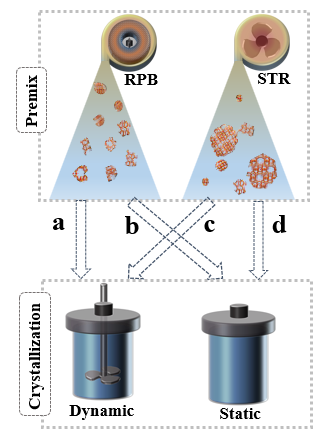
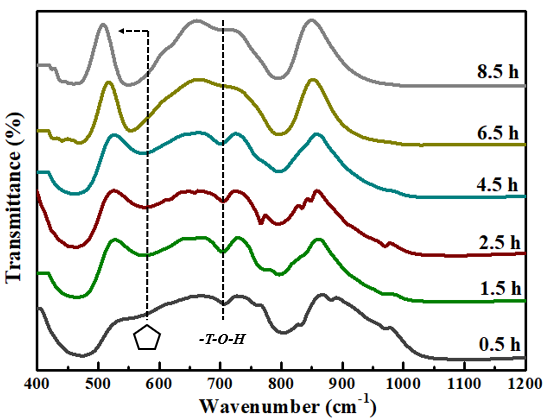
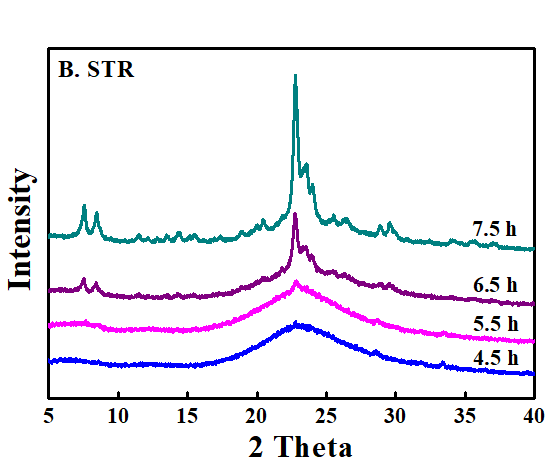
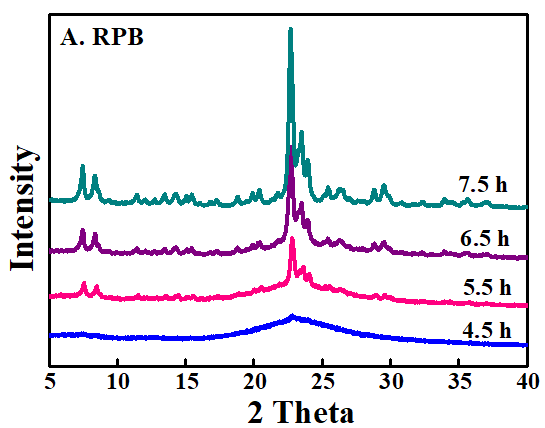
**Image**



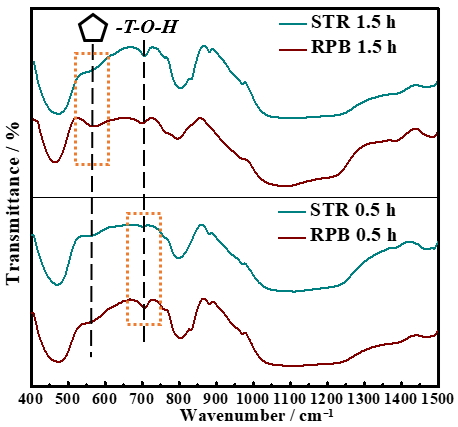
**Fig. 1.** Schematic diagram of four operating processes for synthesizing ZSM-5: a) RPB premix - static crystallization, b) RPB premix - dynamic crystallization, c) STR premix - static crystallization and d) STR premix - dynamic crystallization



