

Supporting Information

for

LaCoO₃ Perovskite in Pt/LaCoO₃/K/Al₂O₃ for the Improvement of NO_x Storage and Reduction Performances

Wu Wen, Xiuyun Wang,* Si Jin and Ruihu Wang*

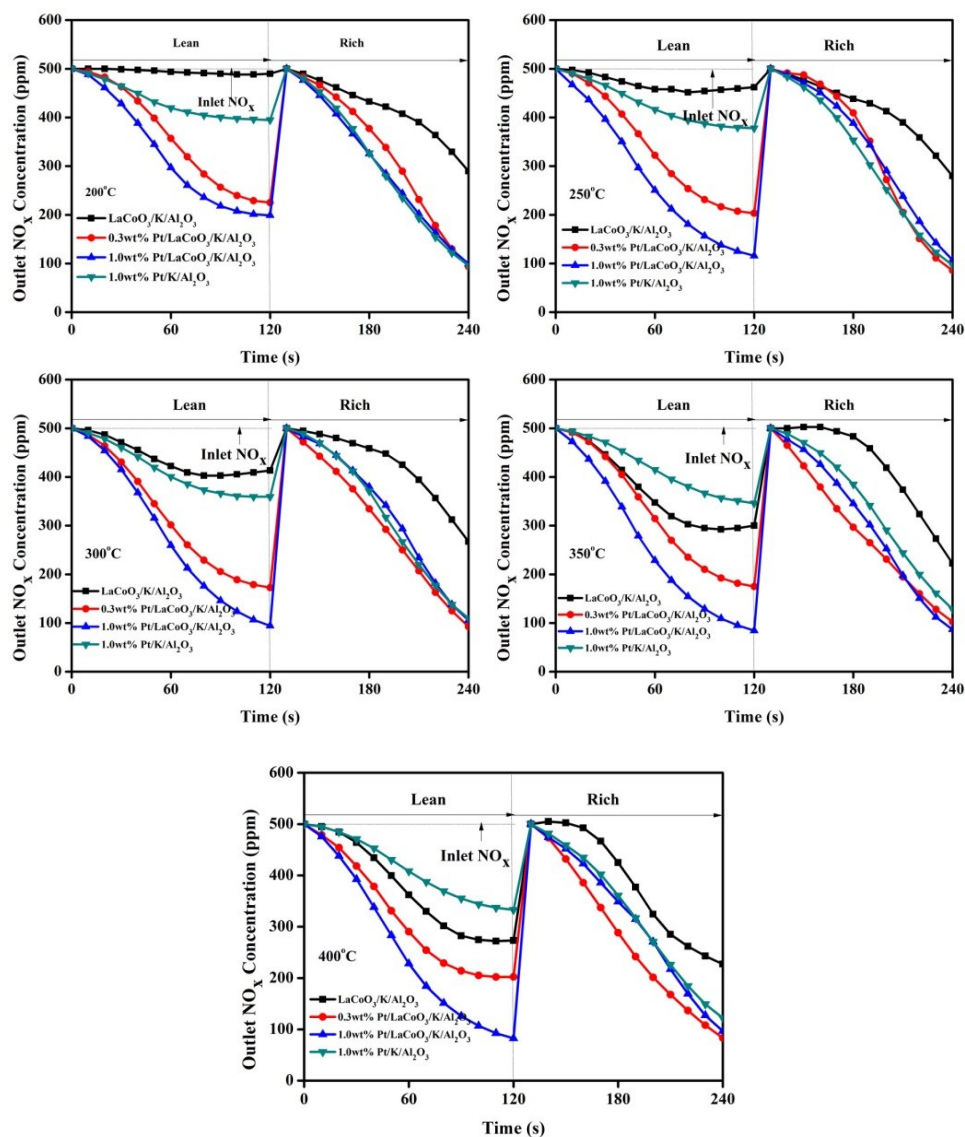


Fig.S1 The outlet NO_x concentration during NSR in xwt% Pt/LaCoO₃/K/Al₂O₃ and 1wt% Pt/K/Al₂O₃.

