

Supporting Information for

In-situ X-ray Diffraction Study of Co-Al Nanocomposites as Catalysts for Ammonia Decomposition

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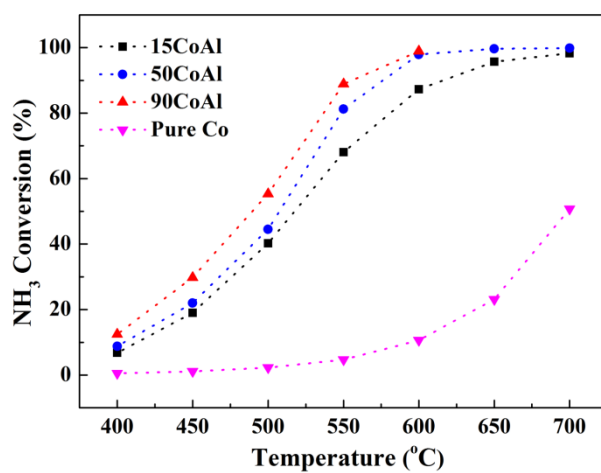


Figure S1. Temperature dependent NH_3 conversion curves measured at a GHSV of 18,000 $\text{cm}^3 \text{g}_{\text{cat}}^{-1} \text{h}^{-1}$ in the second cycle.

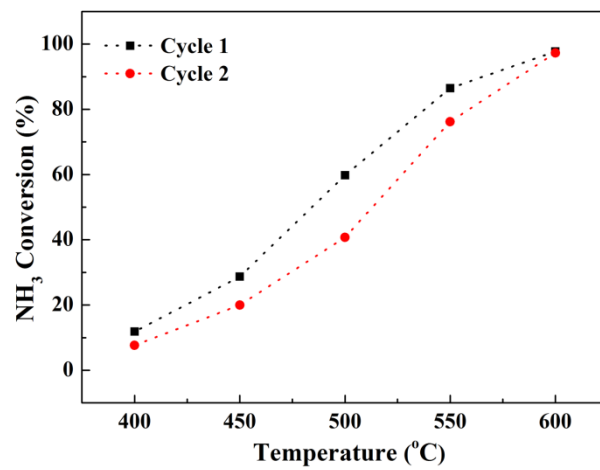


Figure S2. NH₃ conversion curves measured for 95CoAl in the first and second cycles with a GHSV of 18,000 cm³g_{cat}⁻¹h⁻¹.

Table S1. Ammonia conversion values reported for different catalysts measured at 600 °C.

Catalyst	GHSV (NH ₃ cm ³ g ⁻¹ h ⁻¹)	Conversion (%)	Reference
90CoAl	18000	100	This study
Ni/SBA-15	30000	96	[16]
Co/CNTs	5000	50	[17]
CoFe ₅ /CNTs	36000	50	[18]
Fe/CMK-5	7500	96	[19]
Fe/SiO ₂	15000	65	[20]
Mo ₂ C	36000	71	[22]
MoO ₃	15000	91	[25]