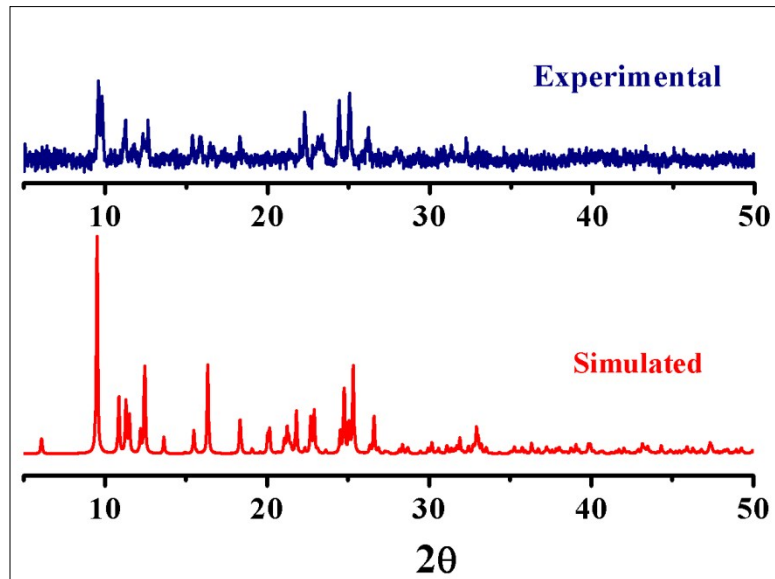


Supporting Information

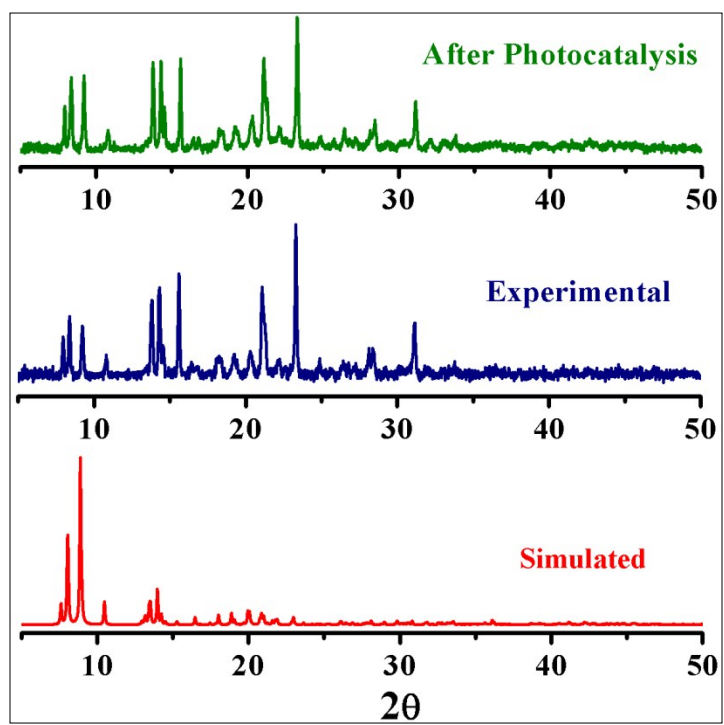
- 1. Powder XRD patterns**
- 2. The N₂ and CO₂ adsorption properties of MOF-4.**
- 3. UV-vis spectra of CR degradation by MOF-3 and MOF-4**
 - 4. Degradation curves of Congo Red (CR)**
 - 5. Solid state Uv-Vis spectra of MOF3 and MOF-4**
 - 6. Selected bond lengths and bond angles**

S1 - Powder XRD patterns:

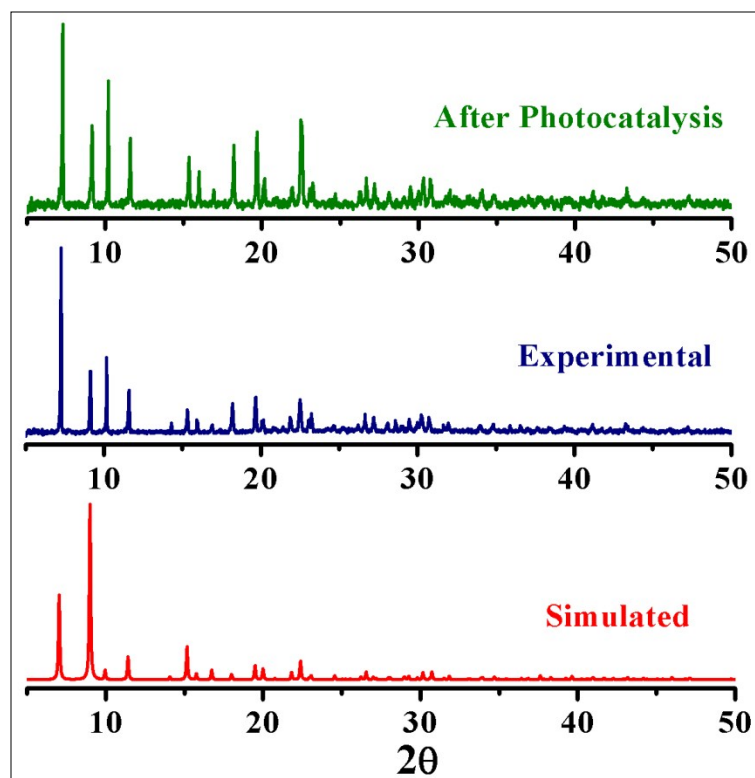
MOF- 1



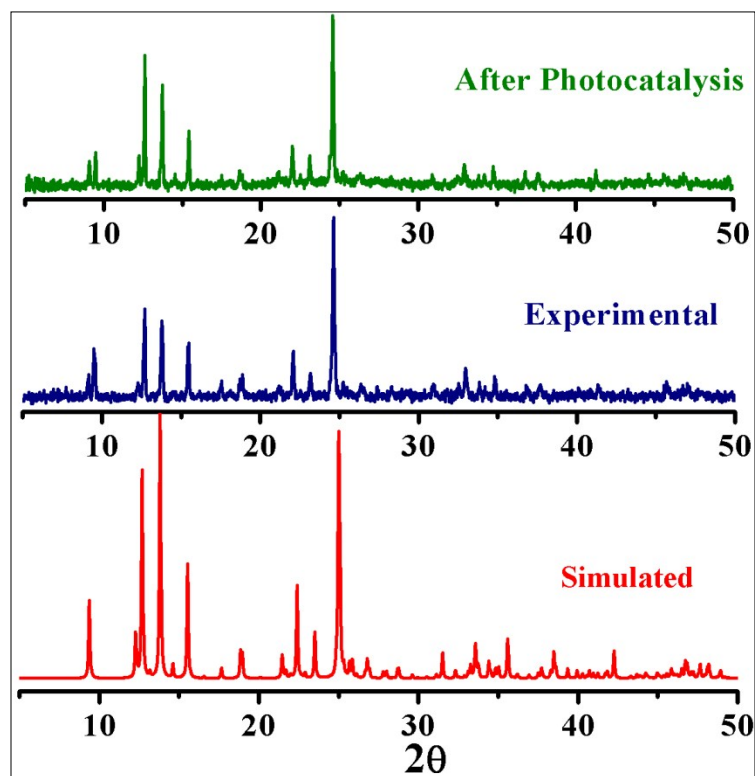
MOF- 2



MOF-3