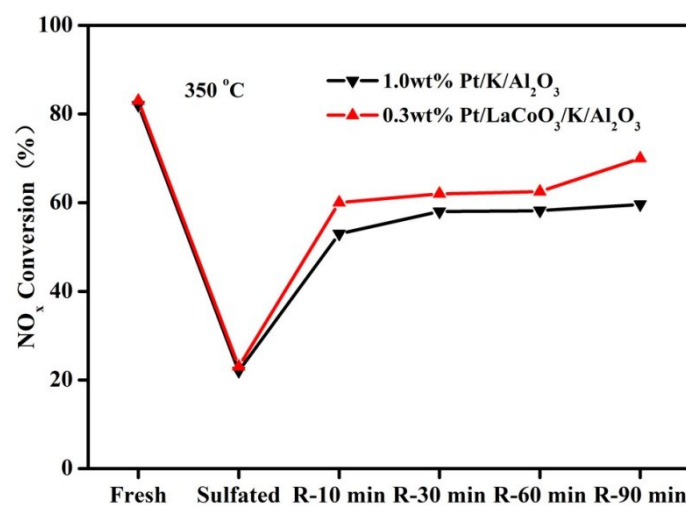


Fig.S2 NO_x conversion of 1.0wt% Pt/K/Al₂O₃ and 0.3wt% Pt/LaCoO₃/K/Al₂O₃ at 350 °C for fresh, sulfated and regenerated (R) catalysts.

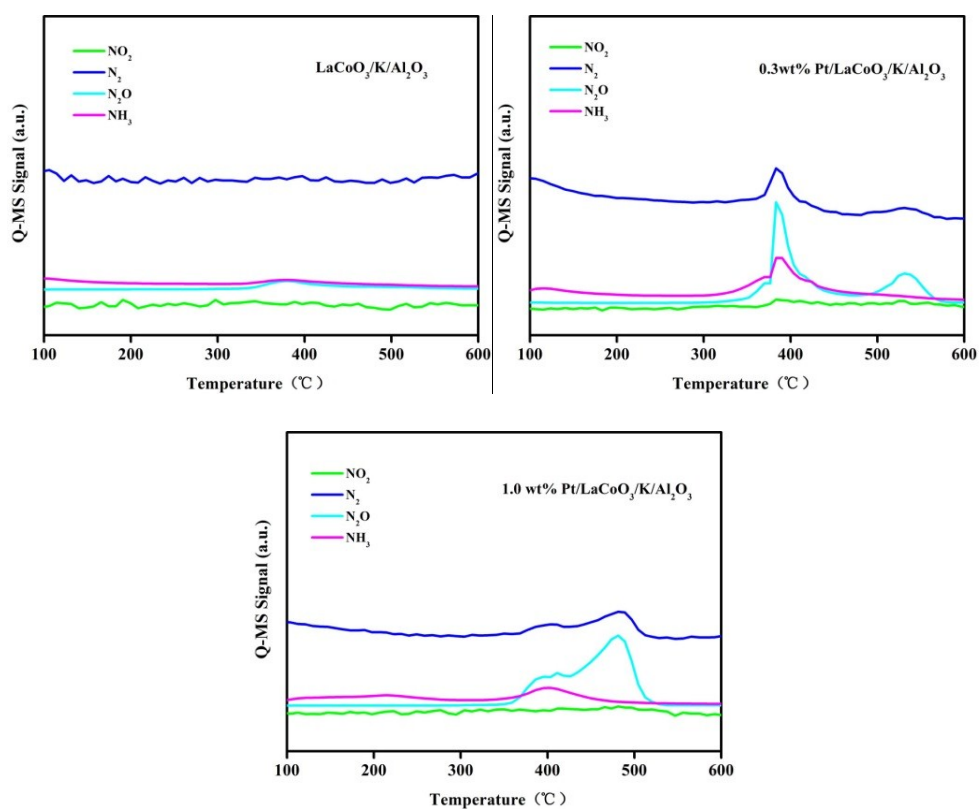


Fig.S3 Q-MS of NO-TPD in xwt% Pt/LaCoO₃/K/Al₂O₃.

Table S1 N₂ selectivity of 0.3 wt%Pt/LaCoO₃/K/Al₂O₃ and 1.0 wt%Pt/K/Al₂O₃ at 200-400 °C.

Samples	N ₂ selectivity (%)				
	Temperature (°C)				
	200	250	300	350	400
0.3 wt%Pt/LaCoO ₃ /K/Al ₂ O ₃	98.3	94.1	90.0	89.5	88.7
1.0 wt%Pt/K/Al ₂ O ₃	92.0	94.2	88.0	84.0	82.4

Table S2 NSC of fresh, sulfated and regenerated (R) catalysts at 350 °C under lean conditions (storage time = 120 s).

Catalyst	NSC (μmol/g)					
	Fresh	Sulfated	R-10 min	R-30 min	R-60 min	R-90 min
0.3wt% Pt/LaCoO ₃ /K/Al ₂ O ₃	35.0	23.2	34.0	34.5	34.3	33.7
1.0wt% Pt/K/Al ₂ O ₃	16.6	5.6	8.2	9.2	8.1	8.0