

Supporting Information

Supplementary Figures

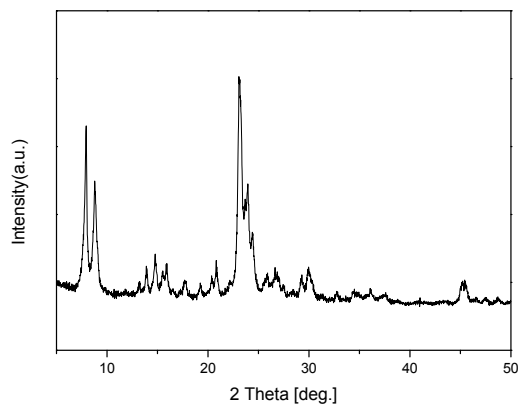


Fig.S1 XRD pattern of HZ-5

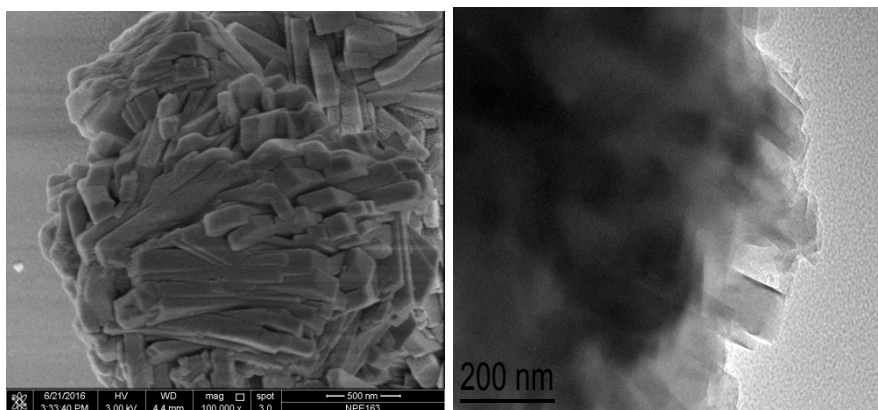


Fig.S2 SEM and TEM images of HZ-5

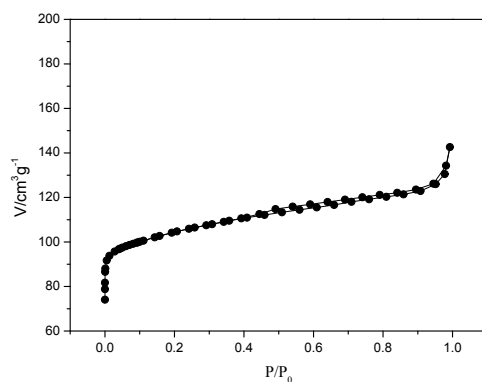


Fig.S3 N₂ adsorption-desorption isotherm of HZ-5

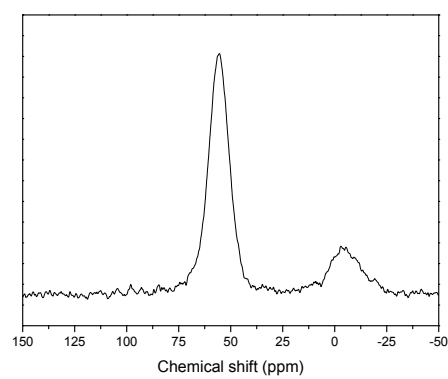


Fig.S4 ^{27}Al MAS NMR spectrum of HZ-5

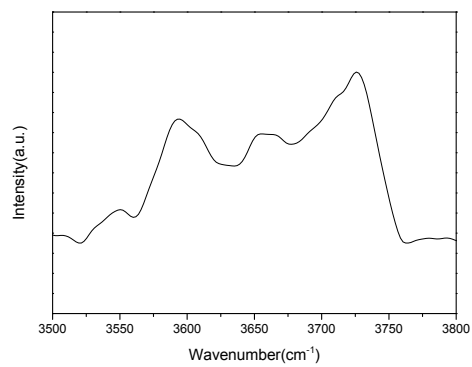


Fig.S5 OH-IR spectrum of HZ-5

