Supplementary information

Appendix A

Table S1 showing the elemental compositttion of ZIF-8.

Element	Wt%	Wt% Sigma	Atomic %
N	31.64	0.48	65.07
O	3.55	0.23	6.38
Mn	0.00	0.00	0.00
Fe	0.00	0.00	0.00
Zn	64.71	0.50	28.52
Zr	0.11	0.21	0.03
Total:	100.00		100.00

Table S2 showing the elemental composition of UiO-66.

Element	Wt%	Wt% Sigma	Atomic %
N	2.47	0.48	5.01
O	43.82	0.39	77.88
Cl	0.73	0.07	0.58
Mn	0.07	0.08	0.04
Fe	0.00	0.00	0.00
Zn	0.02	0.13	0.01
Zr	52.90	0.42	16.49
Total:	100.00		100.00

Table S3 showing the elemental composition of FePc@ZIF-8.

Element	Wt%	Wt% Sigma		Atomic %
N	10.77	0.52		29.52
O	6.48	0.23		15.56
Mn	0.00	0.00		0.00
Fe	64.86	0.60		44.60
Zn	16.76	0.45		9.85
Zr	1.13	0.35		0.48
Total:	100.00			100.00

Table S4 showing the elemental comosition of MnPc@ZIF-8.

Element	Wt%	Wt% Sigma	Atomic %
N	22.02	0.58	45.71
O	13.16	0.35	23.92
Mn	19.20	0.29	10.16
Fe	0.00	0.00	0.00
Zn	44.99	0.52	20.01
Zr	0.62	0.29	0.20
Total:	100.00		100.00

Table S5 showing the elemental composition of CoPcZIF-8.

Element	Wt%	Wt% Sigma	Atomic %
Co	68.30	0.68	70.50
Zn	31.70	0.68	29.50
Total:	100.00		100.00

Table S6 showing the elemental composition of FePc@Uio-66.

Element	Wt%	Wt% Sigma	Atomic %
N	19.89	0.58	35.20
O	30.68	0.42	47.54
Mn	0.10	0.09	0.05
Fe	22.16	0.28	9.84
Zn	0.00	0.00	0.00
Zr	27.16	0.37	7.38
Total:	100.00		100.00

Table S7 showing the elemental composition of MnPc@UiO-66.

Element	Wt%	Wt% Sigma	Atomic %
N	2.78	0.49	5.42
O	45.42	0.41	77.48
Mn	8.03	0.15	3.99
Fe	0.10	0.09	0.05
Zn	0.00	0.00	0.00
Zr	43.67	0.40	13.07
Total:	100.00		100.00

Table S8 showing the elemental composition of CoPc@UiO-66.

Element	Wt%	Wt% Sigma	Atomic %
O	19.60	0.34	52.35
Co	38.91	0.35	28.21
Zr	41.49	0.39	19.43
Total:	100.00		100.00

Table S9 Showing data used to calculate the limit of detection of 4-chlorophenol on ZIF-8, UiO-66, CoPc@ZIF-8, FePc@ZIF-8 and FePc@UiO-66 modified electrodes in pH 7 buffer. Scan rate 500 Mv.s^{-1}.

4-chlorophenol concentration (mM)	**ZIF-8 I_p (µA)**	**UiO-66 I_p (µA)**	**CoPc@ZIF-8 I_p (µA)**	**FePc@ZIF-8 I_p (µA)**	**FePc@UiO-66 I_p (µA)**
0.2	4.64	16.55	0.57	1.68	9.28
0.4	6.57	11.82	0.42	1.89	16.31
0.6	14.68	17.00	0.72	8.47	16.78
0.8	12.68	20.23	8.89	3.89	21.03
1.0	16.39	20.08	17.62	20.06	26.62

