

Supporting information

Control of Al distribution in the CHA-type aluminosilicate zeolites and its impacts on the hydrothermal stability and catalytic properties

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Table S1 The molar compositions of the starting materials

x	Cab-O-Sil M5	FAU (JRC-Z-Y5.5, Si/Al = 2.8, Na _{0.26} (SiO ₂)(AlO ₂) _{0.26})	Al(OH) ₃	NaOH	Total Na ⁺	TMAOH	H ₂ O
0	1	0.0	0.10	0.2	0.200	0.2	30
0.1	0.965	0.035	0.075	0.2	0.225	0.2	10
0.25	0.93	0.070	0.050	0.2	0.250	0.2	10
0.5	0.895	0.105	0.025	0.2	0.275	0.2	10
0.75	0.874	0.126	0.010	0.2	0.290	0.2	10
1.0	0.86	0.14	0.0	0.2	0.300	0.2	10

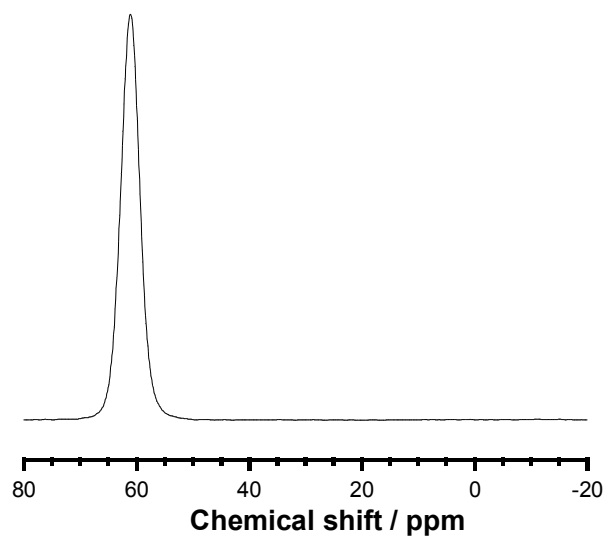
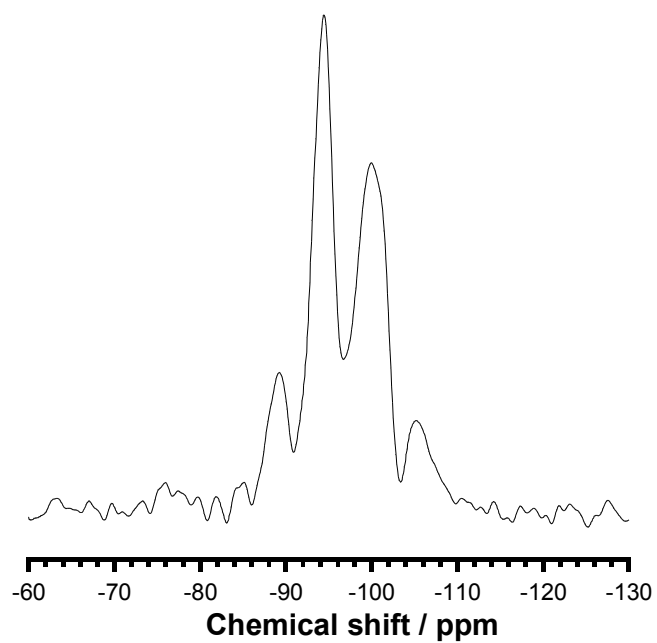


Figure S1

^{29}Si MAS NMR (top) and ^{27}Al MAS NMR (bottom) spectra of the **FAU**-type zeolite ($\text{Si}/\text{Al} = 2.8$) used as an raw material.

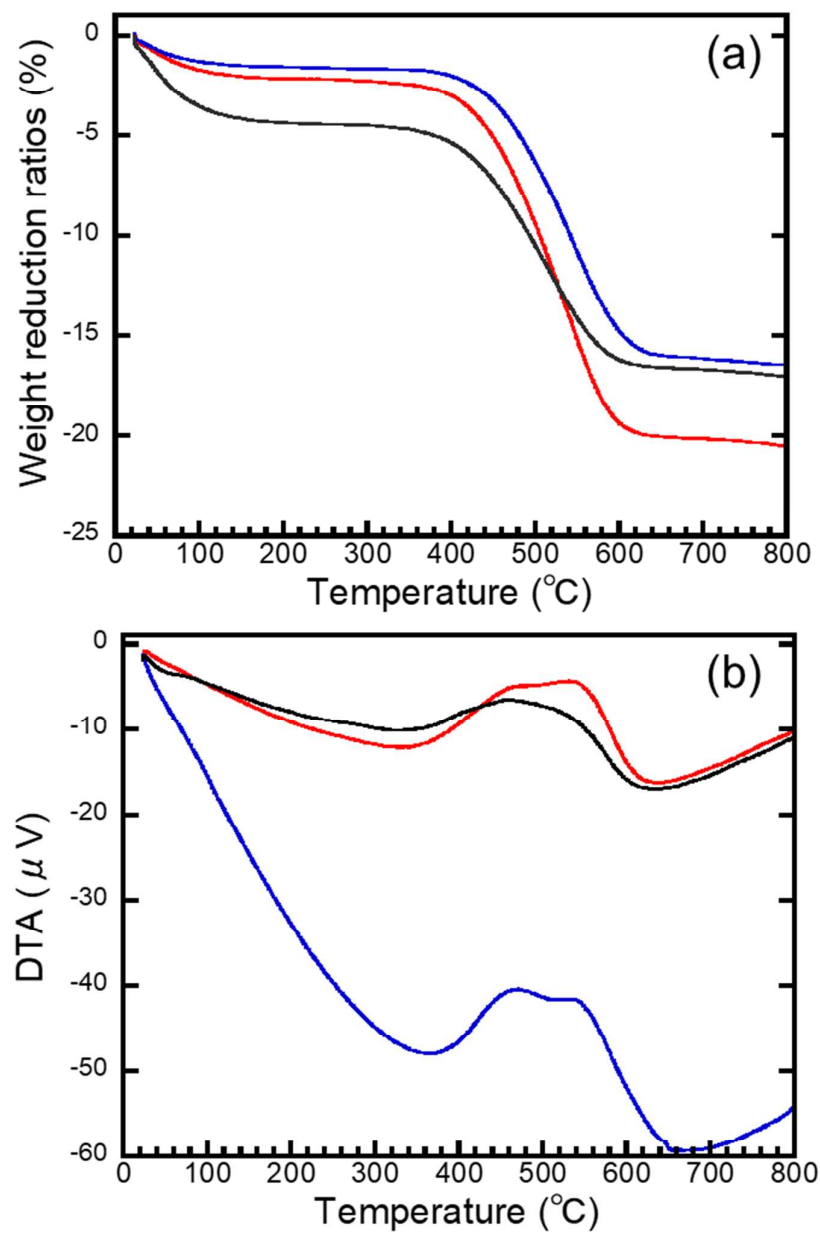


Figure S2

TG-DTA profiles of the CHA-F-0.1, CHA-F-0.25 and CHA-F-0.5 catalysts after the reaction. CHA-F-0.1 (black line), CHA-F-0.25 (blue line), CHA-F-0.50 (red line)