

## Supplementary information

### **Exploration of the dynamic equilibrium between the rare earth location within RE-NaY zeolite and the FCC carbon deposition precursor**

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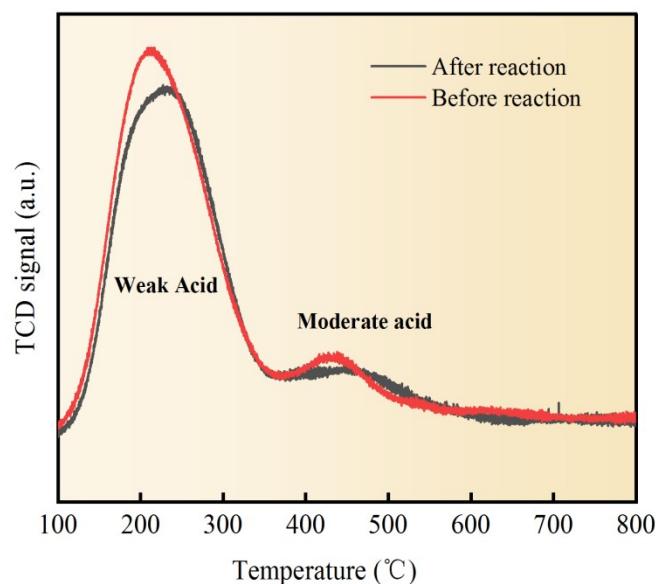
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**Table S1 Quantitative semi-analysis of the peak areas at  $1521\text{ cm}^{-1}$  and  $1488\text{ cm}^{-1}$**

	Peak area at $1521\text{ cm}^{-1}$	Peak area at $1488\text{ cm}^{-1}$
Fig. 12-d	1.35	0.41
Fig. 12-f	0.99	0.36
Fig. 12-j	0.16	0.09
Fig. 12-l	0.066	0.036



**Fig.S1  $\text{NH}_3$ -TPD spectra of before/after reaction of  $\text{Ce}_{0.01}\text{Y-550}$  zeolite sample**