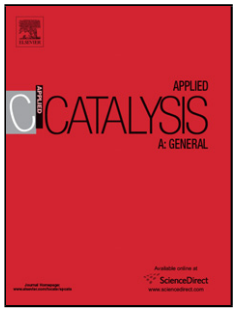

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PII: S0926-860X(17)30577-X
DOI: https://doi.org/10.1016/j.apcata.2017.12.022
Reference: APCATA 16502

To appear in: *Applied Catalysis A: General*

Received date: 19-9-2017
Revised date: 23-12-2017
Accepted date: 27-12-2017

Please cite this article as: Li D, Xu S, Song K, Chen C, Zhan Y, Jiang L, Hydrotalcite-derived Co/Mg(Al)O as a stable and coke-resistant catalyst for low-temperature carbon dioxide reforming of methane, *Applied Catalysis A, General* (2010), https://doi.org/10.1016/j.apcata.2017.12.022

Hydrotalcite-derived Co/Mg(Al)O as a stable and coke-resistant catalyst for low-temperature carbon dioxide reforming of methane

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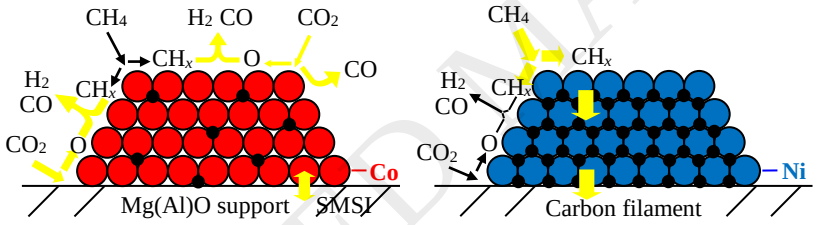
Graphic abstract



Highlights

- ► Co catalyst shows a high and stable activity for CH_4-CO_2 reforming at 773 K.
- ► Co catalyst shows much higher stability and coke-resistance than Ni catalyst.
- ► Initial coking rate on Co catalyst was about 1/20 times that on Ni catalyst.
- ► Lower activity of Co for CH_4 decomposition contributes to the high coke-resistance.
- ► Higher oxophilicity of Co promotes the CO_2 activation and the carbon elimination.