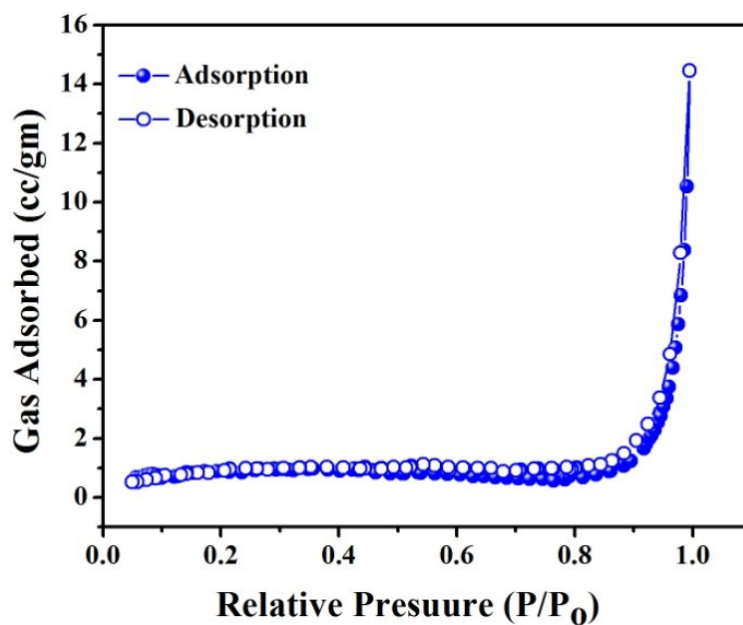


MOF-4

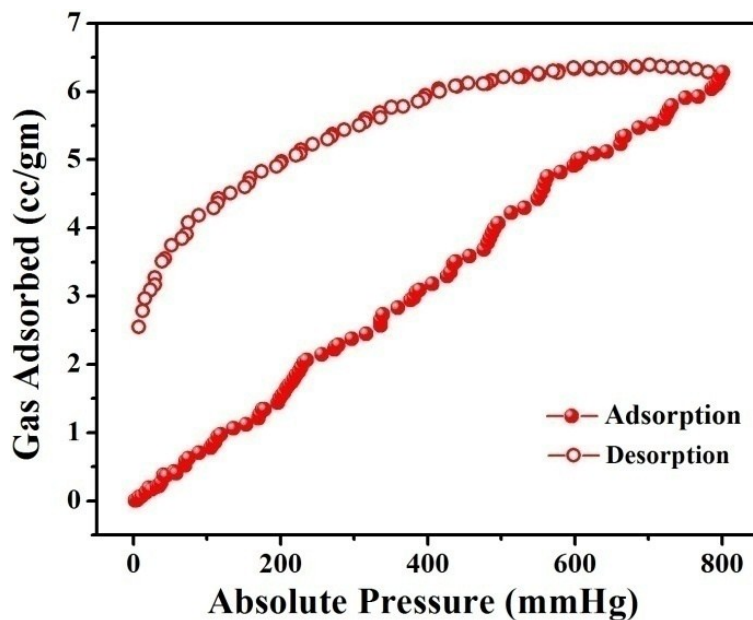


S2 - The N₂ and CO₂ adsorption properties of MOF-4.

