

Supplementary information

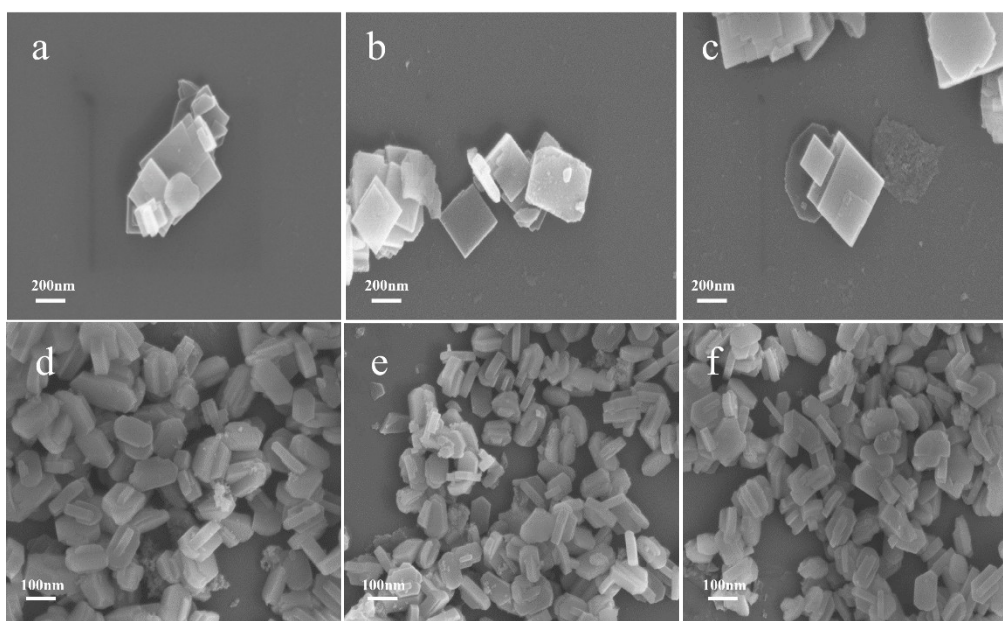


Fig.S1 SEM image of Zn/ZSM-5 and SAPO-34
(a)SP0.1; (b)SP0.2; (c)SP0.3;(d)1ZnZ30 ; (e)3ZnZ30 ; (f)5ZnZ30

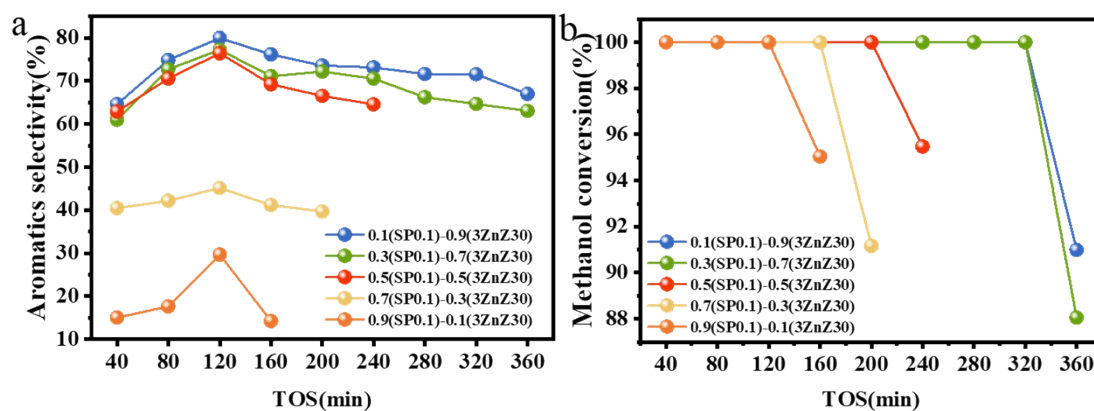


Fig.S2 Effect of layered loading of 3ZnZ30 and SP0.1 with different loading ratio on reaction performance (a) TOS diagram of aromatics selectivity, (b) TOS diagram of methanol conversion, reaction conditions: $T = 698\text{ K}$, $\text{TOS} = 2\text{ h}$, $\text{WHSV} = 3\text{ h}^{-1}$.