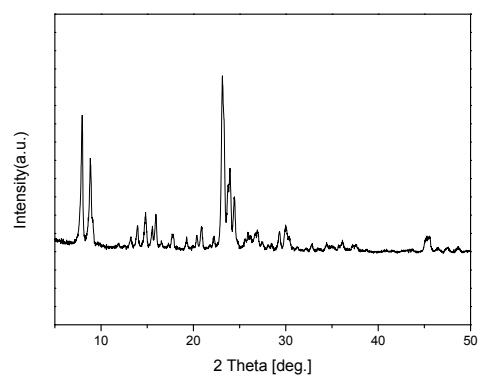


Fig.S6 XRD pattern of EZ-5

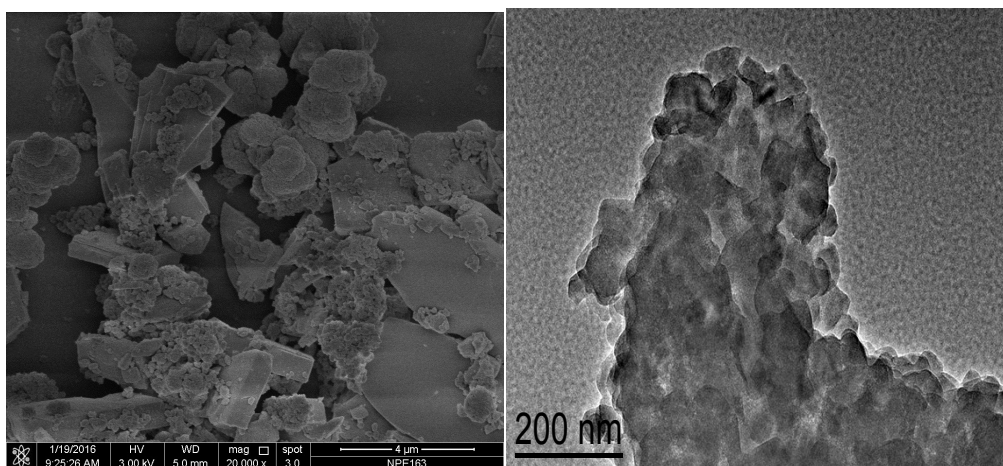


Fig.S7 SEM and TEM images of EZ-5

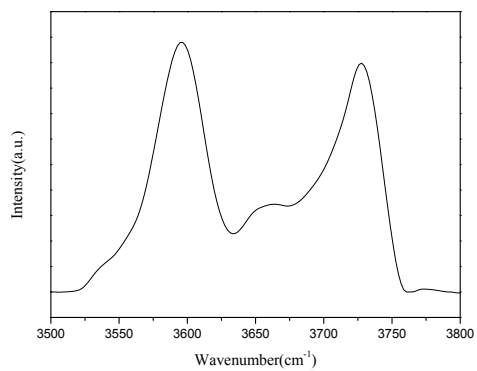


Fig.S8 OH-IR spectrum of EZ-5

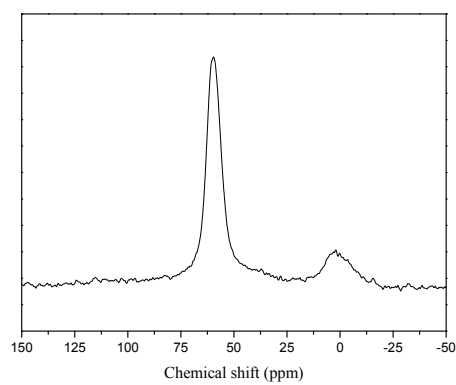


Fig.S9 ²⁷Al MAS NMR spectrum of EZ-5

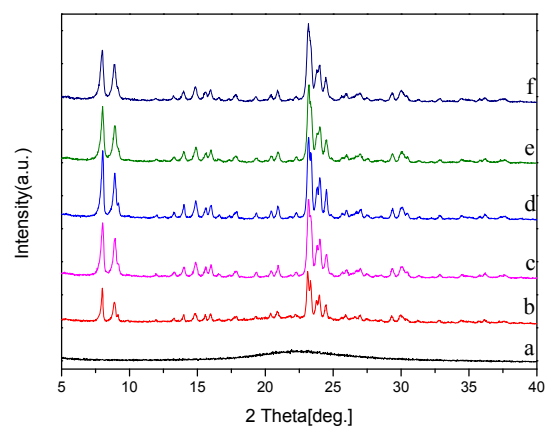


Fig.S10. XRD patterns of the ZSM-5 zeolites with different molar ratios of TPA⁺/SiO₂:
a: 0, b: 0.01, c: 0.03, d: 0.05, e: 0.07, f: 0.1