Appendix B

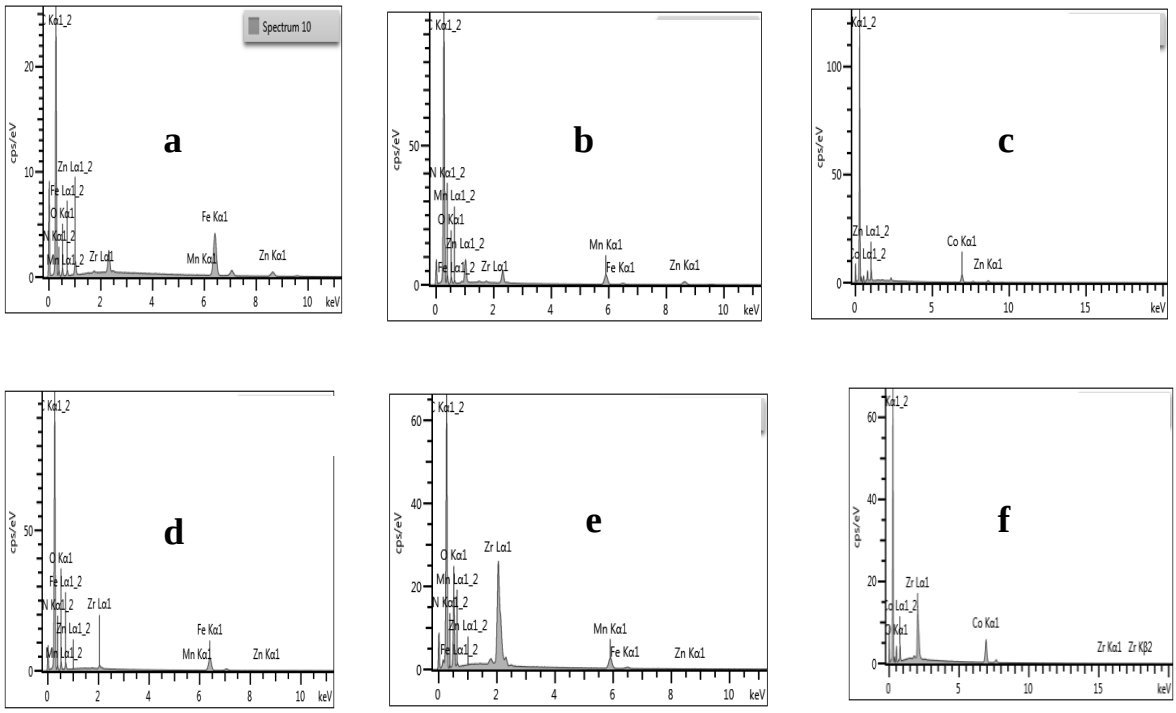

Figure S1: Elemental analysis spectra for MOF composites (a) FePc@ZIF-8 (b) MnPc@ZIF-8 (c) CoPc@ZIF-8 (d) FePc@UiO-66 (e) MnPc@UiO-66 and (f) CoPc@UiO-66.