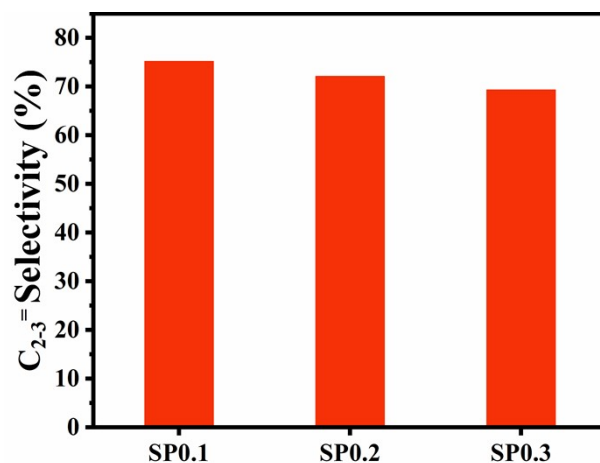


Fig.S3 C_{2-3} selectivity of different SAPO-34, reaction conditions: T = 698 K, TOS = 2 h, WHSV = 3 h⁻¹.

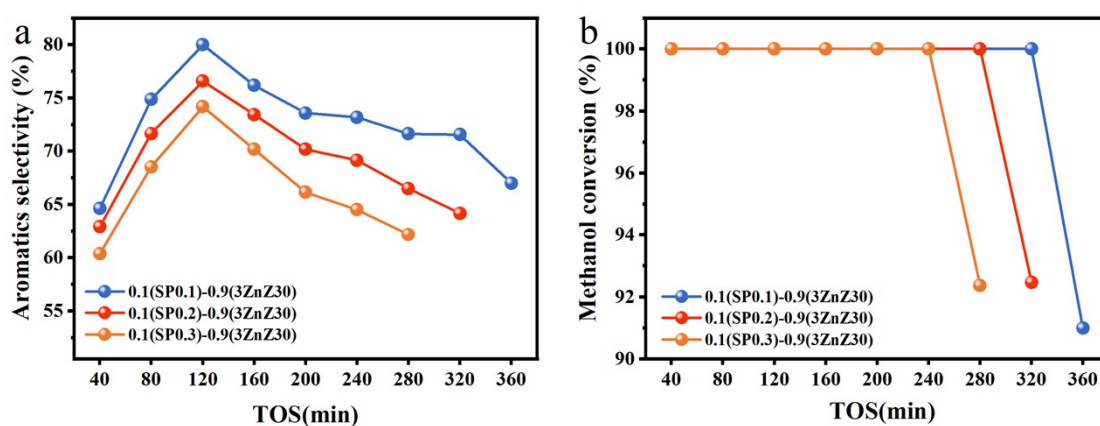


Fig.S4 Effect of SAPO-34 with different acid on production capacity of C_{2-3} (a) TOS diagram of aromatics selectivity ,(b) TOS diagram of methanol conversion

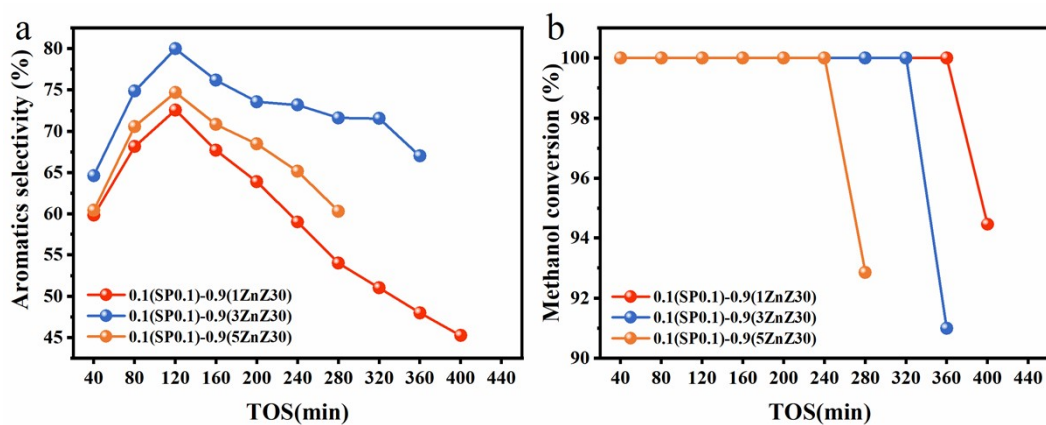


Fig.S5 Effect of ZSM-5 with different Zn loading on aromatization capacity of C_{2-3} (a) TOS diagram of aromatics selectivity ,(b) TOS diagram of methanol conversion