

# Total Catalytic Oxidation of Ethanol over MnCoAl Mixed Oxides Derived from Layered Double Hydroxides: Effect of the Metal Ratio and the Synthesis Atmosphere Conditions

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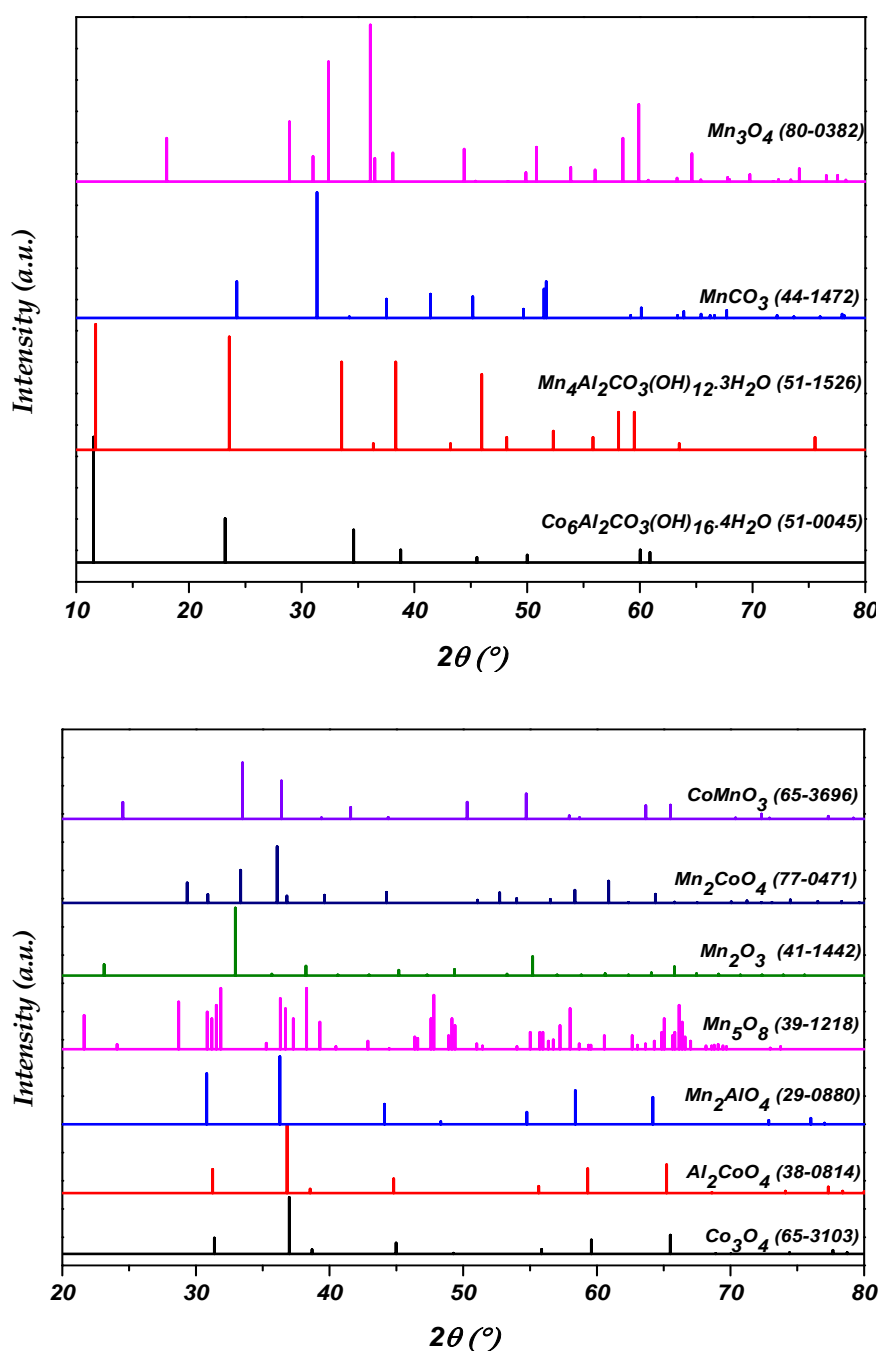
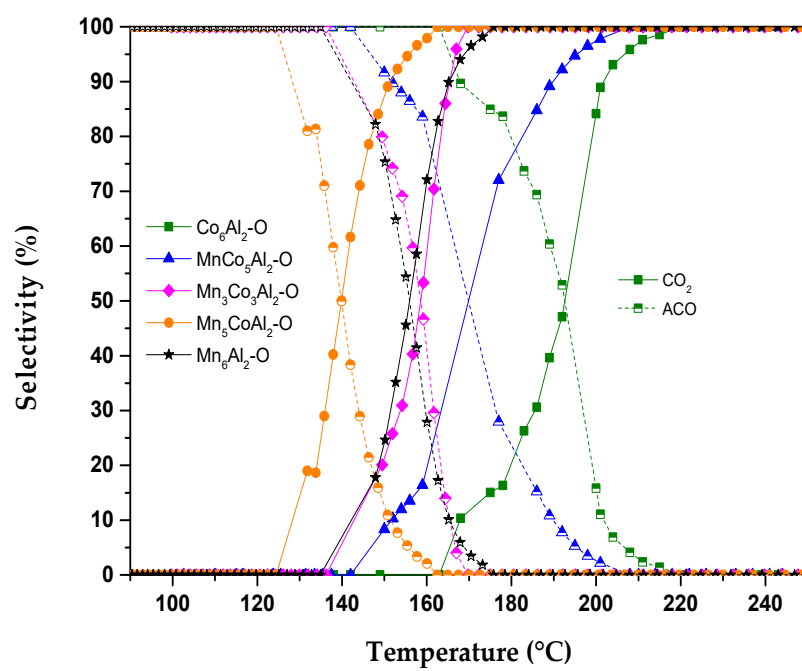
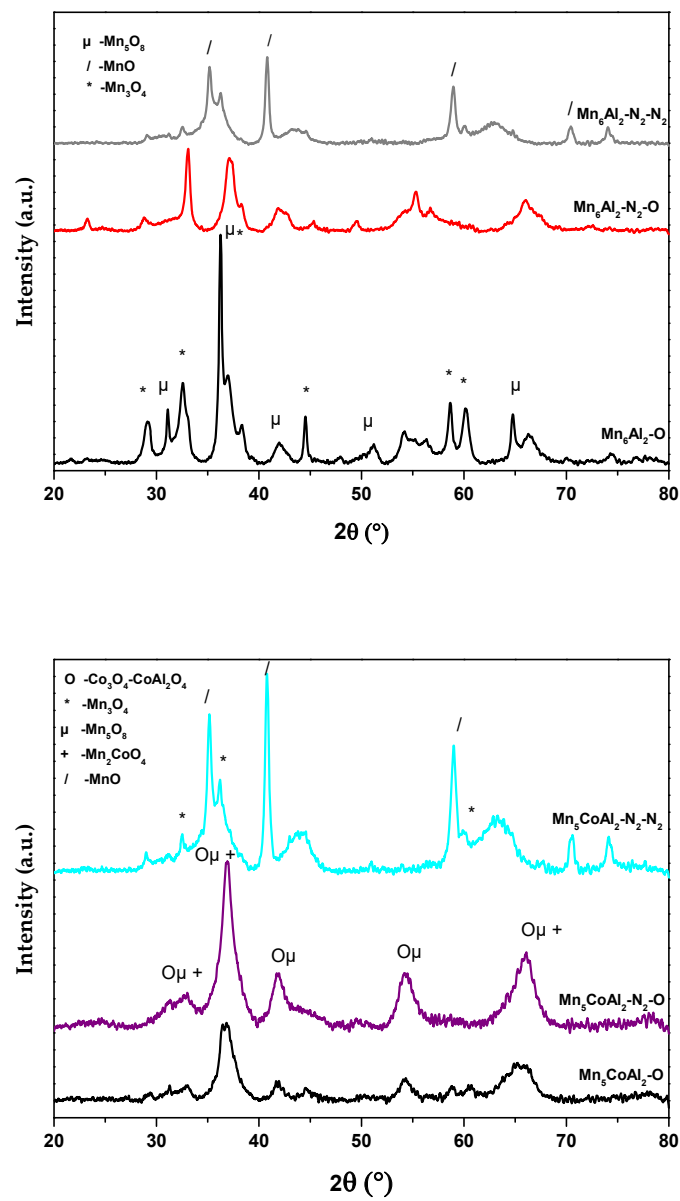


