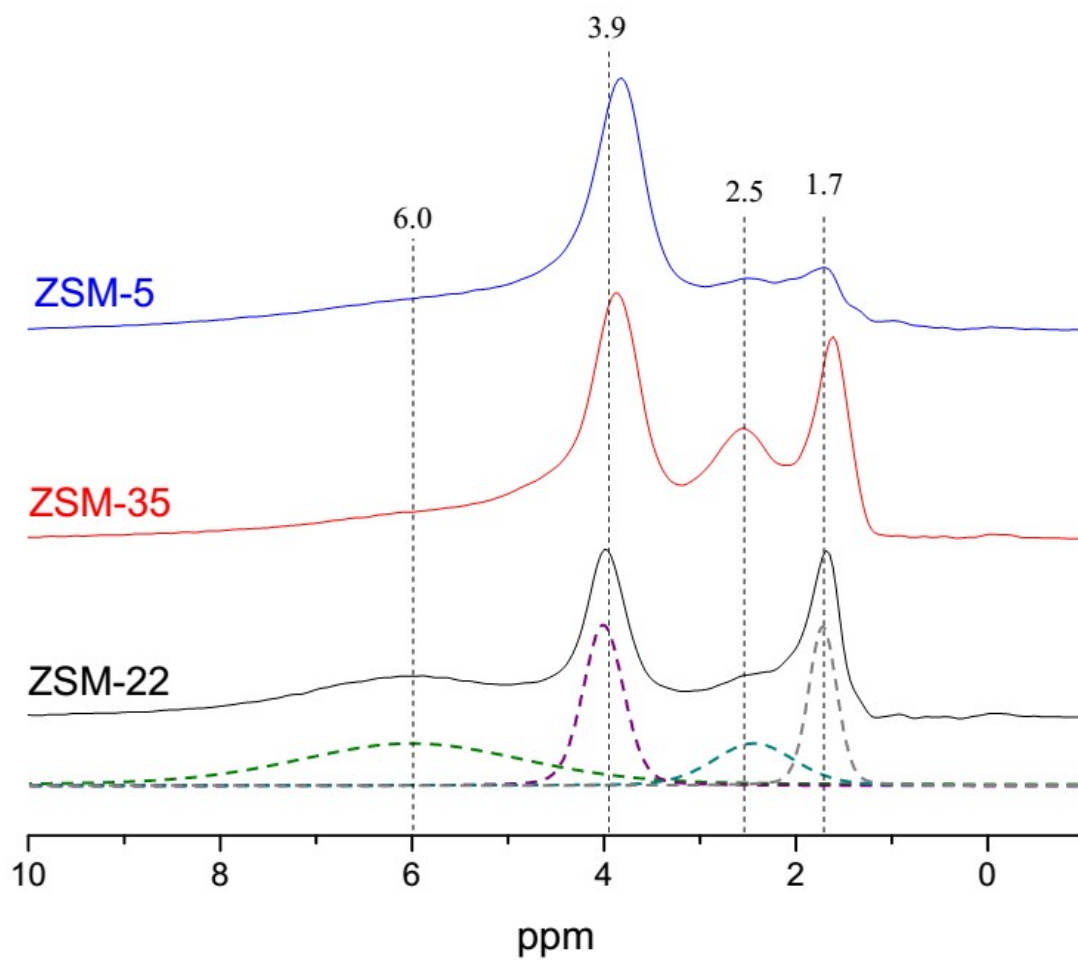


Fig. S6 ^1H MAS NMR spectra of ZSM-22, ZSM-35 and ZSM-5