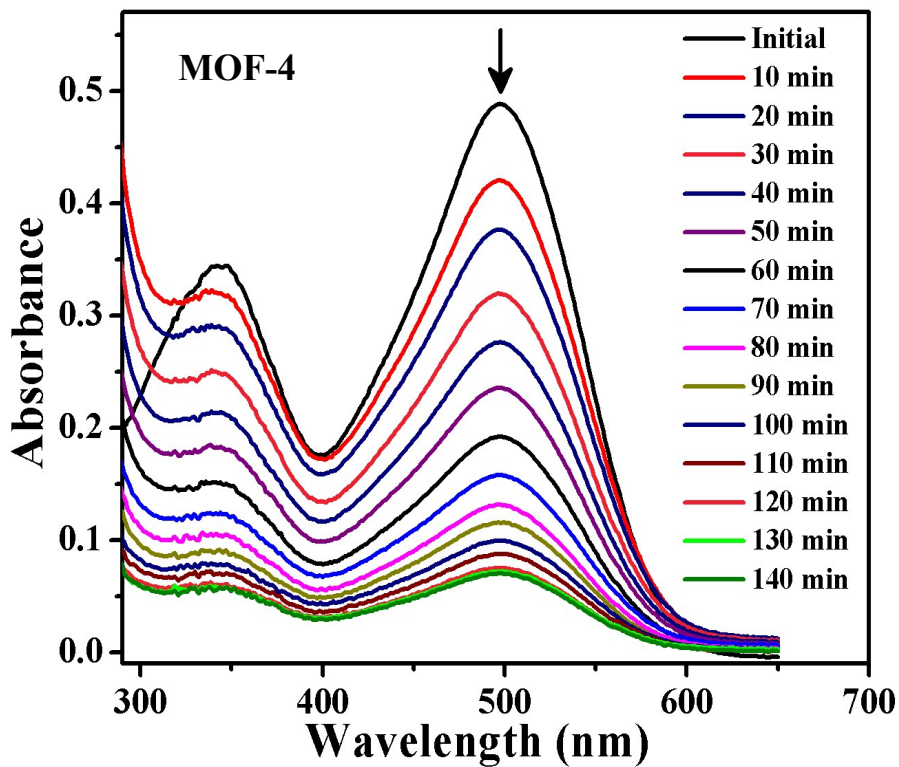
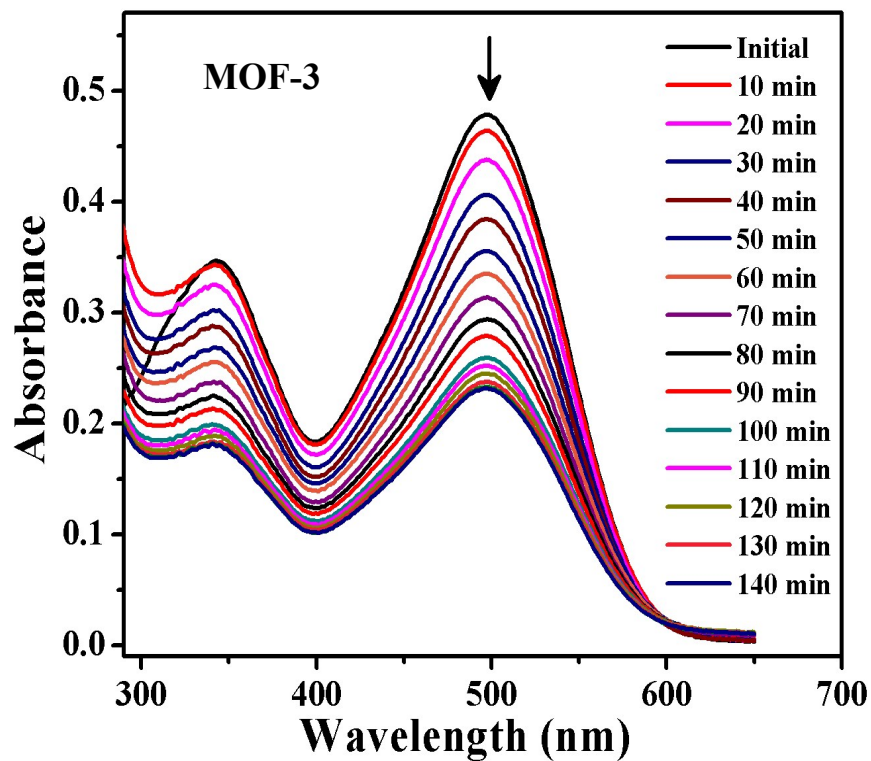
The N₂ adsorption isotherms collected for MOF-4 at 77 K showing typical type-I behaviour.