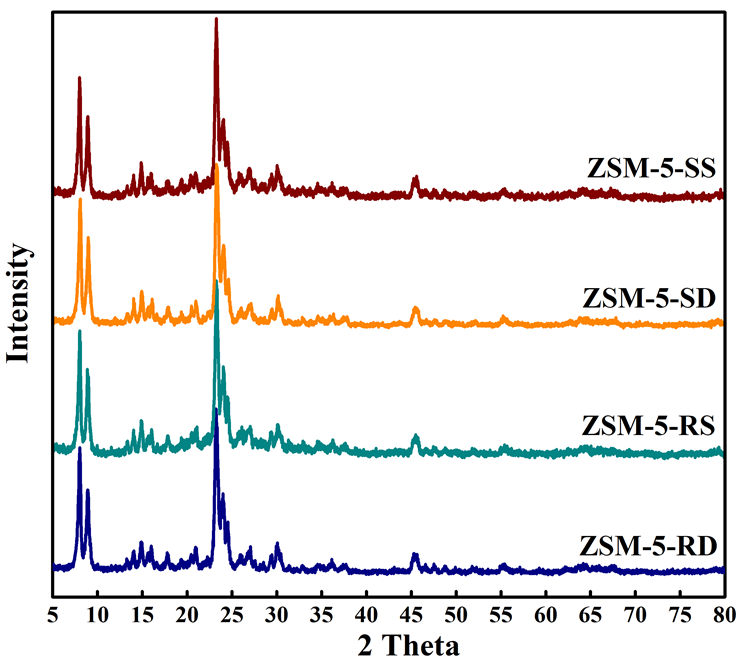
**Fig. 2.** FTIR spectra of the solid aliquots from a series of experiments at different intervals.



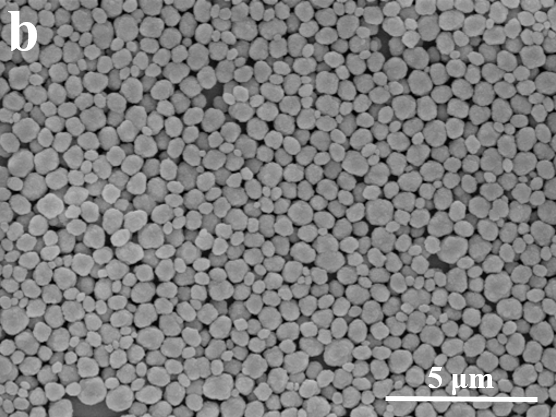
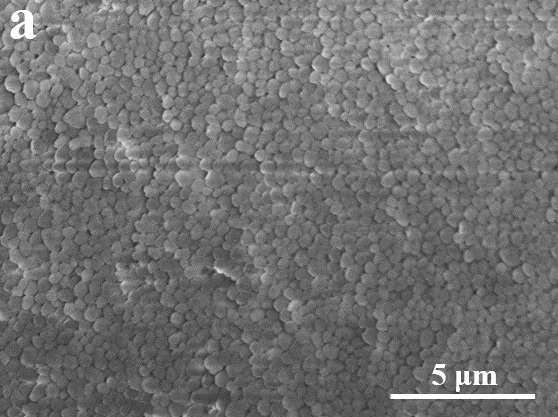
**Fig. 3.** XRD patterns of solid aliquots obtained by (A) RPB and (B) STR premix at different intervals.

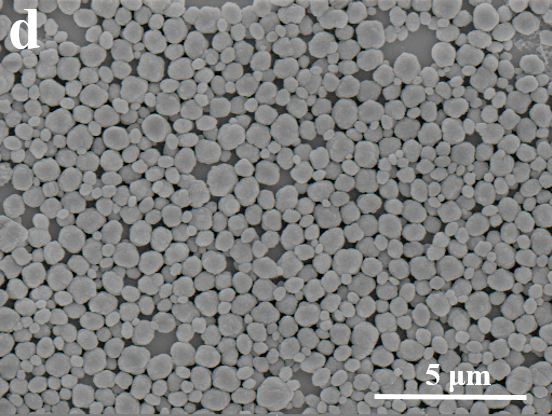
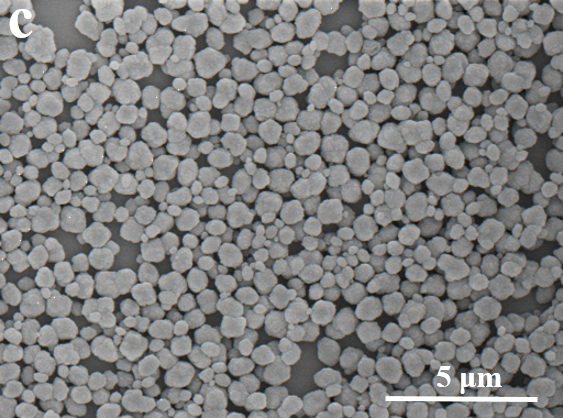


