

Supporting Information

Catalytic oxidation of toluene over porous Co₃O₄-supported ruthenium catalyst

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Table S1. The BET surface areas and pore diameters of the catalysts.

Catalyst	BET surface area (m ² /g)	Pore diameter (nm)
Ru/Co ₃ O ₄ -MOF	80.0	4.9
Co ₃ O ₄ -MOF	94.1	4.9
Ru/Co ₃ O ₄ -B	61.4	12.4
Co ₃ O ₄ -B	66.2	12.4

Table S2. The XPS data of the Ru-based catalysts.

Catalyst	Ru ⁰ (at.%)	Ru ⁴⁺ (at.%)	Ru ⁶⁺ (at.%)	Ru/Co
Ru/Co ₃ O ₄ -MOF	2.9	64.7	32.4	0.038
Ru/Co ₃ O ₄ -B	3.7	55.6	40.7	0.013

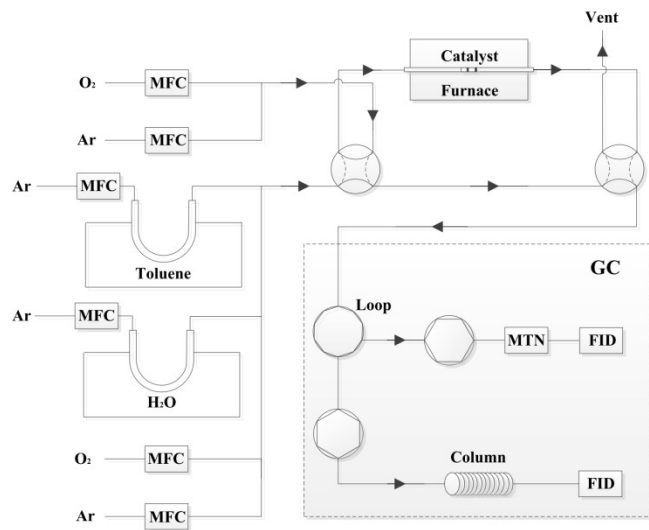


Fig. S1 The catalytic evaluation platform