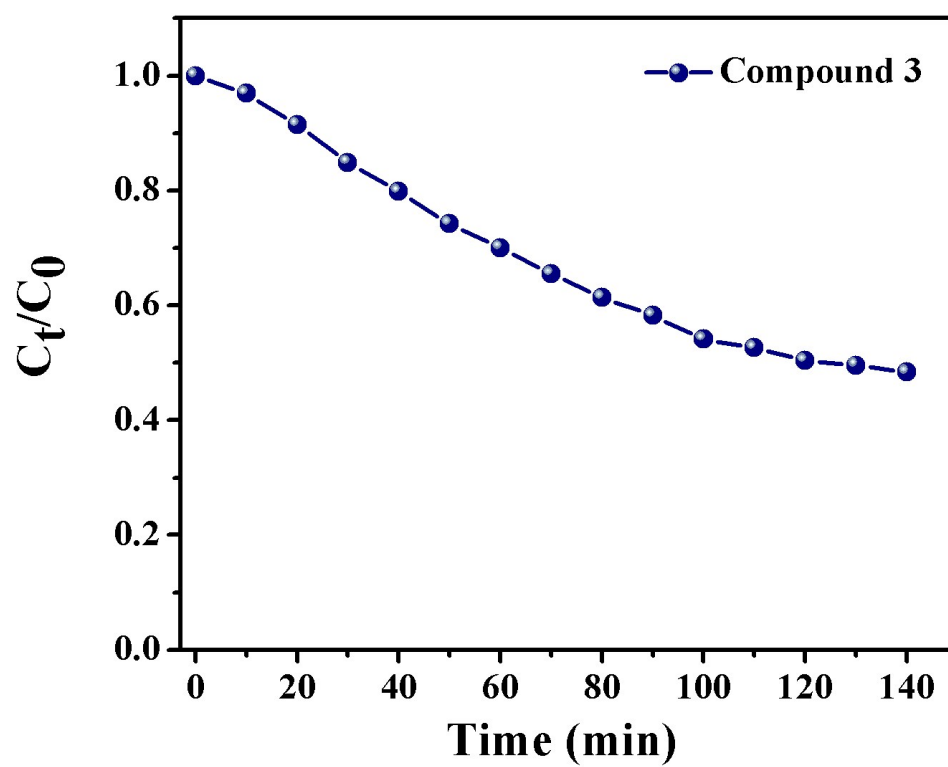
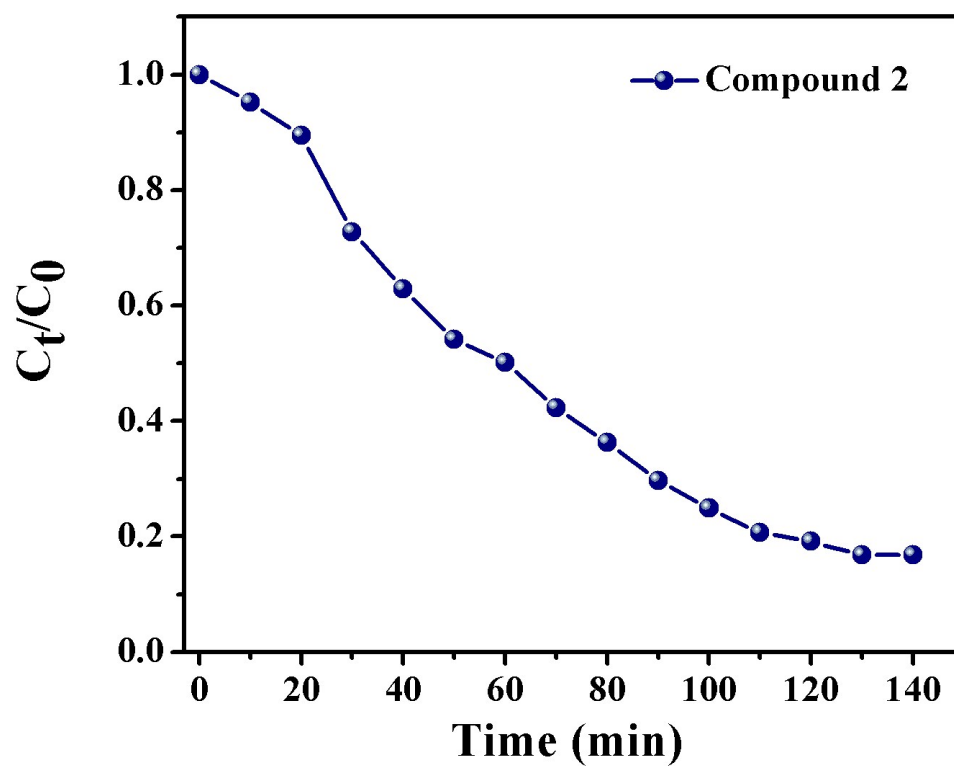
The CO₂ adsorption isotherms collected for 298k.