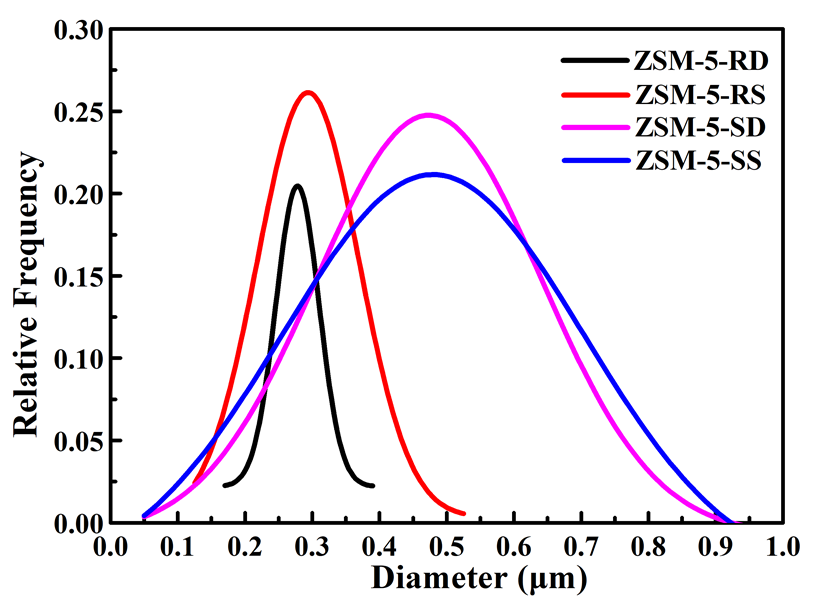
**Fig. 4.** FTIR spectra of the solid aliquots obtained by (A) RPB and (B) STR premix at different intervals.



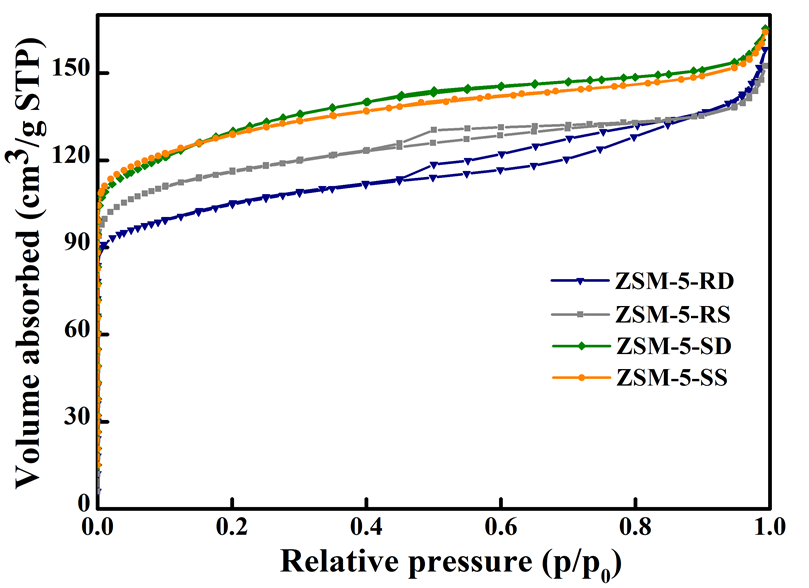
**Fig. 5.** XRD patterns of four ZSM-5 samples obtained by different operating processes.



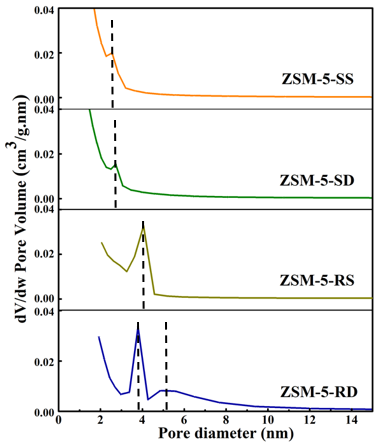




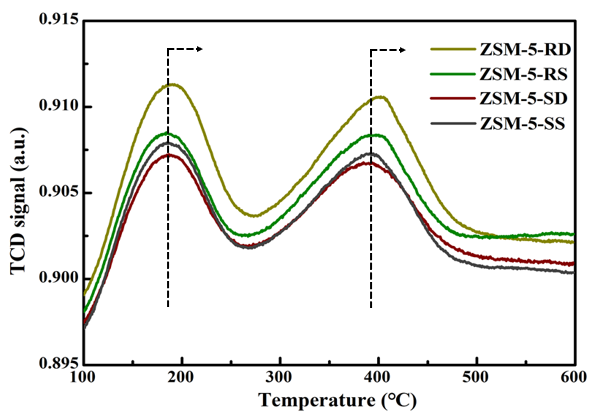
**Fig. 6.** SEM images and particle size distributions of (a) ZSM-5-RD, (b) ZSM-5-RS, (c) ZSM-5-SD, (d) ZSM-5-SS.



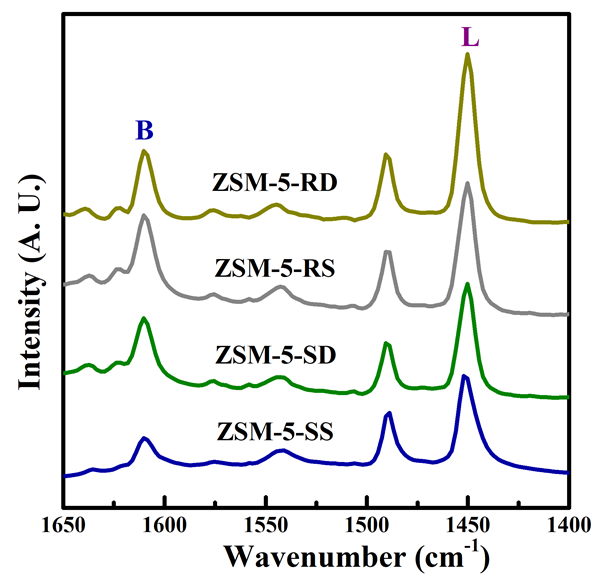
**Fig. 7** N2 adsorption and desorption isotherms of four ZSM-5 samples obtained by different operating processes.



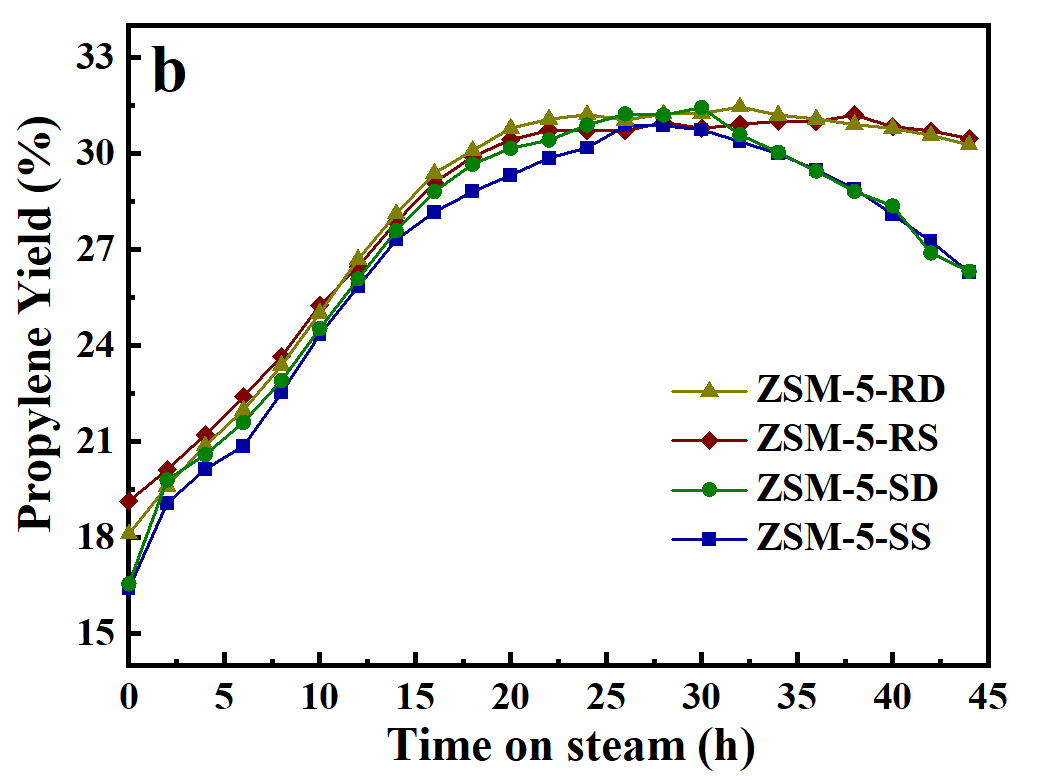
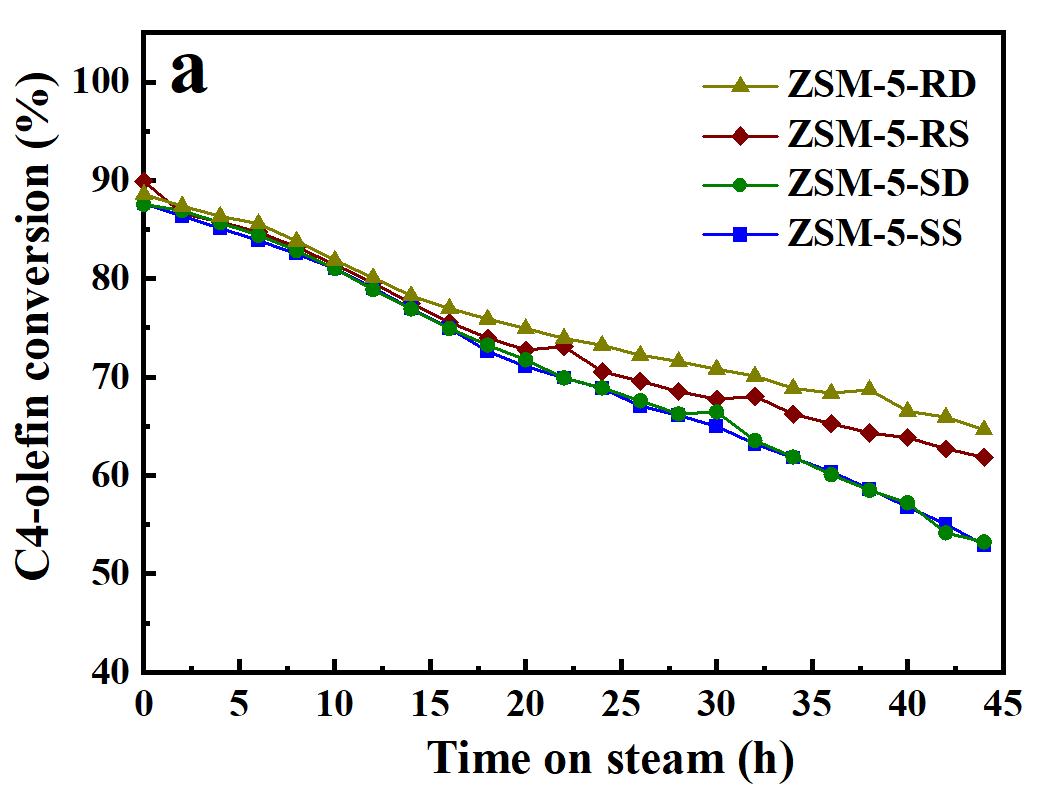
**Fig. 8.** BJH pore size distributions of four ZSM-5 samples obtained by different operating processes.



**Fig. 9.** NH3-TPD profiles of four ZSM-5 samples obtained by different operating processes.



**Fig. 10.** FT-IR spectra after the adsorption of pyridine followed with desorption of ZSM-5 samples obtained by different operating processes.



**Fig. 11.** (a) C4-olefin conversion and (b) propylene yield of four ZSM-5 samples.