

**Metal Organic Frameworks-Derived Nanoflowers and Nanoflakes Metal Oxides as  
Electrocatalysts for Methanol Oxidation**

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Table S1: EDS results as a table of MOFP1, MOFP2 and MOFP3.

For MOFP1

Element	Weight %	Atomic %	Net Int.	Error %	Kratio	Z	A	F
C K	11.34	23.59	413.55	11.23	0.0338	1.1773	0.2531	1.0000
O K	35.56	55.53	3490.82	7.57	0.1651	1.1314	0.4103	1.0000
CuK	53.10	20.88	2110.90	2.91	0.4562	0.8464	1.0073	1.0078

For MOFP2

Element	Weight %	Atomic %	Net Int.	Error %	Kratio	Z	A	F
C K	50.36	66.60	2895.84	7.41	0.2261	1.0649	0.4215	1.0000
O K	27.91	27.72	1348.85	10.06	0.0609	1.0201	0.2139	1.0000
NiK	12.05	3.26	582.27	4.43	0.1027	0.7914	1.0140	1.0617
CuK	9.68	2.42	367.22	5.48	0.0758	0.7508	1.0117	1.0308

For MOFP3

Element	Weight %	Atomic %	Net Int.	Error %	Kratio	Z	A	F
C K	63.50	73.58	6024.57	5.46	0.3901	1.0321	0.5952	1.0000
O K	28.13	24.47	1336.02	11.15	0.0501	0.9870	0.1802	1.0000
CoK	5.25	1.24	338.38	6.13	0.0437	0.7362	1.0176	1.1093
NiK	1.49	0.35	85.90	18.17	0.0126	0.7605	1.0158	1.0916
CuK	1.63	0.36	75.66	14.76	0.0130	0.7213	1.0107	1.0910

Table S2: Tafel slopes of MOFP1, MOFP2 and MOFP3 at 0.7 V and ECSA .

Catalyst	Tafel slop at 0.7 V	ECSA
Mofp1	0.27	114
Mofp2	0.31	310.25
Mofp3	0.28	30.25