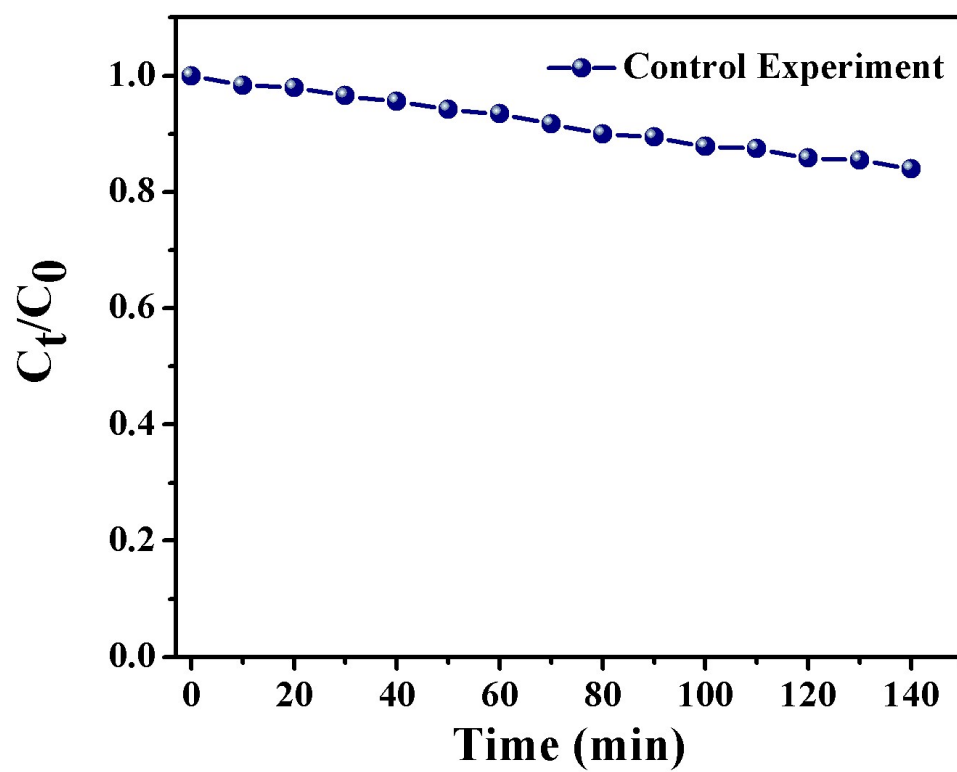
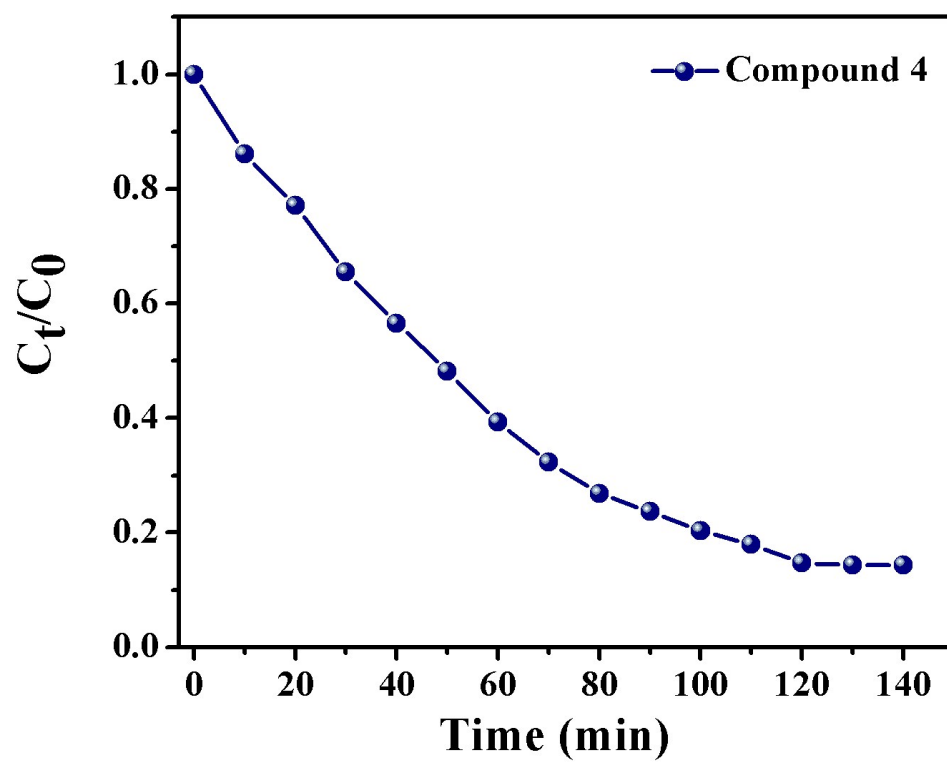