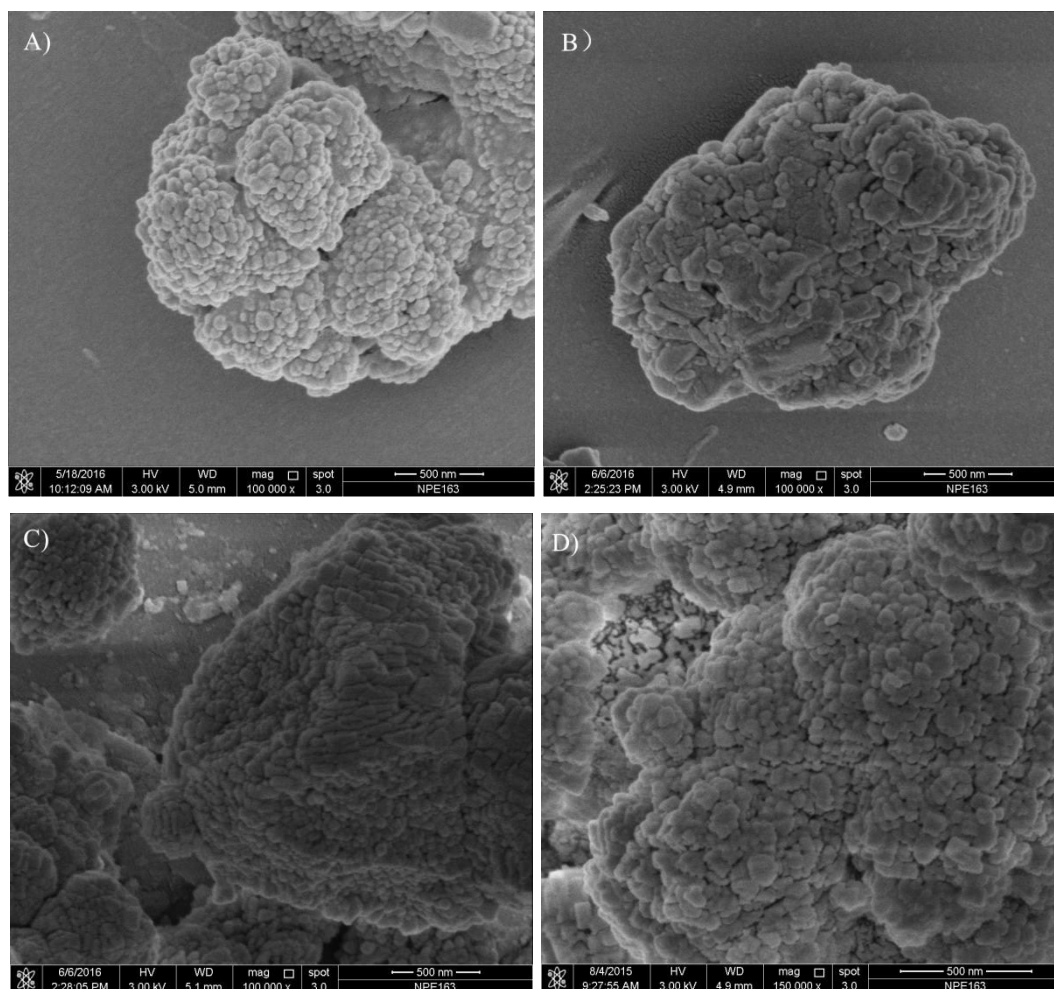


Fig.S11. SEM images of ZSM-5 zeolites synthesized with different molar ratios of TPA⁺/SiO₂:
A: 0.01, B: 0.03, C: 0.07, D: 0.1

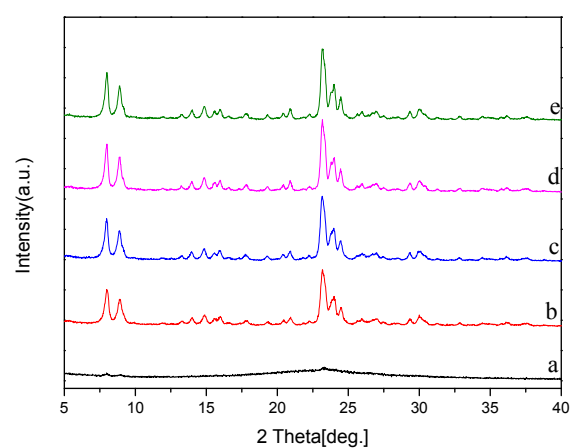


Fig.S12. XRD patterns of the ZSM-5 zeolites at different crystallization temperature:
a: 110°C, b: 130°C, c: 150°C, d: 170°C, e: 190°C

