

Electronic Supplementary Information (ESI) for

Controlling microstructure of MFI zeolites with $\text{Mg}(\text{OH})_2$ nanocrystals to improve their catalytic performances

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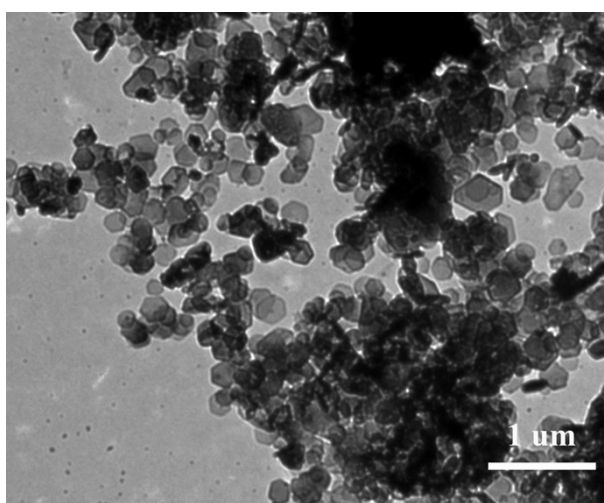


Fig. S1 TEM images of $\text{Mg}(\text{OH})_2$ nanocrystals.

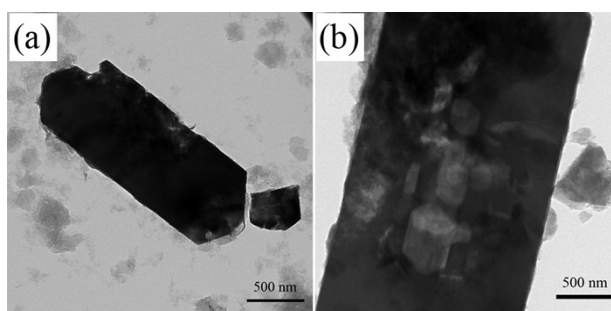


Fig. S2 TEM images of TS-1-0.50Mg samples before and after removing $\text{Mg}(\text{OH})_2$ (a) TS-1-0.50Mg before removing $\text{Mg}(\text{OH})_2$ (b) TS-1-0.50Mg.

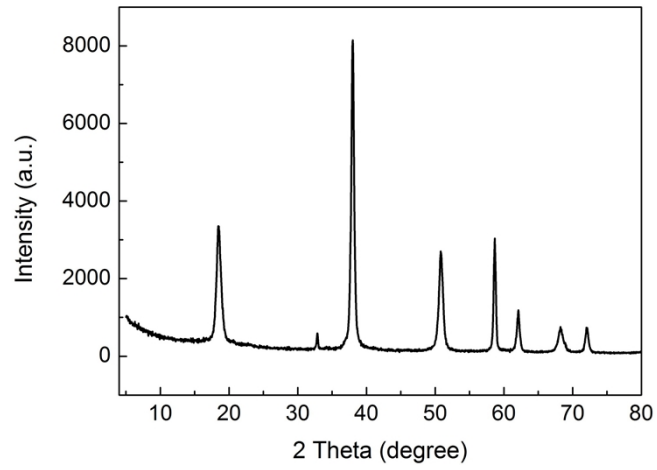


Fig. S3 XRD pattern of $\text{Mg}(\text{OH})_2$ nanocrystals.

Table S1. Chemical compositions of TS-1-xMg and S-1-xMg.

Sample	$n_{\text{Si}}/n_{\text{Ti}}$ (atomic)	$n_{\text{Si}}/n_{\text{Mg}}$ (atomic)
TS-1	51.8	∞
TS-1-0.05Mg	56.4	∞
TS-1-0.10Mg	70.5	∞
TS-1-0.30Mg	84.6	28.4
TS-1-0.50Mg	73.9	32.8
S-1	∞	∞
S-1-0.05Mg	∞	∞
S-1-0.10Mg	∞	113.0
S-1-0.15Mg	∞	33.7
S-1-0.25Mg	∞	4.27