Appendix C

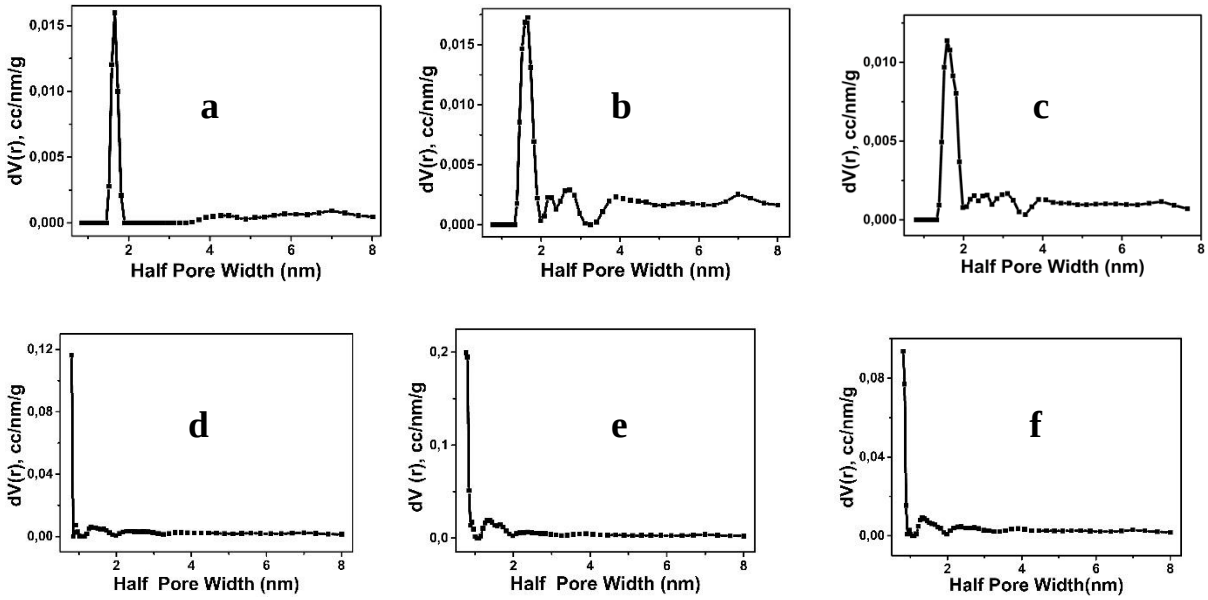

Figure S2: Pore size distribution of MOF composites (a) FePc@ZIF-8 (b) MnPc@ZIF-8 (c) CoPc@ZIF-8 (d) FePc@UiO-66 (e) MnPc@UiO-66 and (f) CoPc@UiO-66.

Appendix D

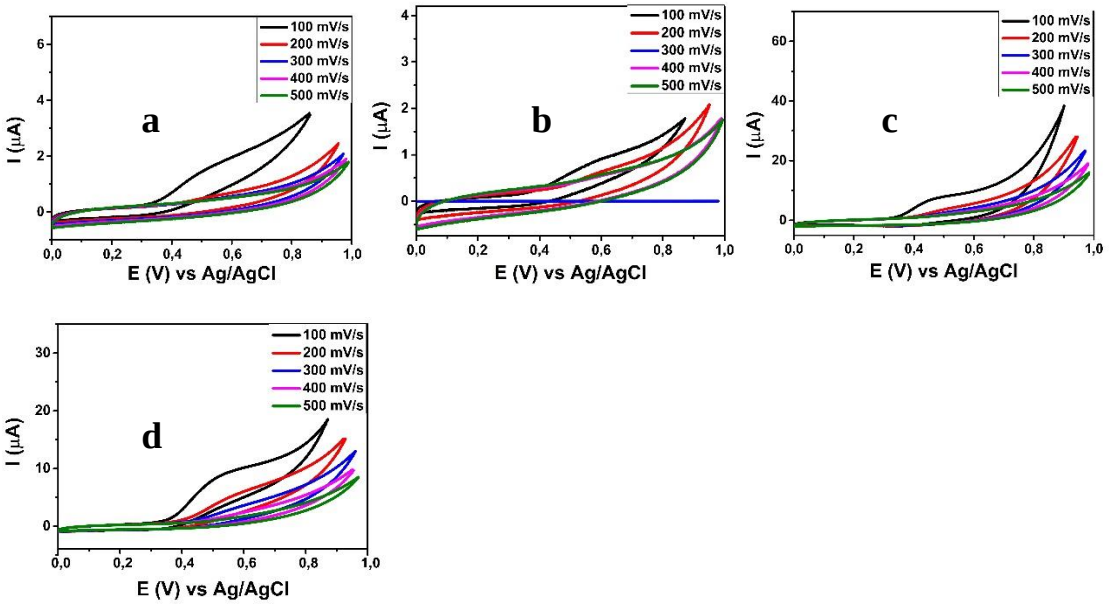

Figure S3: Effecct of scan rate on 4-chlorophenol oxidation using compound (a) **9** (b) **10** (c) **11** and (d) **15** modified electrodes in pH 7 buffer.