Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information for

The recycle of red mud as excellent SCR catalyst for removal of NO_x

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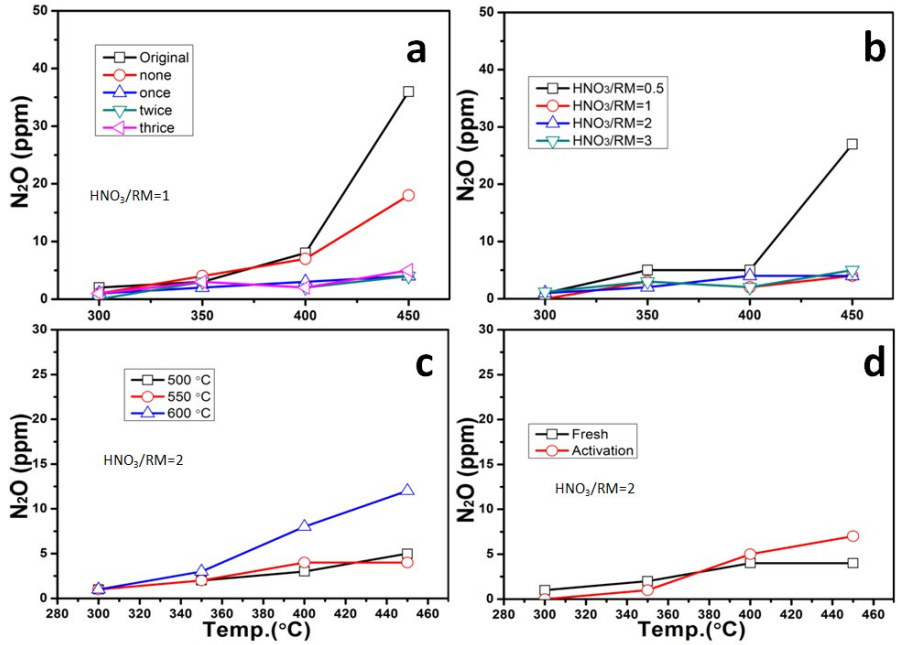


Figure S1. The detected concentration of N_2O during the catalytic test in Figure 1.