**Fig S1: TEM images of MOFP2 (a) HR-TEM images of MOFP2 (b).**

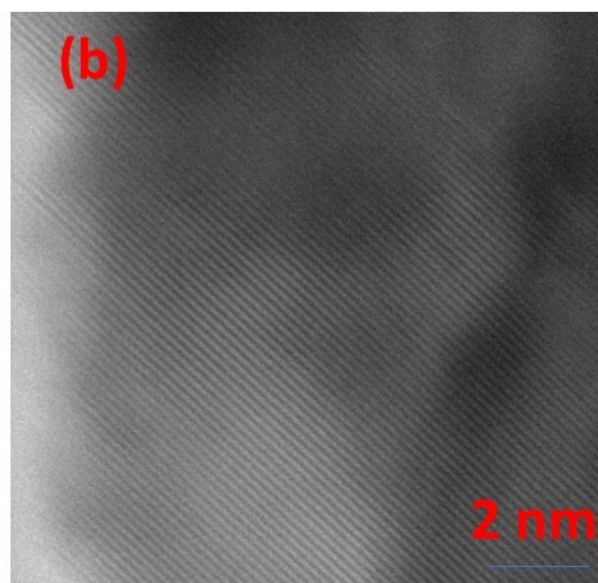
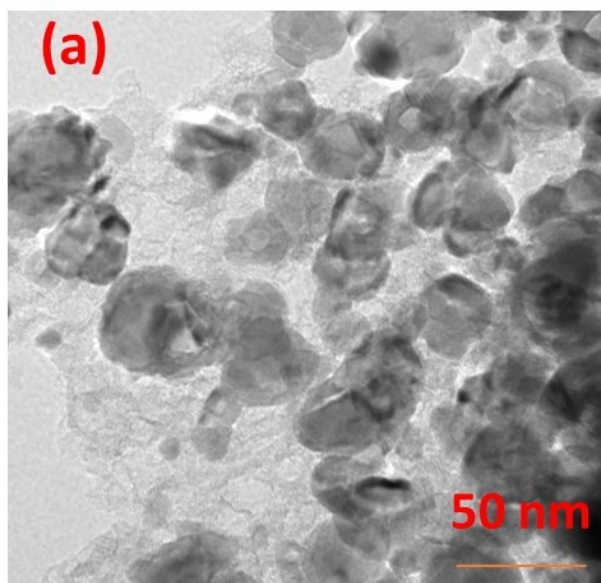
