

Supplement information

**Table S1. The catalytic performance of the catalyst without Ti doping(Cu-MgO/SBA-15)**

Reaction time(h)		4	6	8	10	12	14
Conv.(%)	methanol	85.4	80.3	73.3	68.2	63.0	56.6
	ethanol	97.7	97.6	98.3	97.9	96.5	94.7
Sel.(%)	AD	7.78	8.33	8.07	11.8	15.7	21.1
	PD	6.33	7.41	7.07	8.30	9.89	12.0
	IBA	13.4	23.2	35.0	26.3	20.7	15.9
	MA	4.29	3.98	3.23	2.65	2.81	2.31
	EA	0.29	0.23	0.64	4.18	6.96	9.46
	POL	1.74	2.07	1.42	1.36	1.66	2.08
	IBOL	3.60	6.52	6.81	3.38	2.56	1.99

360 °C, 0.1MPa, 3 mL · h<sup>-1</sup> · g<sup>-1</sup>, methanol : ethanol=3:1