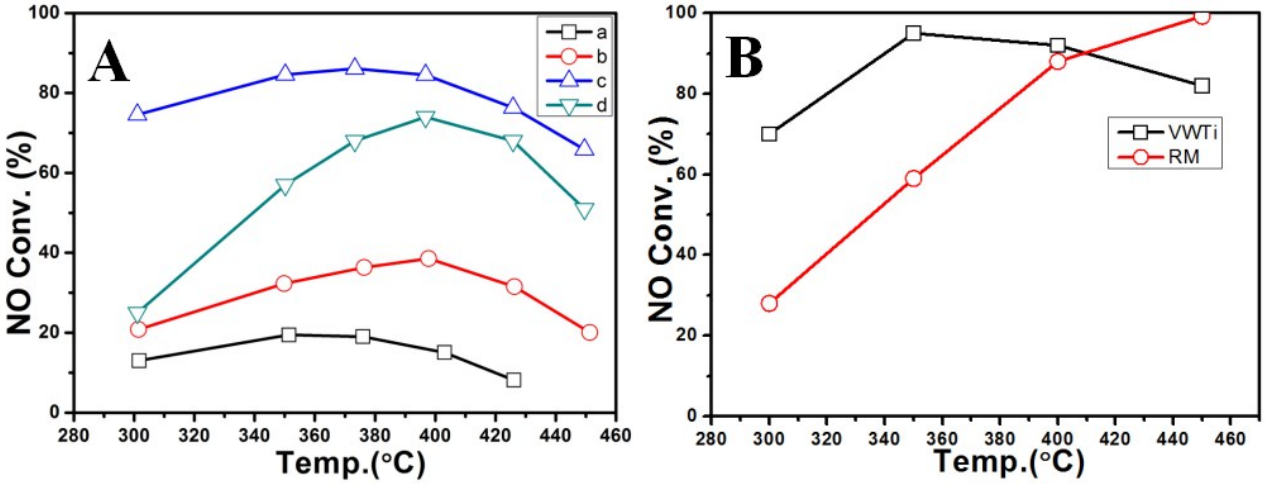


Figure S2. (A) The $DeNO_x$ performance of Fe_2O_3/SiO_2 (a), Fe_2O_3/Al_2O_3 (b), Fe_2O_3/TiO_2 (c), Fe_2O_3/SiO_2-Al_2O_3-TiO_2 (d) and (B) the VWTi catalyst without inactive additives together with RM catalyst.

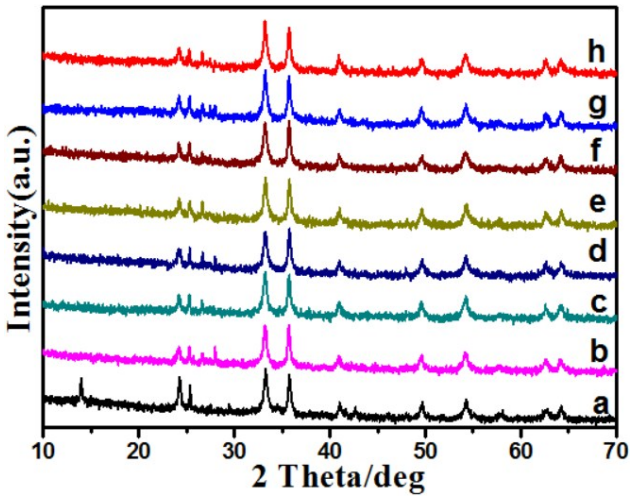
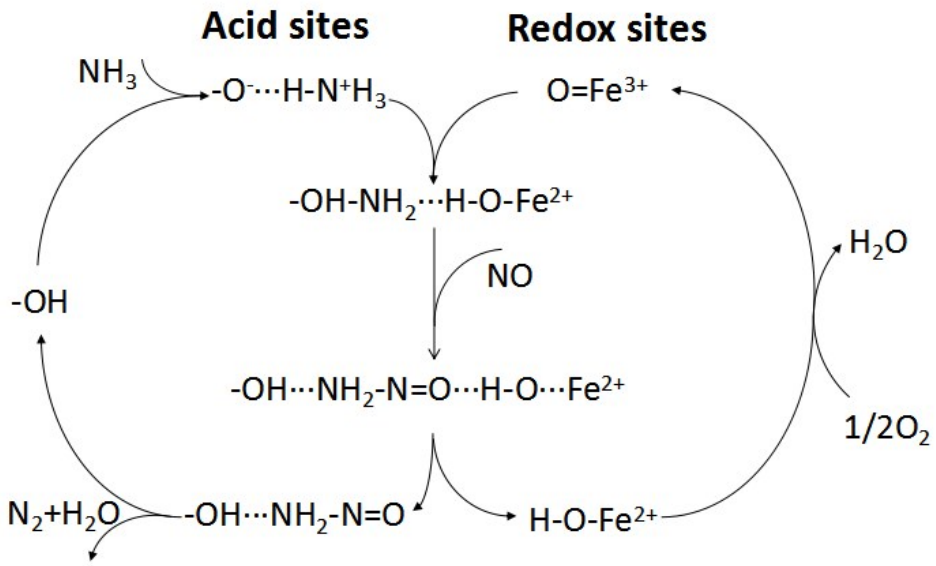


Figure S3. The XRD patterns of different RM samples: the calcinated original RM (a), the acid treated RM catalysts without washing (b), washed three times (c), the RM samples treated with the ratio of HNO_3/RM at 0.5 (d), the RM samples treated with the ratio of HNO_3/RM at 1 (e), the RM samples treated with the ratio of HNO_3/RM at 2 (f), the RM catalysts calcinated at 500 °C (g) and 600 °C (h).



Scheme S1 The possible Eley-Rideal mechanism over RM based catalyst at high temperature.