

Electronic Supplementary Information

Selective hydrogenation of 5-HMF to 2, 5- DMF over non-noble magnetically recoverable catalyst

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Tables

Table S.1: Basicity calculation by CO₂-TPD analysis

Sr. No.	Catalysts	Temperature Range (°C)			Total CO ₂ desorbed
		25-250	250-500	500-750	
1	CuO _x	0.368	0.0346	0.0097	0.4123
2	FeO _x	0.1574	0	0	0.1574
3	Cu-Fe(1:1)	0.1665	0.1592	0.0377	0.3634
4	Cu-Fe(2:1)	0.2996	0	0.0023	0.3019
5	Cu-Fe (1:2)	0.1068	0.0141	0.0035	0.1244

Figures

Figure SI 1: SAED Pattern of Cu-Fe (1:2) catalyst

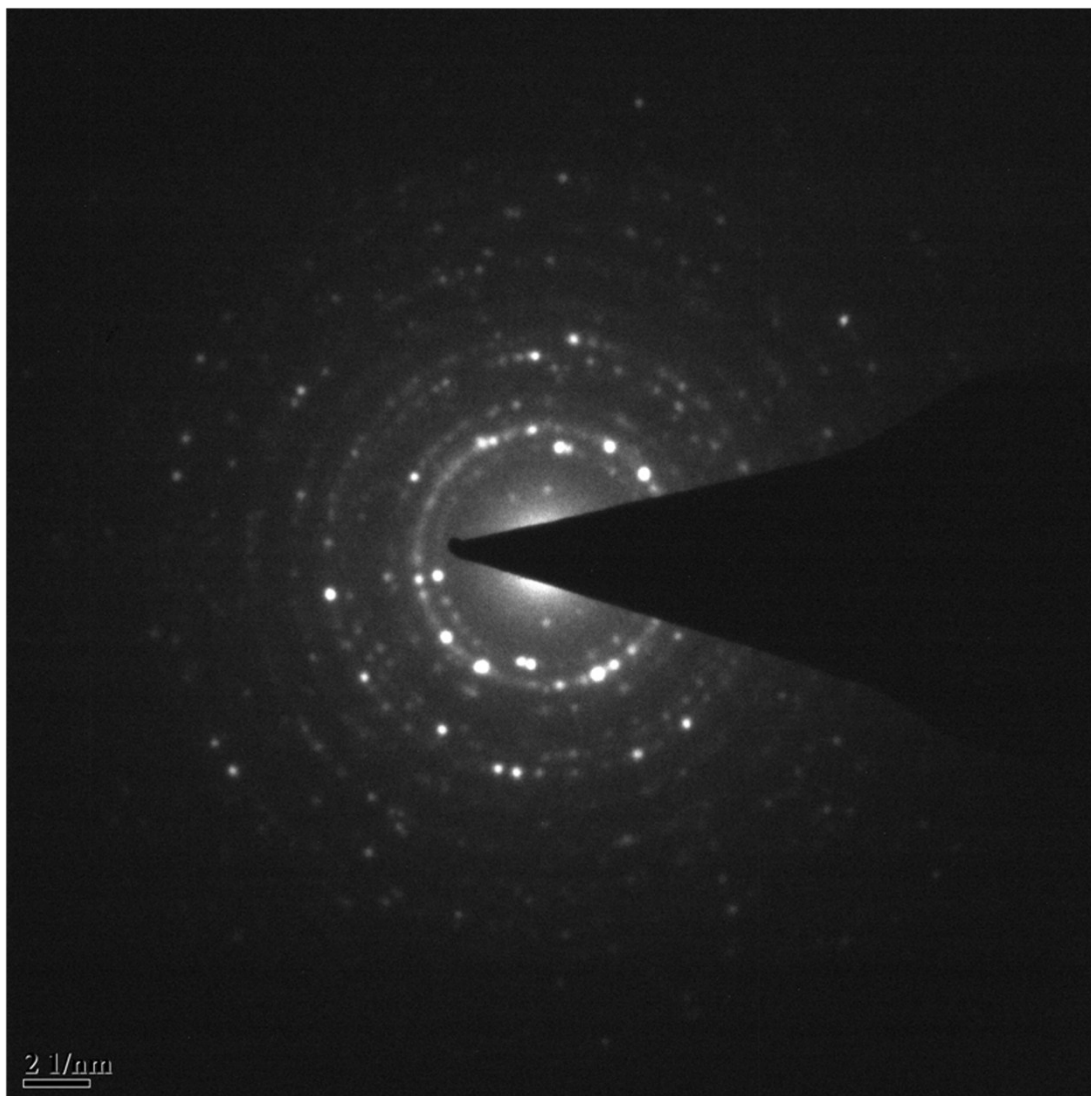


Figure SI 2: XPS analysis of Carbon in Cu-Fe (1:2)-Used

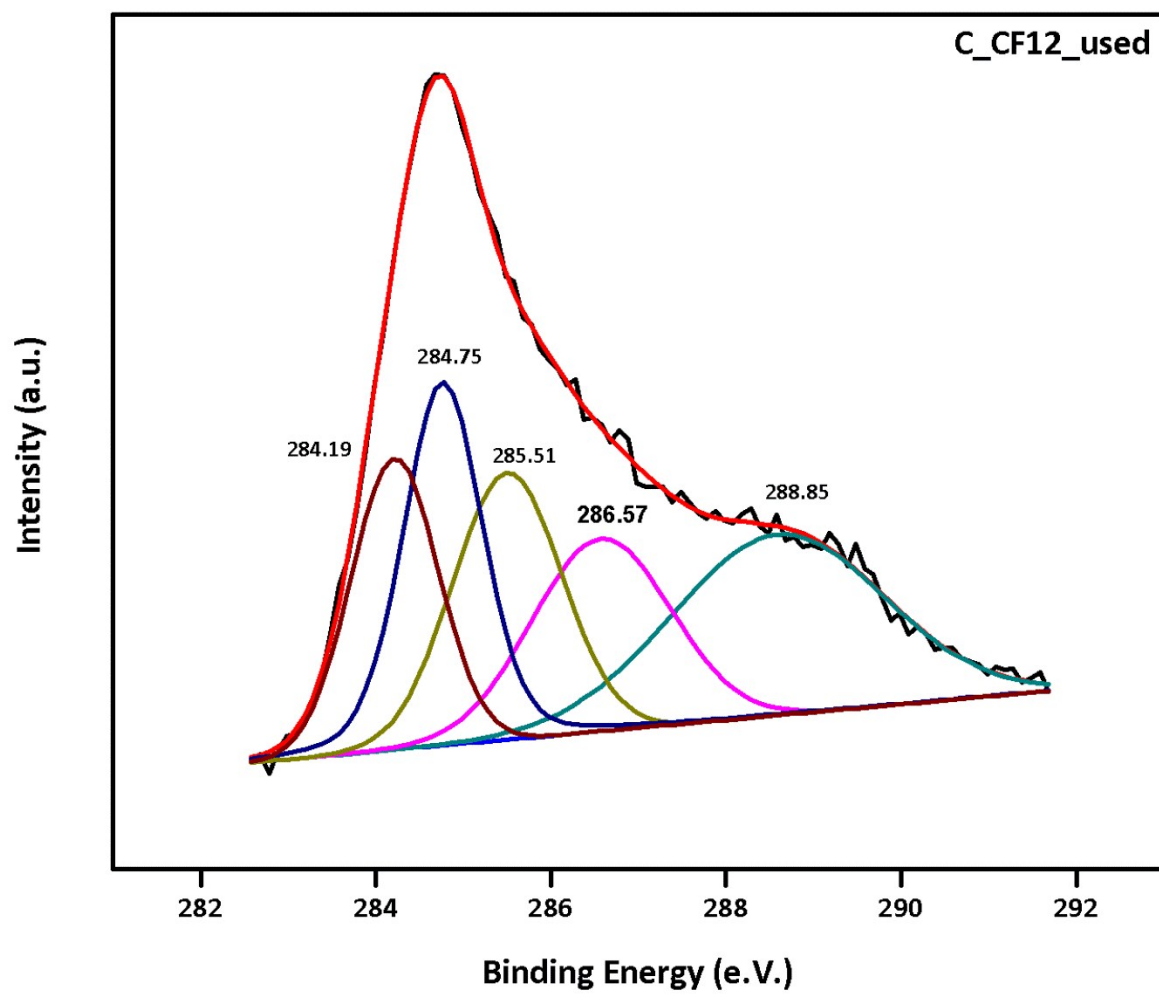


Figure SI 3: CO₂-TPD of all the screened catalysts

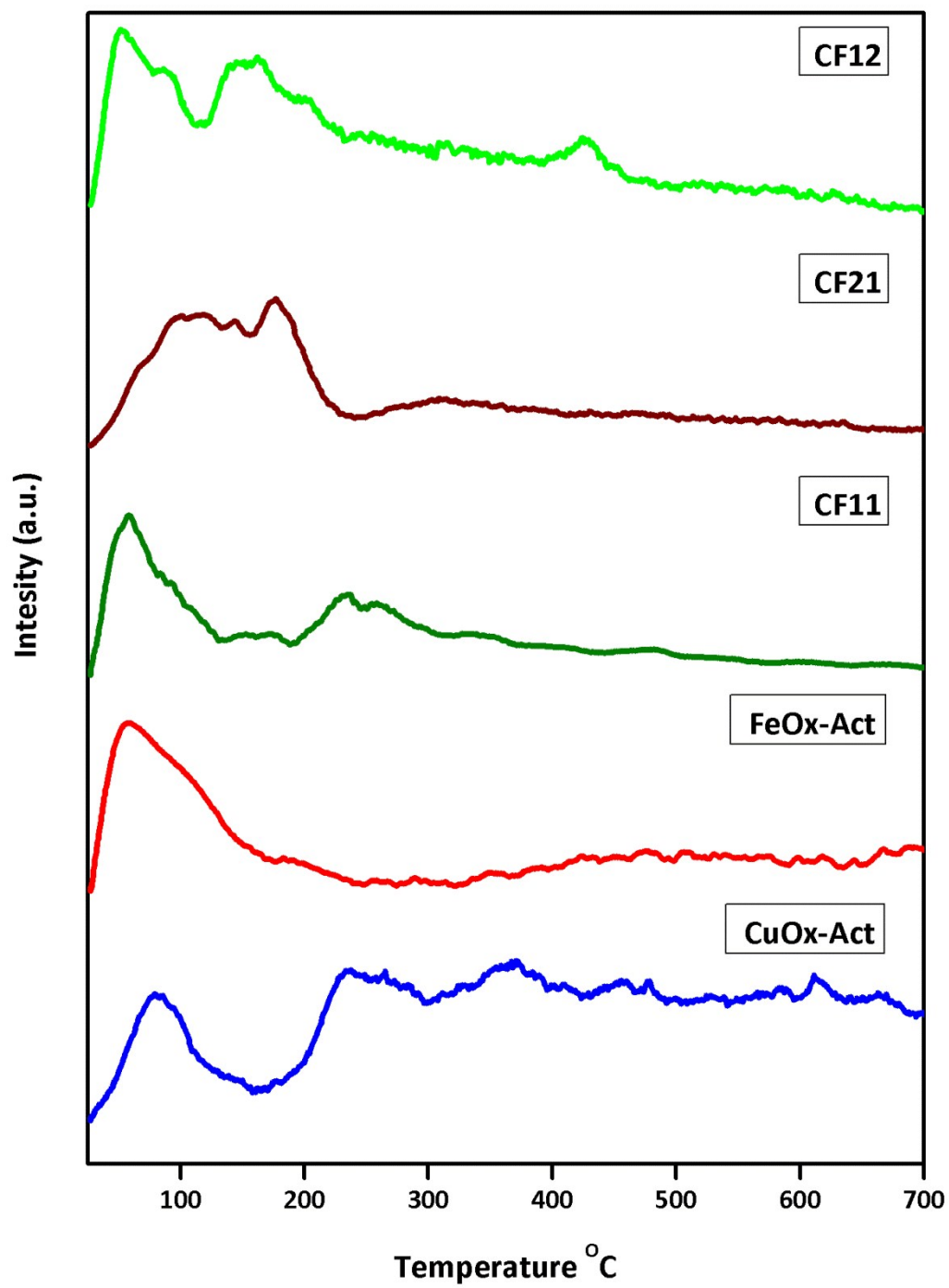


Figure SI 4: Py-IR of CuO_x, FeO_x ad Cu-Fe (1:2)