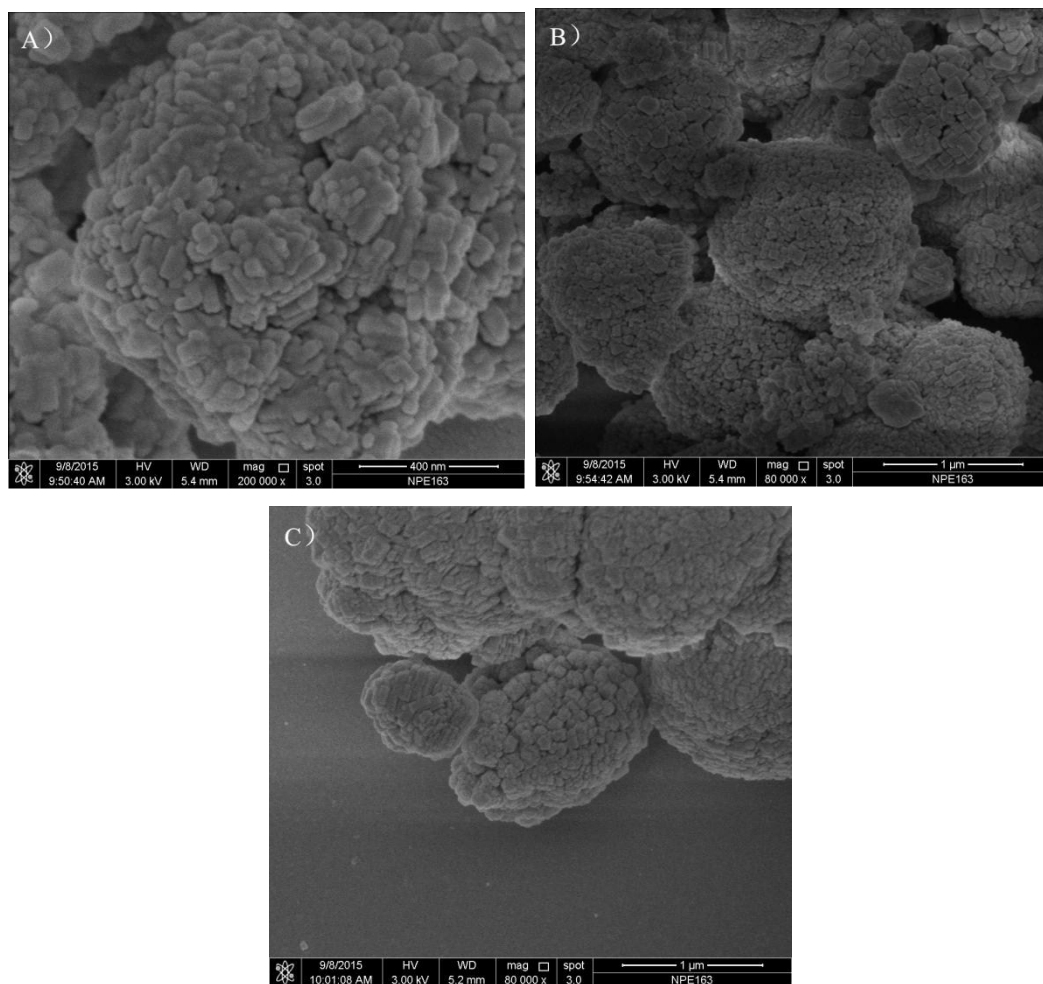


Fig.S13. SEM images of ZSM-5 zeolites synthesized at different crystallization temperature:
A: 130°C, B: 150°C, C: 190°C

