Dispersion and Stabilization of Supported Layered Double Hydroxide-based Nanocomposites on V-based Catalysts for Nonoxidative Dehydrogenation of Isobutane to Isobutene

Fanji Liu[1], Mingxun Han[1], Xiangxiang Li[1], Xiqing Zhang[1], Yanting Wang[1], Yanhong Xu[2], Lihong Zhang[1,*]

1 *Department of Catalysis Science and Technology and Tianjin Key Laboratory of Applied Catalysis Science & Technology, School of Chemical Engineering and Technology, Tianjin University, Tianjin 300350, P.R. China*

2 *School of Chemical & Environmental Engineering, Pingdingshan University, Henan Province, Pingdingshan 467000, P.R. China*

*****Corresponding authors: zlh_224@163.com (Lihong Zhang)*

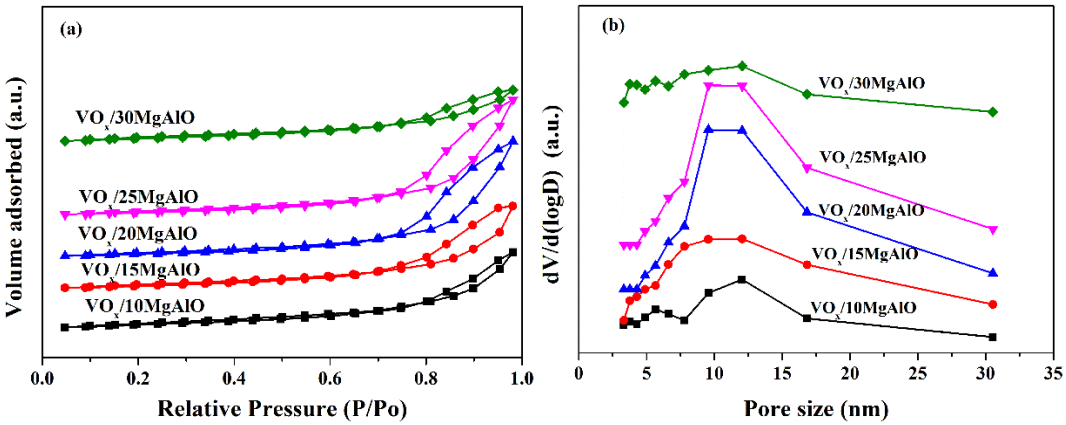

Figure S1. Low temperature N_2 adsorption-desorption isotherms (a) and pore size distribution curves (b) of the calcined catalysts VO_x/mMgAlO (m = 10, 15, 20, 25, 30).

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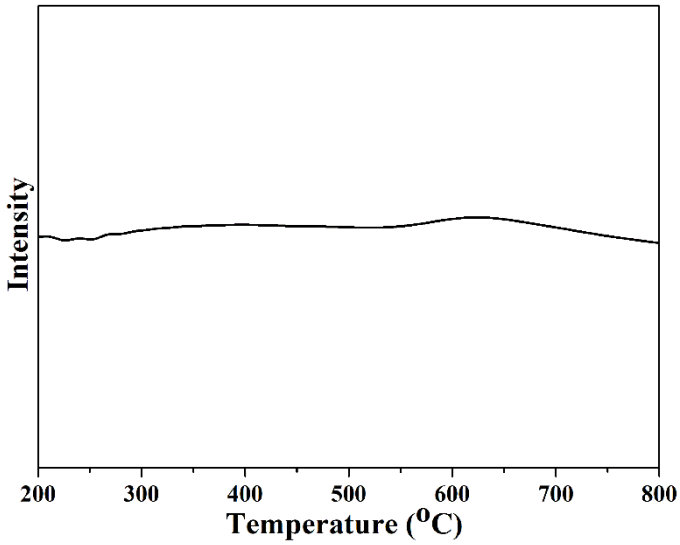

Figure S2. Temperature-programmed reduction (H_2-TPR) profiles for the bare support

Table S1. TPR data of the calcined catalysts VO_x/mMgAlO (m = 10, 15, 20, 25, 30).

Catalysts	Peak temperature (°C)	Peak area (%)	Hydrogen consumed ($mmol^3/g$)	Average oxidation state of vanadium
VO_x/10MgAlO	460	27	0.16	4.67
	526	69	0.41	3.82
	612	3	0.02	3.78
VO_x/15MgAlO	465	30	0.17	4.66
	535	67	0.38	3.90
	624	3	0.02	3.86
VO_x/20MgAlO	490	35	0.17	4.62
	554	62	0.33	3.95
	623	3	0.02	3.92
VO_x/25MgAlO	490	35	0.16	4.63
	554	62	0.32	3.98
	629	3	0.02	3.95
VO_x/30MgAlO	492	32	0.16	4.67
	552	66	0.32	4.01
	625	2	0.01	3.99