S3 - UV-vis spectra of CR degradation by MOF-3 and MOF-4



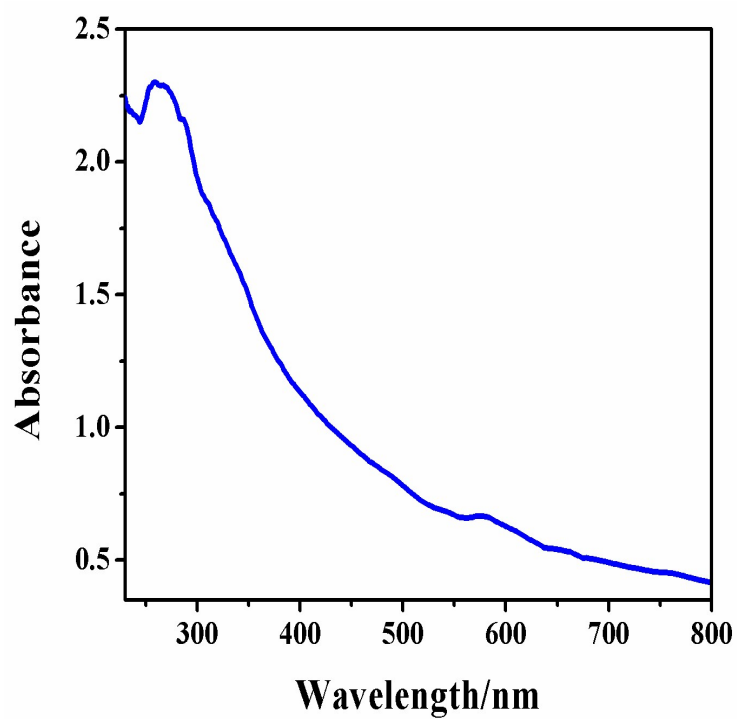
S4 - Degradation curves of CR



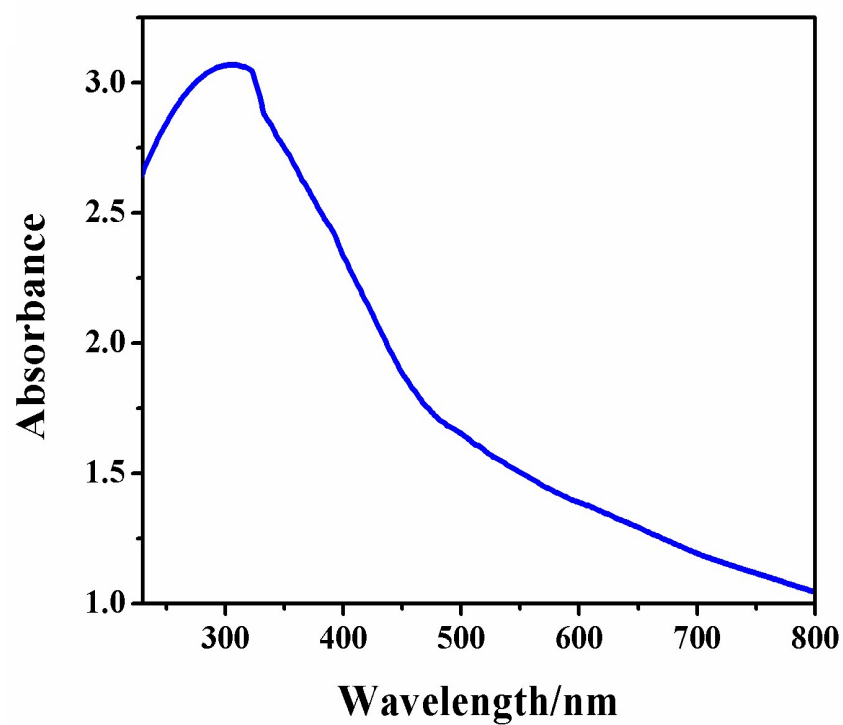


S5 - Solid state Uv-Vis spectra of MOF-3 and MOF-4

MOF- 3



MOF- 4



S6 - Selected bond lengths and bond angles:

MOF-1			
Bond Length		Bond Angle	
Co1 O1	1.999(5)	O1 Co1 N1	143.5(2)
Co1 N1	2.017(4)	O1 Co1 O1S	107.6(2)
Co1 O1S	2.021(4)	N1 Co1 O1S	106.42(19)
Co1 O5	2.022(4)	O1 Co1 O5	90.93(18)
Co1 O6	2.124(4)	N1 Co1 O5	100.03(18)
		O1S Co1 O5	93.25(17)
		O1 Co1 O6	87.04(17)
		N1 Co1 O6	82.28(16)
		O1S Co1 O6	86.27(16)
		O5 Co1 O6	177.67(16)

MOF- 2			
Bond Length		Bond Angle	
Co1 N2	2.002(8)	N2 Co1 O2	99.8(3)
Co1 O2	2.028(6)	N2 Co1 O4	100.7(3)
Co1 O4	2.033(7)	O2 Co1 O4	92.5(3)
Co1 O1	2.037(6)	N2 Co1 O1	98.0(3)
Co1 O5	2.048(6)	O2 Co1 O1	162.0(2)
Co1 Co1	2.848(2)	O4 Co1 O1	86.4(3)
		N2 Co1 O5	96.9(3)
		O2 Co1 O5	85.9(3)
		O4 Co1 O5	162.3(3)
		O1 Co1 O5	89.7(3)
		N2 Co1 Co1	169.8(2)
		O2 Co1 Co1	85.34(19)
		O4 Co1 Co1	87.8(2)