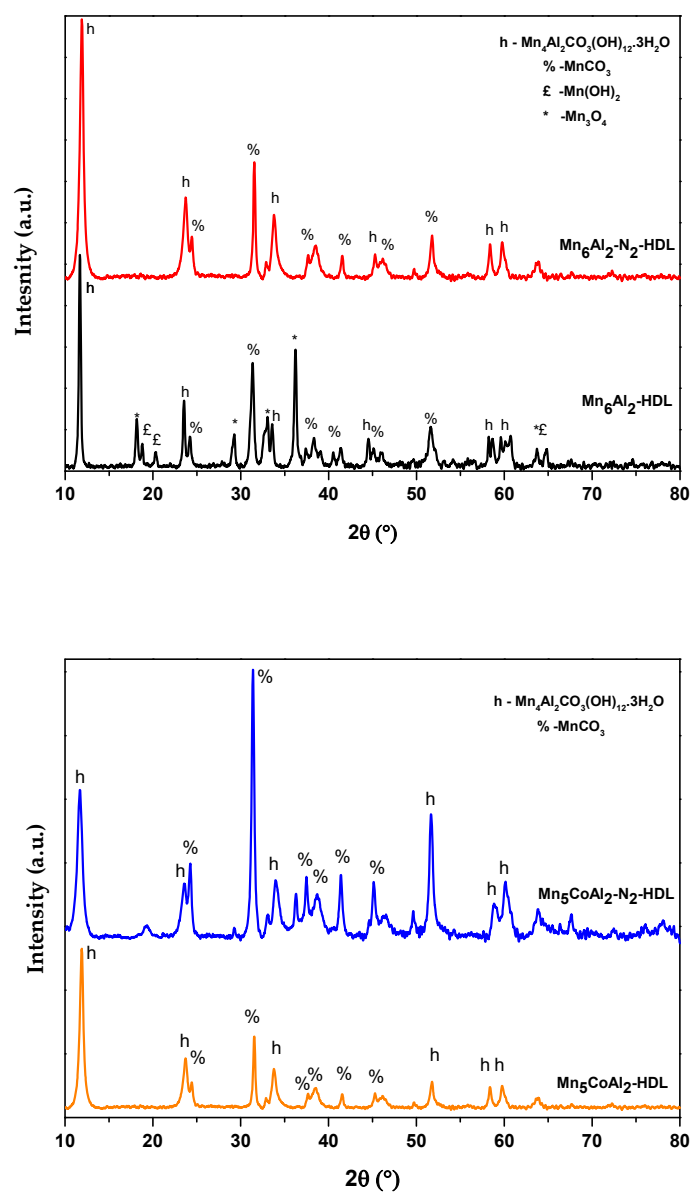
Figure S1. JCPDS files of the identified phases.



**Figure S2.** Products selectivity of the ethanol oxidation over Mn<sub>x</sub>Co<sub>6-x</sub>Al<sub>2</sub> mixed oxides catalysts.



**Figure S3.** XRD patterns of the  $\text{Mn}_x\text{Co}_{6-x}\text{Al}_2\text{-O}$  ( $x=6$  or  $5$ ) mixed oxides, effect of the heat treatment atmosphere.



**Figure S4.** XRD patterns of the  $\text{Mn}_x\text{Co}_{6-x}\text{Al}_2\text{-LDH}$  ( $x=6$  or  $5$ ) LDH, effect of the synthesis atmosphere.