Supporting Information for

The recycle of red mud as excellent SCR catalyst for removal of NO\textsubscript{x}

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\begin{figure}[h]
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\includegraphics[width=\textwidth]{figureS1.png}
\caption{The detected concentration of N\textsubscript{2}O during the catalytic test in Figure 1.}
\end{figure}
Figure S2. (A) The DeNO\textsubscript{x} performance of Fe\textsubscript{2}O\textsubscript{3}/SiO\textsubscript{2} (a), Fe\textsubscript{2}O\textsubscript{3}/Al\textsubscript{2}O\textsubscript{3} (b), Fe\textsubscript{2}O\textsubscript{3}/TiO\textsubscript{2} (c), Fe\textsubscript{2}O\textsubscript{3}/SiO\textsubscript{2}-Al\textsubscript{2}O\textsubscript{3}-TiO\textsubscript{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\textsubscript{3}/RM at 0.5 (d), the RM samples treated with the ratio of HNO\textsubscript{3}/RM at 1 (e), the RM samples treated with the ratio of HNO\textsubscript{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.