		O1 Co1 Co1	76.69(17)
		O5 Co1 Co1	74.52(19)

MOF-3			
Bond Length			Bond Angle
Co1	N1	2.074(3)	N1 Co1 N1 168.50(18)
Co1	N1	2.074(3)	N1 Co1 O1 94.12(13)
Co1	O1	2.111(3)	N1 Co1 O1 94.31(13)
Co1	O1	2.111(3)	N1 Co1 O1 94.31(13)
Co1	O2	2.160(3)	N1 Co1 O1 94.12(13)
Co1	O2	2.160(3)	O1 Co1 O1 85.65(18)
			N1 Co1 O2 90.80(12)
			N1 Co1 O2 80.84(12)
			O1 Co1 O2 93.86(12)
			O1 Co1 O2 174.89(12)
			N1 Co1 O2 80.84(12)
			N1 Co1 O2 90.80(12)
			O1 Co1 O2 174.89(12)
			O1 Co1 O2 93.86(12)
			O2 Co1 O2 87.07(18)

MOF-4			
Bond Length			Bond Angle
Co1	N1	2.027(5)	N1 Co1 N1 162.2(3)
Co1	N1	2.027(5)	N1 Co1 O2 94.24(18)
Co1	O2	2.063(4)	N1 Co1 O2 97.94(17)
Co1	O2	2.063(4)	N1 Co1 O2 97.94(17)
Co1	O4	2.133(4)	N1 Co1 O2 94.24(18)
Co1	O4	2.133(4)	O2 Co1 O2 93.2(2)
			N1 Co1 O4 87.51(17)
			N1 Co1 O4 79.99(17)
			O2 Co1 O4 177.59(17)
			O2 Co1 O4 88.17(16)
			N1 Co1 O4 79.99(17)
			N1 Co1 O4 87.51(17)
			O2 Co1 O4 88.16(16)
			O2 Co1 O4 177.59(17)

	O4 Co1 O4 90.5(2)
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