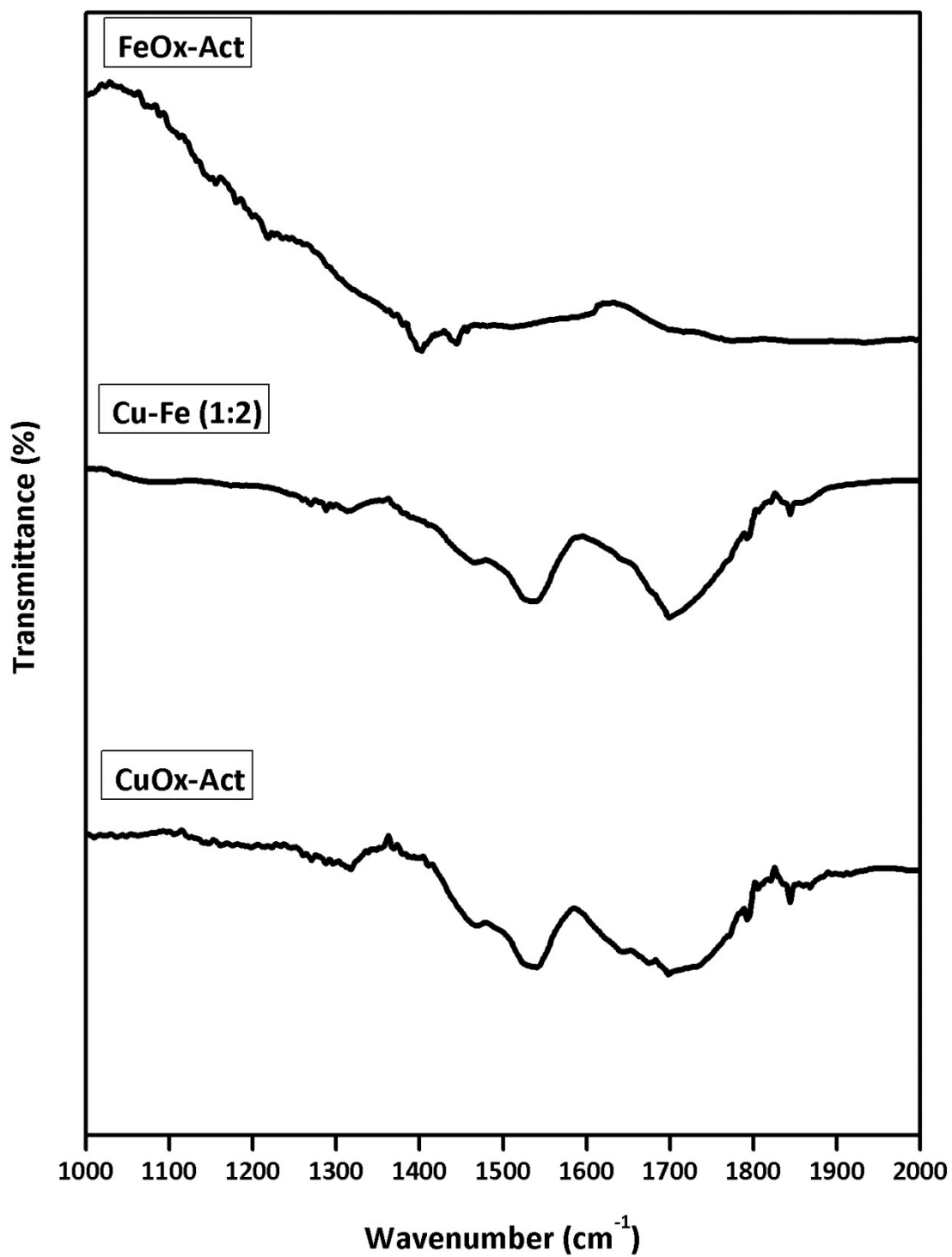


Figure SI 5: Colour change of Cu-Fe(1:2) during catalytic recyclability test (a) Cu-Fe (1:2)-fresh (b) Cu-Fe (1:2)-first recycle (c) Cu-Fe (1:2)- fifth recycle

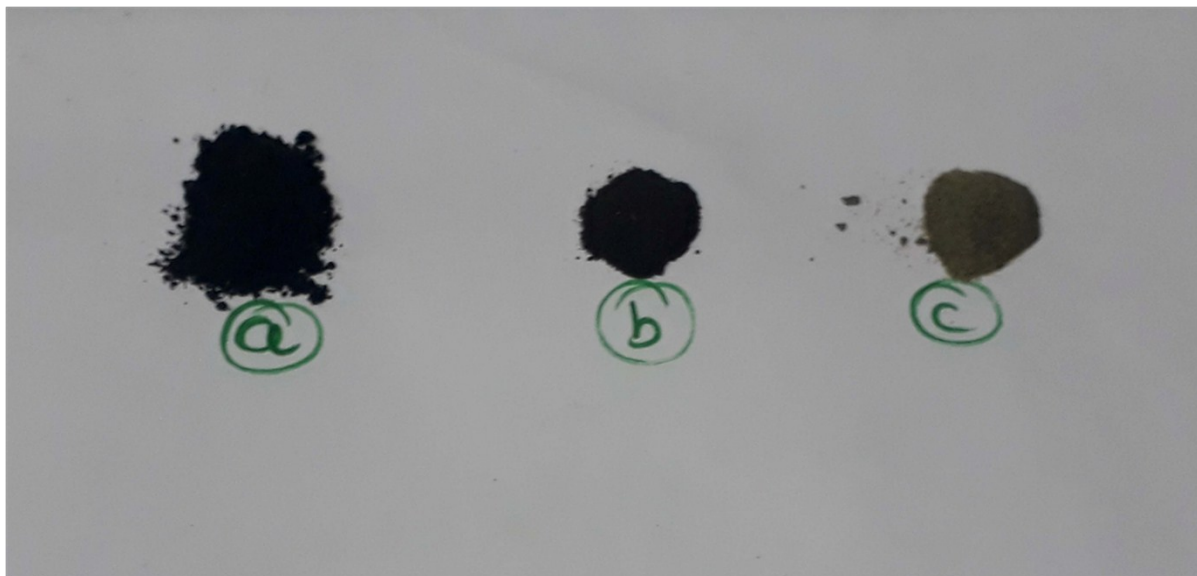


Figure SI 6: Mass fragment analysis of TGA-MS (a) m/z 18 for H₂O (b) m/z 30 for NO

