

Electronic Supplementary Information

Towards the sustainable production of pyridines via thermo-catalytic conversion of glycerol with ammonia over zeolite catalysts

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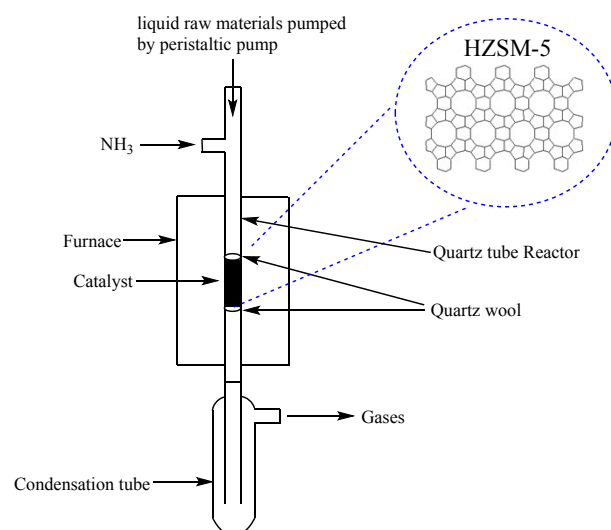


Figure S1: The scheme of the fixed bed reactor for thermo-catalytic conversion of glycerol with ammonia over zeolites.

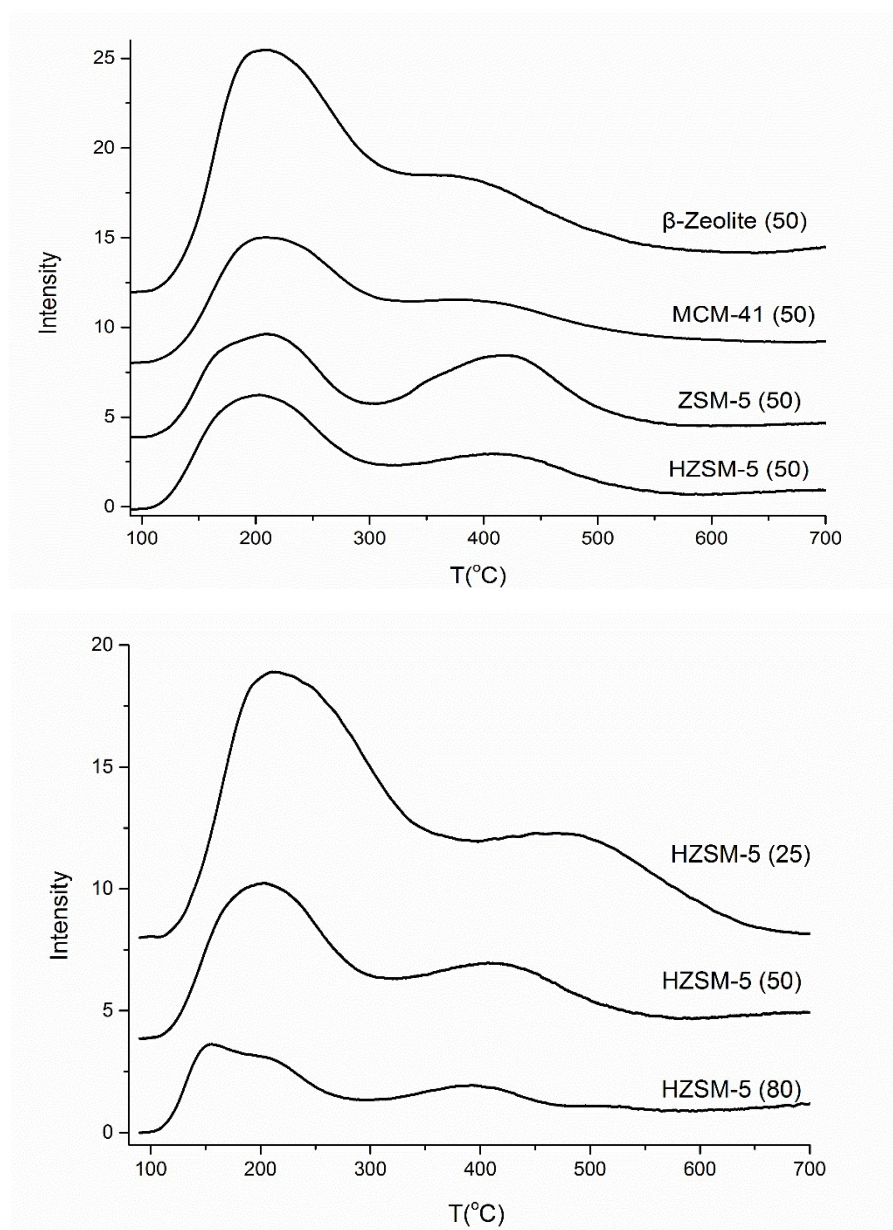


Figure S2: The NH_3 -TPD spectra of different zeolites with different pore structure and different Si/Al ratio.

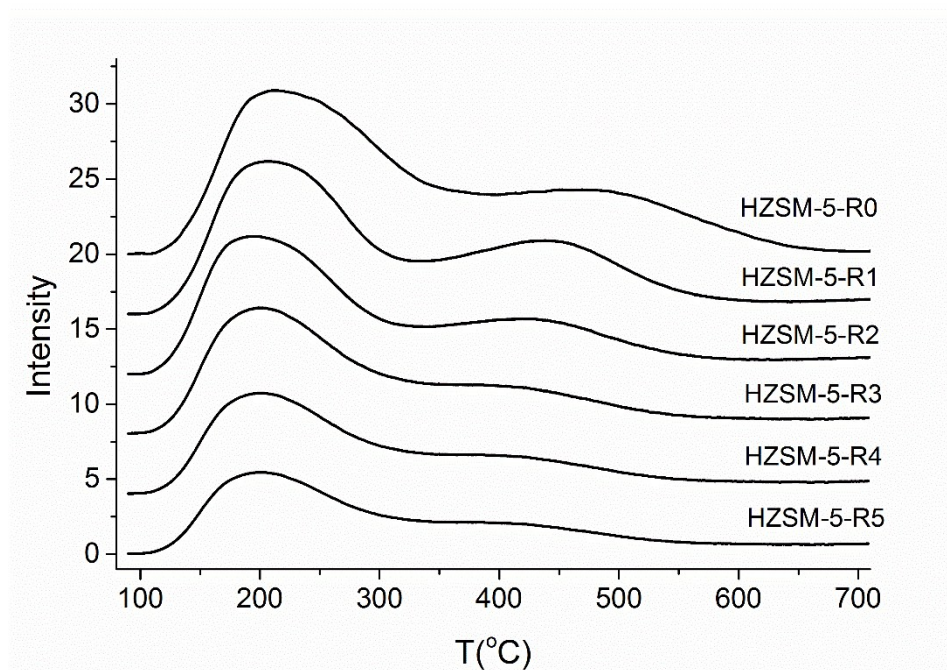


Figure S3. The NH₃-TPD spectra of HZSM-5 (Si/Al=25) after each cycles.

Table S1: The liquid product distribution of glycerol dehydration over zeolites with nitrogen.

Compounds	GC Peak area (%)
Acrolein	53.6
Acetaldehyde	15.2
Acetol	5.3
Acetone	4.6
2-propenol	2.1
Propionaldehyde	2.8
Benzene	6.7
Toluene	3.1
Xylenes	1.5
Others	5.1
Reaction conditions: 500 °C; HZSM-5, Si/Al=25, 0.5g; WHSV, 2 h ⁻¹ ; residence time: 0.5 s; glycerol content, 100%.	