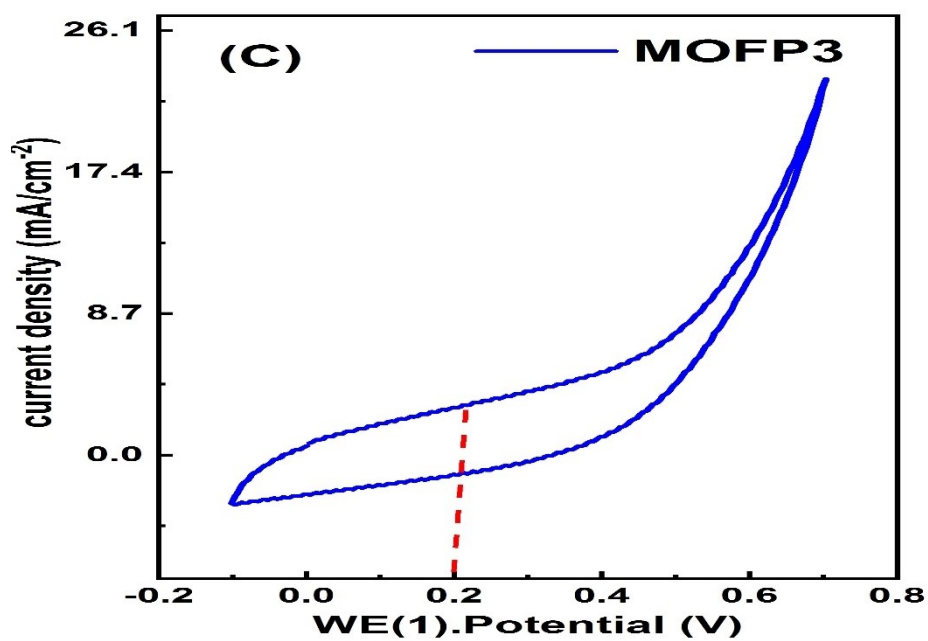
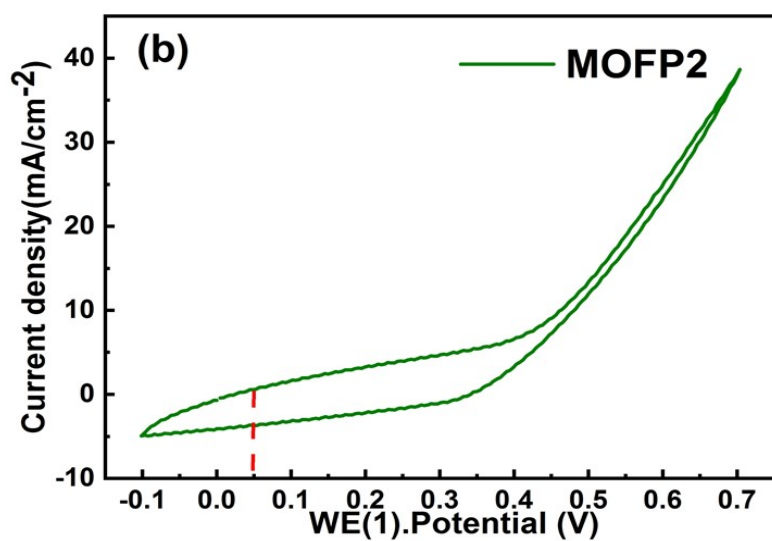
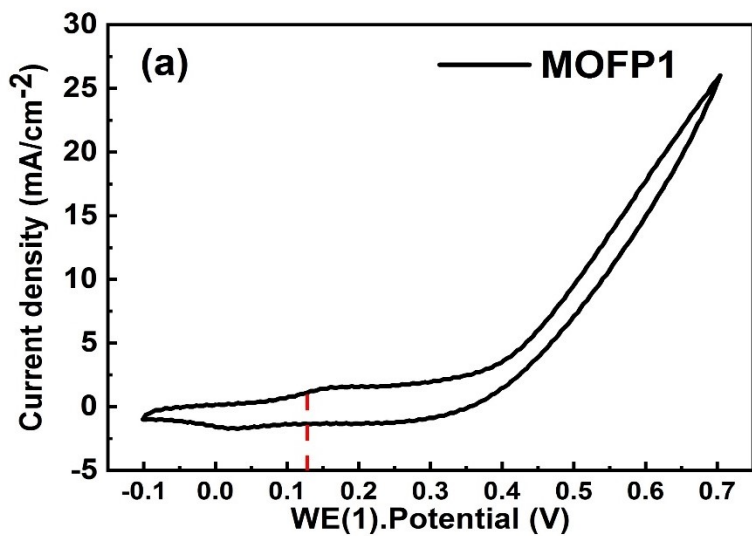
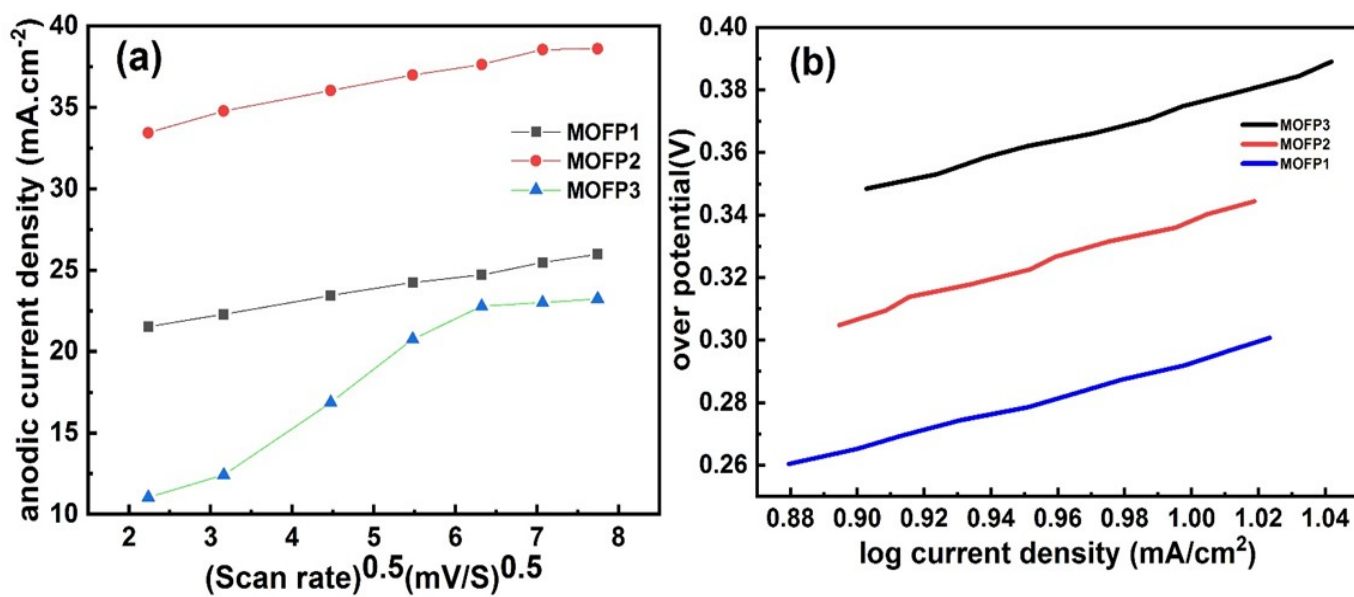


