

Novel Transition bimetal-organic frameworks: Recyclable catalyst for the oxidative coupling of primary amines to imines at mild conditions

Danhua Ge, Genlong Qu, Xinming Li, Kaiming Geng, Xueqin Cao*, and Hongwei

Gu*[a]

Supporting Information

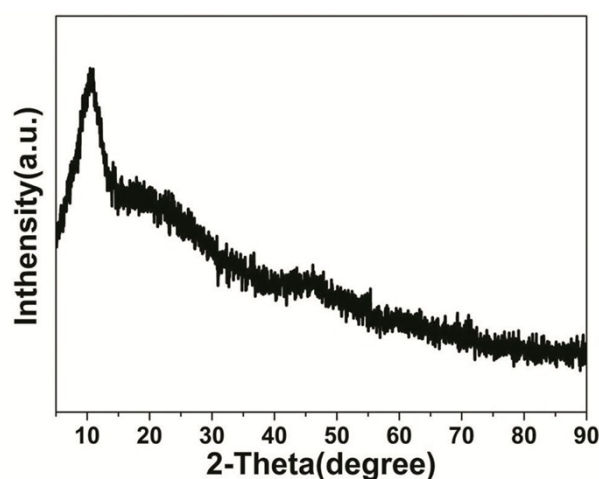


Figure S1 XRD patterns of Mn/Co-MOF catalyst.

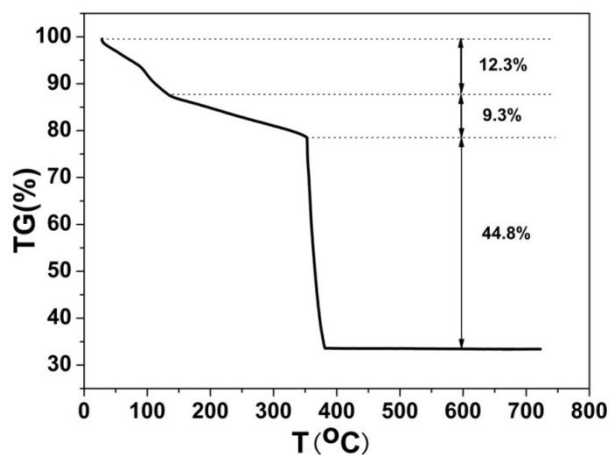


Figure S2 TGA curves of Mn/Co-MOF catalyst.

Table S1 The oxidation coupling of **1a** with different oxidants.^[a]

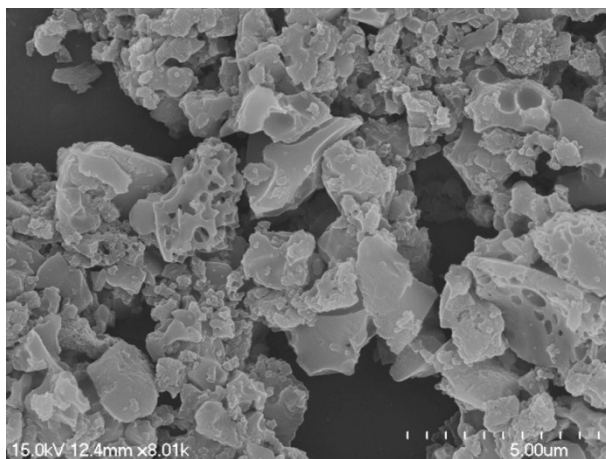
Entry	Oxidant(mmol)	Conversion ^[b] (%)	Selectivity ^[b] (%)
1	air	13	100
2	O ₂	9	100
3	BPO(2)	100	11
4	H ₂ O ₂ (3)	14	100
5	TBHP(2)	100	100

^abenzylamine (1 mmol), Cat. (10 mg), MeOH (2 mL), rt, 3h; ^bDetermined by GC analysis.

Table S2 The oxidation coupling of **1a** with different amounts of TBHP.^[a]

Entry	TBHP(mmol)	Conversion ^[b] (%)	Selection ^[b] (%)
1	0	16	100
2	0.5	43	100
3	1	82	100
4	1.5	100	85
5	2	100	100

^aBenzylamine (1 mmol), Cat. (10 mg), MeOH (2 mL), rt, 3h; ^bDetermined by GC analysis.

**Figure S3** The image of SEM for Mn/Co-MOF catalyst after six catalytic runs.