

Supplemental Information

Size-dependent metal-support interactions in Co/CeO₂-Y₂O₃ catalysts for enhanced methane dry reforming

Yanhui Long^{a,b}, Liboting Gao^a, Yilin Zhang^a, Wee-Liat Ong^b, Hao Zhang^{a,c,d*}, Yan jianhua^{a,c,d}

^a State Key Laboratory of Clean Energy Utilization, Zhejiang University, Hangzhou 310027, China.

^b College of Energy Engineering, ZJU-UIUC, Zhejiang University, Hangzhou 310027, China.

^c Ningbo Innovation Center, Zhejiang University, Ningbo 315100, China.

^d Inner Mongolia Daqingshan Laboratory, Hohhot 017000, China

*Corresponding author: State Key Laboratory of Clean Energy Utilization, Zhejiang University, Hangzhou 310027. Email:

zhang_hao@zju.edu.cn

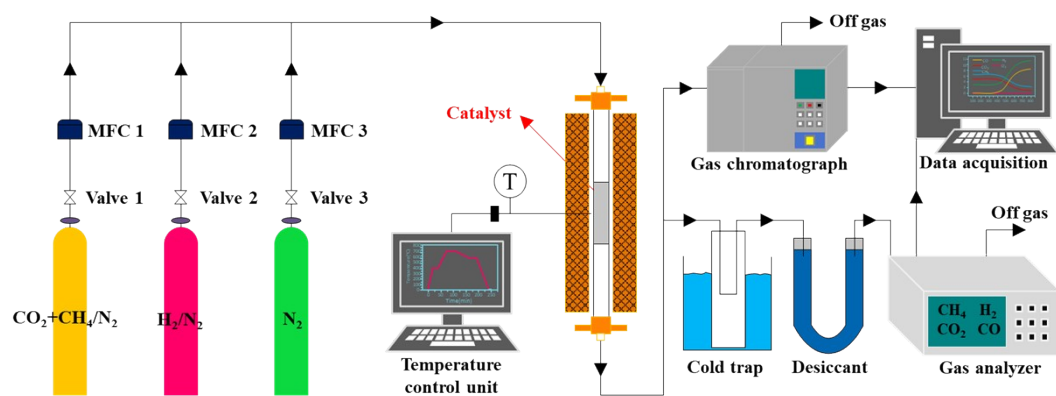


Fig.S1 Schematic of the experimental system.

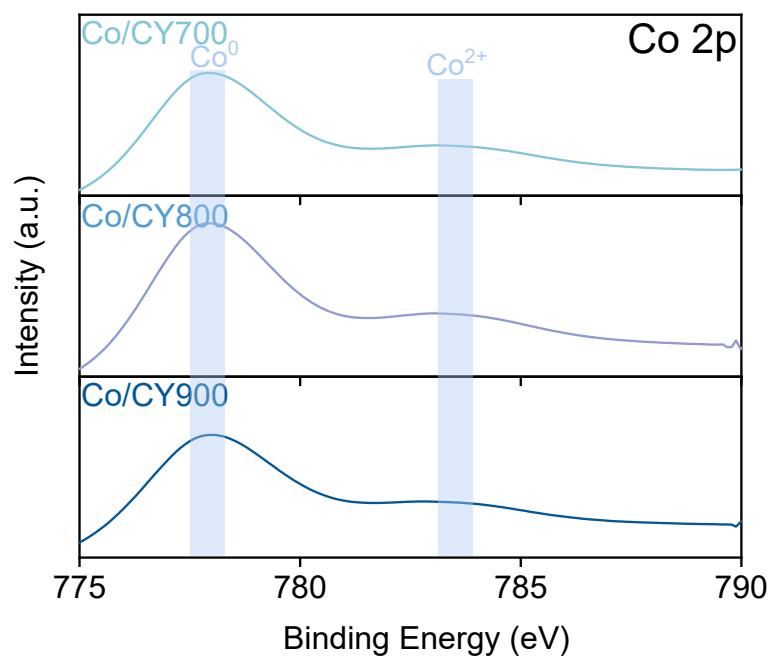


Fig. S2 XPS analysis of the Co 2p peaks of reduced Co/CY_x.

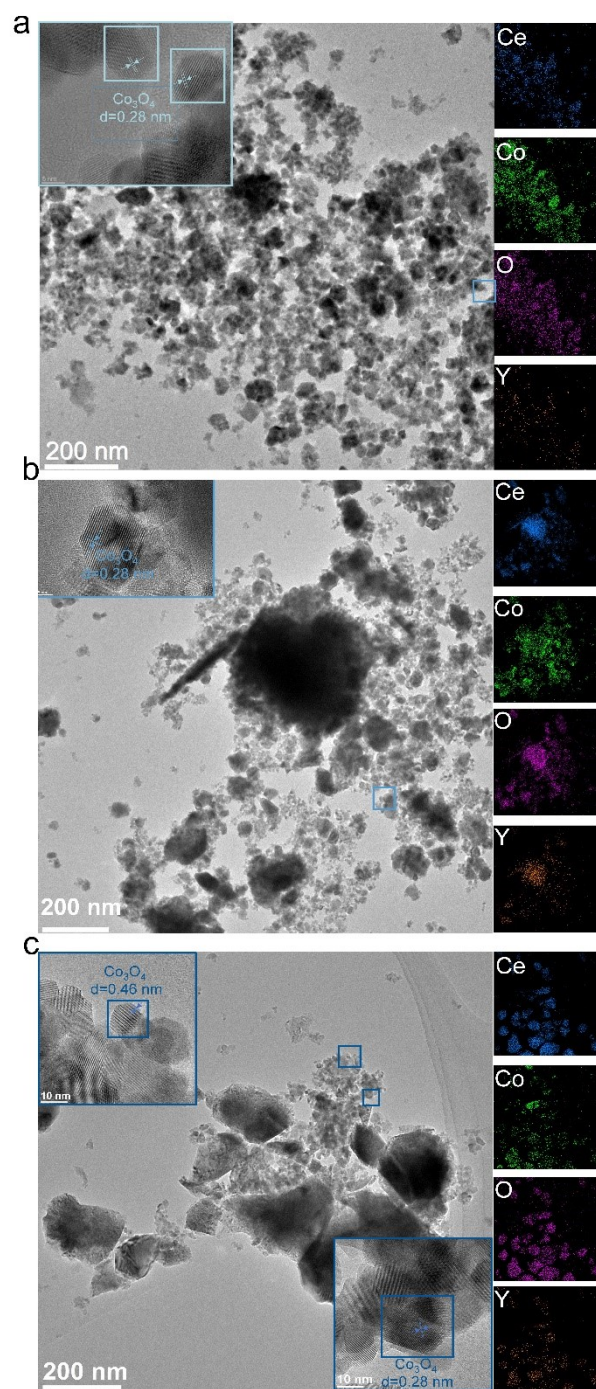


Fig. S3 TEM images and STEM-EDX images of fresh Co/CY_x: **a** Co/CY700, **b** Co/CY800, **c** Co/CY900.

Table S1 CO pulse of various samples.

Sample	Co content (wt.%)	Unit ads. Volume (ml/g)	Determined dispersion of Co (%)
Co/CY700	2.3	0.98	11.4
Co/CY800	2.2	1.42	17.1
Co/CY900	2.2	1.30	15.6