Fig S2 . CV curves of (a) MOFP1 (b) MOFP2, (c) MOFP catalysts in 01M NaOH with 1.0M MeOH at a scan rate 60 mV·s<sup>-1</sup>



**Fig S 3. (a)** The relation between the square root of the scan rates and the anodic current density for MOFP1, MOFP2 and MOFP3. **(b)** Tafel plots of MOFP1 , MOFP2 and MOFP3 in 1 M NaOH 1 M methanol at 60 mV/s.



**Fig S4:** CVs in the double layer region for electrodes based MOFS(a)MOFP1, (c)MOFP2 and (e)MOFP3 at scan rates of 20,30,40,50 and 60 mV s<sup>-1</sup> in the non-faradaic range of 0-0.1 V vs. Hg/HgO. , (b), (d) and (f) Corresponding linear fit of the capacitive current vs. scan rates to calculate C<sub>dl</sub> and ECSA.

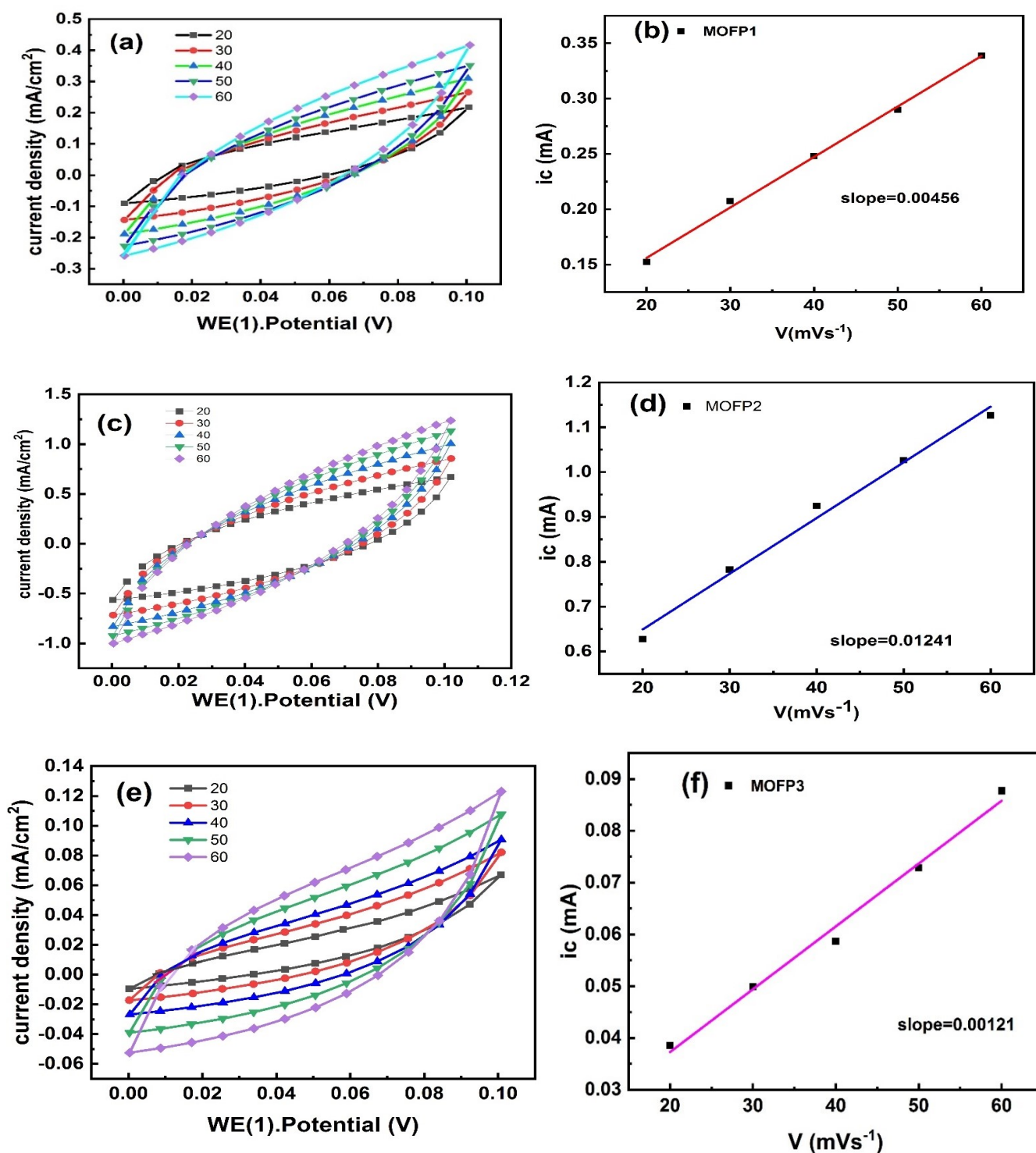


Fig S5: TEM images of MOFP2 (a) HR-TEM images of MOFP2 after methanol oxidation.

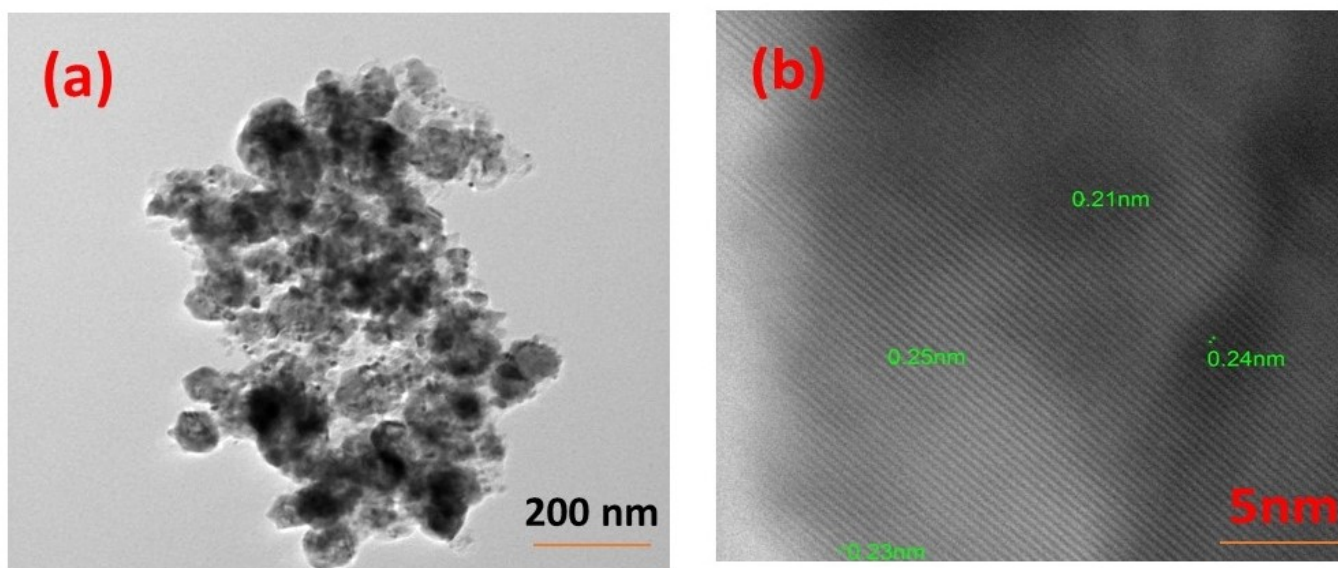


Fig S6: the cyclic voltammetry of the sample after 1 cycle and 1500 cycles:

