

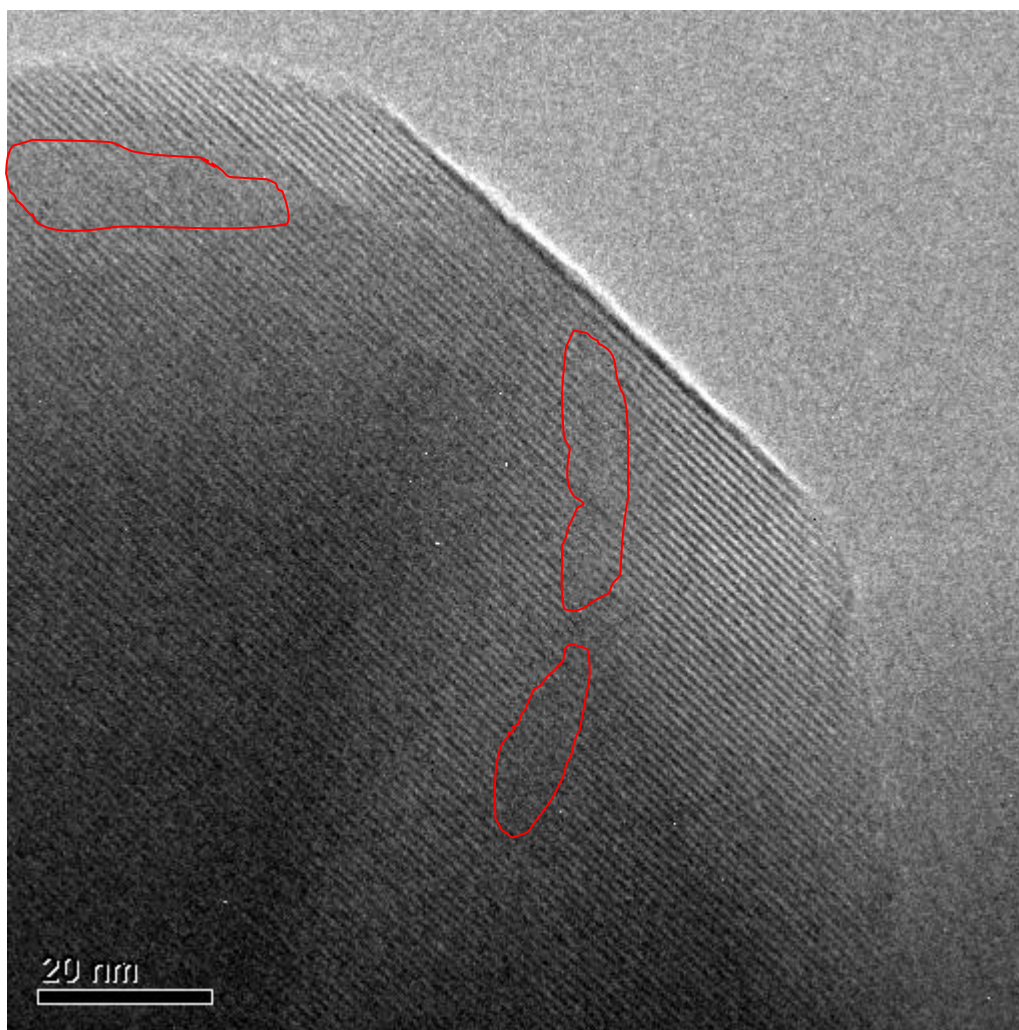
## Mesoporous MFI zeolites with self-stacked morphology templated by cationic polymer

Runwei Wang, Wenting Liu, Shang Ding, Zongtao Zhang\*, Jixue Li\* and Shilun Qiu

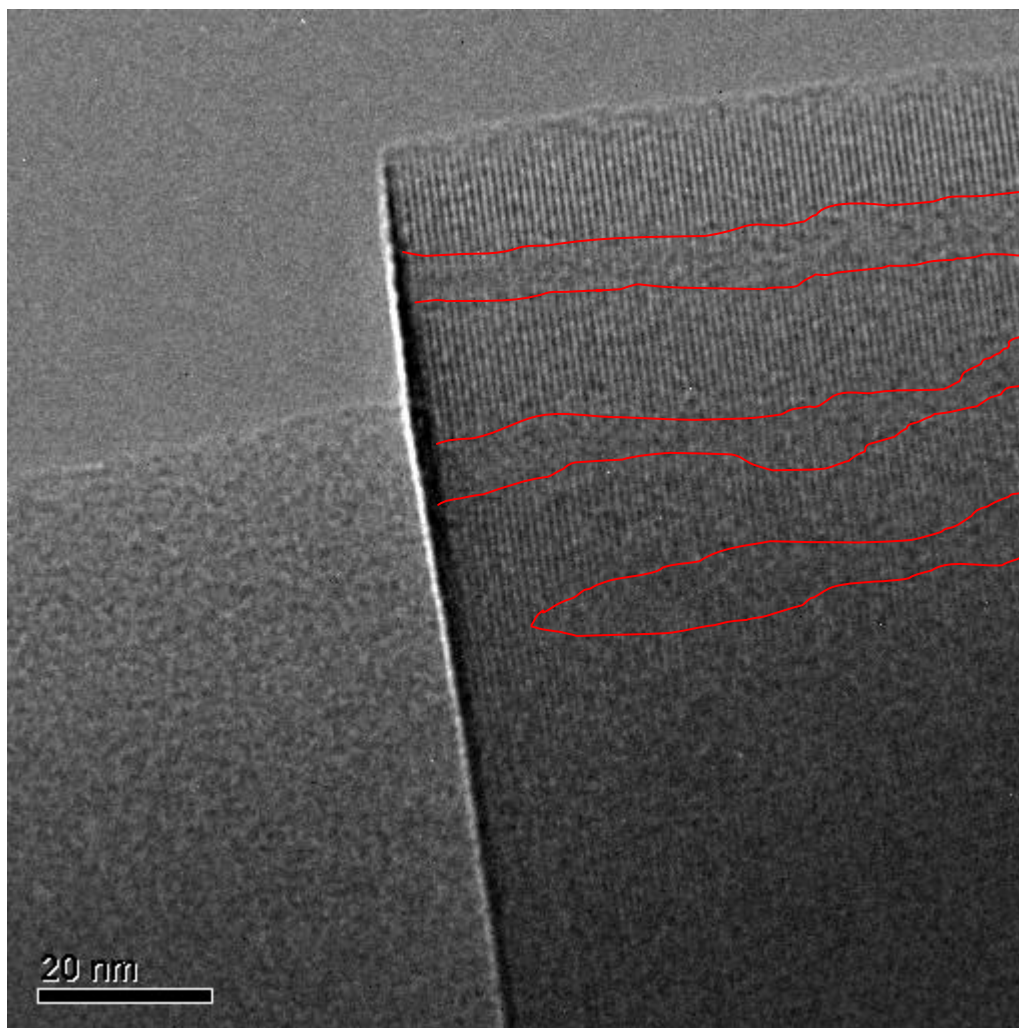
Table 1S Selectivity for products in MTO over M-ZSM-5 and conventional ZSM-5 zeolites for stream at 4h.

| Catalyst | Ethylene(%) | Propylene(%) | Butylene(%) | Others <sup>a</sup> (%) | Propylene/Ethylene |
|----------|-------------|--------------|-------------|-------------------------|--------------------|
| M-ZSM-5  | 12          | 34           | 16          | 38                      | 2.83               |
| ZSM-5    | 9           | 17           | 4           | 70                      | 1.89               |

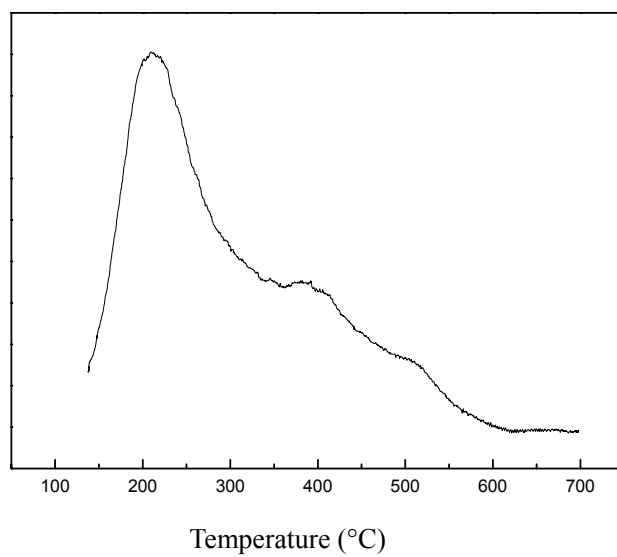
<sup>a</sup>: other products including saturated hydrocarbons, C<sub>5</sub> and higher hydrocarbons.



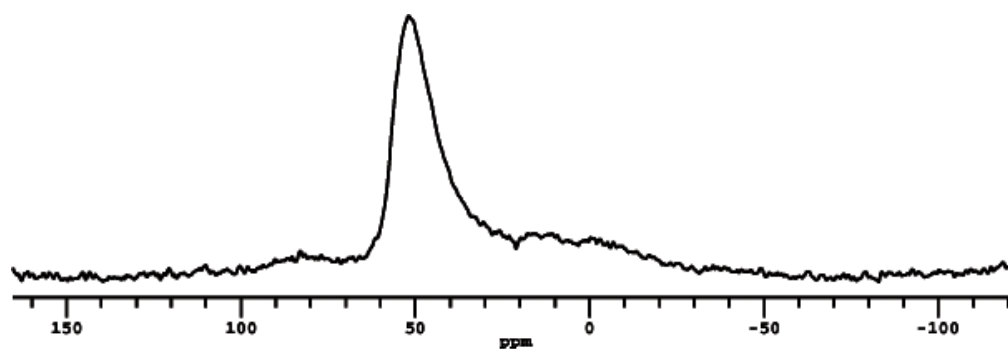
Supporting Figure 1 Enlarge TEM image for H-S-1. Mesopores are shown in the index area.



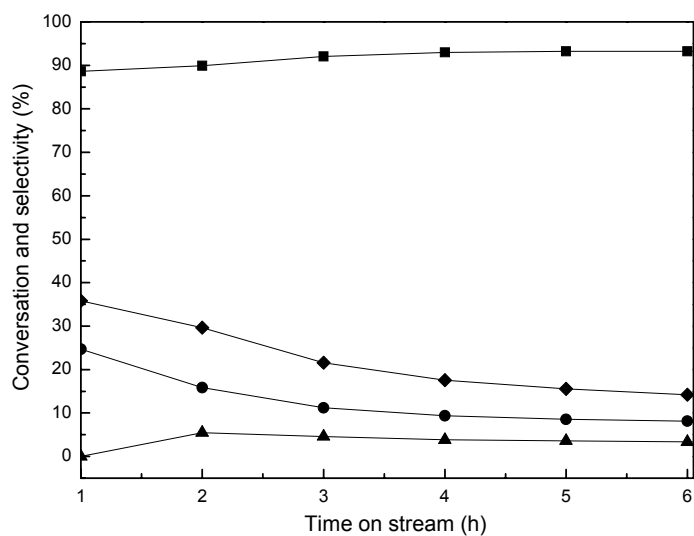
Supporting Figure 2 Enlarge TEM image for H-ZSM-5. Mesopores are shown in the index area.



Supporting Figure 3 TPD-NH<sub>3</sub> curve of H form M-ZSM-5 sample.



Supporting Figure 4  $^{27}\text{Al}$  MAS NMR spectra of calcined M-ZSM-5 sample.



Supporting Figure 5 Conversion of methanol (■) and olefins selectivity for ethylene (●), propylene (◆) as well as butylene (▲) over conventional ZSM-5 in MTO reaction.