

Direct Decomposition of NO over Co-Mn-Al mixed oxides: effect of Ce and/or K promoters

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Table S1: Binding energies (eV) of core electron levels (adjusted to C 1s = 284.8 eV)

Sample	C 1s	Co 2p	Mn 2p _{3/2}	Al 2p	Ce 3d	K 2p	O 1s
Bare	284.8;288.3	780.6;786.4;782.6	642.2	73.4	None		530.0;531.0
Bare-Ce	284.8;288.5	780.3;786.2;782.5	641.9	73.3	882,7; 916,6		529.6;531.3
Bare-Ce,K	284.8;288.3	780.4;786.3;782.5	642.0	73.2	882,6; 917,6	292.7	529.5;531.2
Bare-Ce+Co	284.8;288.5	780.2;786.1;782.3	641.9	73.3	882,4;916,8		529.4;531.2
Bare-Ce,K+Co,K	284.8;288.3	780.1;786.0;782.2	641.9	73.1	882,4;916,8	292.6	529.3;531.2

Table S2: Surface concentrations of metals determined by XPS (wt. %)

Sample	Co 2p	Mn 2p	Al 2p	Na 1s	Ce 3d	K 2p
Bare	62.6	16.4	12.6	0.6	0.0	0.0
Bare-Ce	27.6	4.9	5.7	0.5	32.8	0.0
Bare-Ce,K	28.3	4.9	5.8	0.0	28.1	7.9
Bare-Ce+Co	28.7	5.4	4.8	0.4	41.4	0.0
Bare-Ce,K+Co,K	34.3	5.8	4.2	0.4	26.6	12.0

Figure S1 Deconvoluted XPS spectra of the individual elements of the catalysts