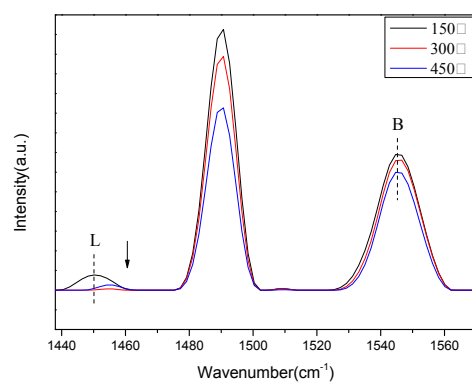


Fig.S14. Py-IR spectra of HZ-5

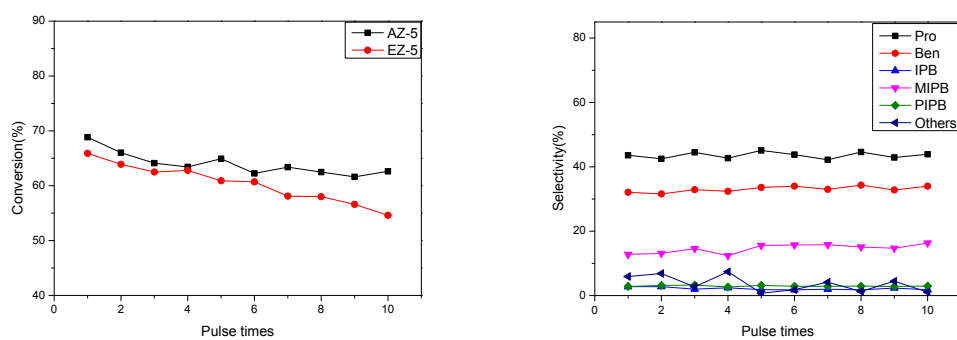


Fig.S15. Catalytic performance in the cracking of 1,3,5-TIPB of EZ-5

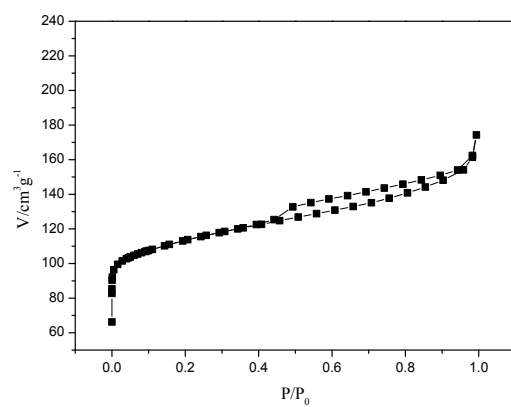


Fig.S16. N₂ adsorption-desorption isotherm of EZ-5

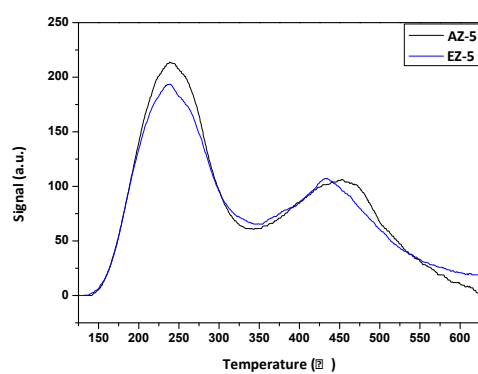


Fig.S17. NH₃-TPD curves

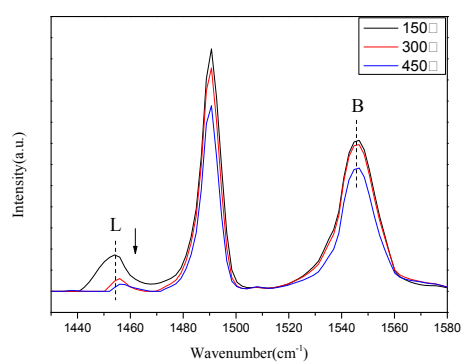


Fig.S18. Py-IR spectra of EZ-5

Table S1. The textural properties of EZ-5

Sample	Product SiO ₂ /Al ₂ O ₃	Precursor SiO ₂ /Al ₂ O ₃	Relative Crystallinity/%	$S_{\text{BET}}/\text{m}^2\cdot\text{g}^{-1}$	$S_{\text{ext}}/\text{m}^2\cdot\text{g}^{-1}$	$V_{\text{total}}/\text{cm}^3\cdot\text{g}^{-1}$	$V_{\text{mic}}/\text{cm}^3\cdot\text{g}^{-1}$	$V_{\text{mes}}/\text{cm}^3\cdot\text{g}^{-1}$
EZ-5	45	48	105	403.7	63.09	0.2696	0.1481	0.1215