

Supporting Information

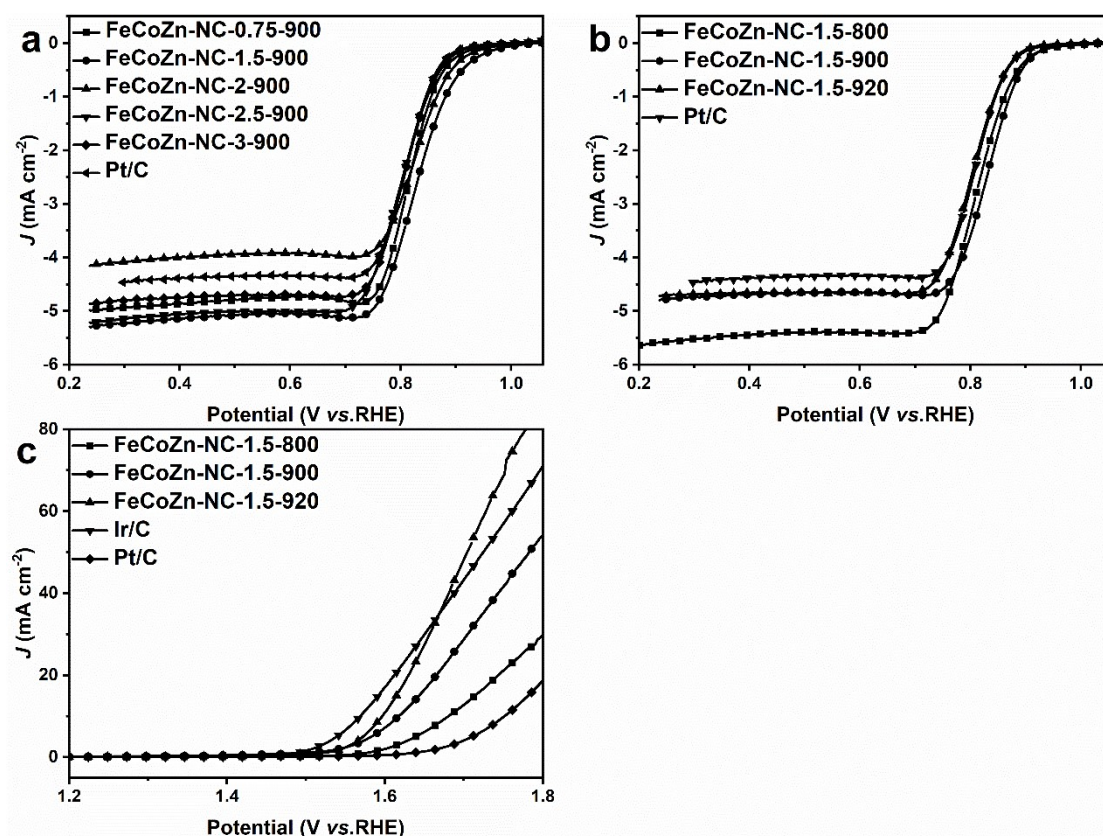


Figure S1. (a) LSV curves of FeCoZn-NC with varying Fe²⁺ concentration and Pt/C in O₂-saturated KOH electrolyte. The sweep speed was 1600 rpm; (b) LSV curves of FeCoZn-NC-1.5 synthesized under different pyrolysis temperatures and Pt/C catalyst in O₂-saturated KOH electrolyte. The sweep speed was 1600 rpm; (c) LSV curves of FeCoZn-NC-1.5 samples prepared at different carbonization temperature, Ir/C and Pt/C in 1.0 M KOH solution. The sweep speed was 1600 rpm.

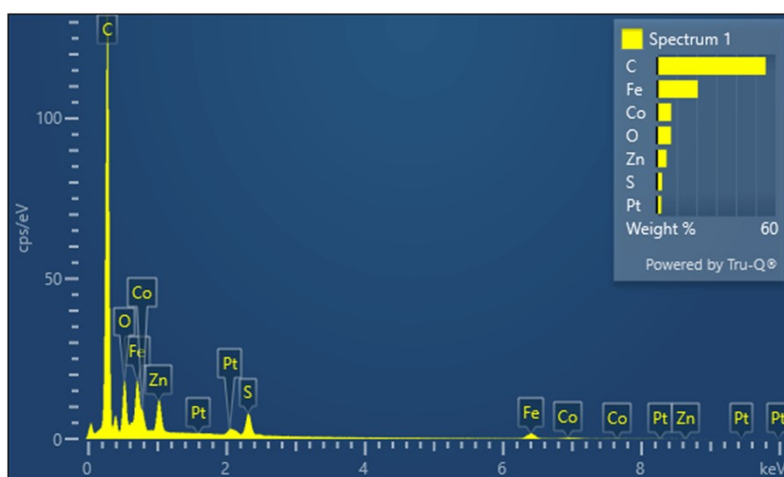


Figure S2. Energy-dispersive X-ray spectroscopy analysis of FeCoZn-NC-1.5-900 performed under ambient conditions.

Table S1. Inductively coupled plasma mass spectrometry (ICP-MS) characterization of the FeCoZn-NC-1.5-900 sample.

Metal element	Content in the sample (mg/kg)
Fe	440.7
Co	315.45
Zn	378.9

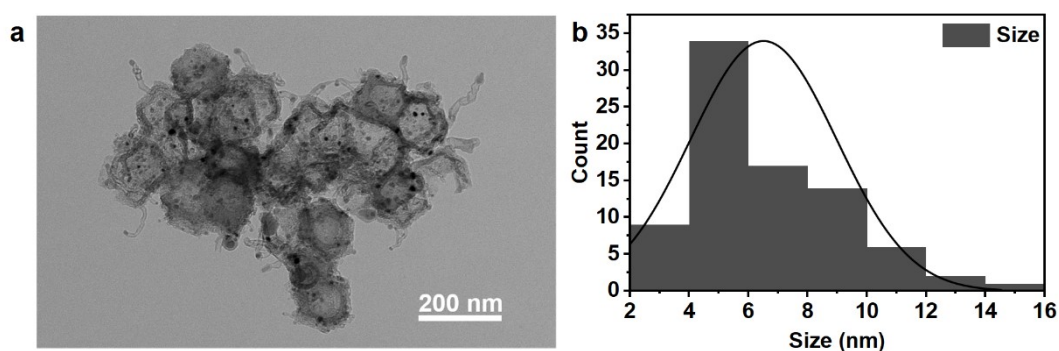


Figure S3. TEM image (a) and nanoparticle size distribution histogram (b) of FeCoZn-NC-1.5-900 determined via transmission electron microscopy analysis.

Table S2. Summary of various recently reported MOF-derived ORR electrocatalysts.

Catalysts	E_{onset} (V)	$E_{1/2}$ (V)	References
FeCoZn-NC-1.5-900	0.979	0.832	This work
C–N/Co (1/2)	0.89	0.79	S1
NC@Co-HPNC	1.17	0.83	S2
FeCo–N–C-800	0.878	0.791	S3
Fe@N-CNTs@rGO	-	0.83	S4
Co–N–C@F127	0.93	0.84	S5
Co ₃ O ₄ @C/N-r-GO-10	-	0.8	S6
FeNC-900	0.957	0.848	S7
NC@Co-NGC DSNC	0.92	0.82	S8
S-Co ₉ Fe _x S ₈ @rGO-10	0.94	0.84	S9
FeNC-950	0.94	0.84	S10

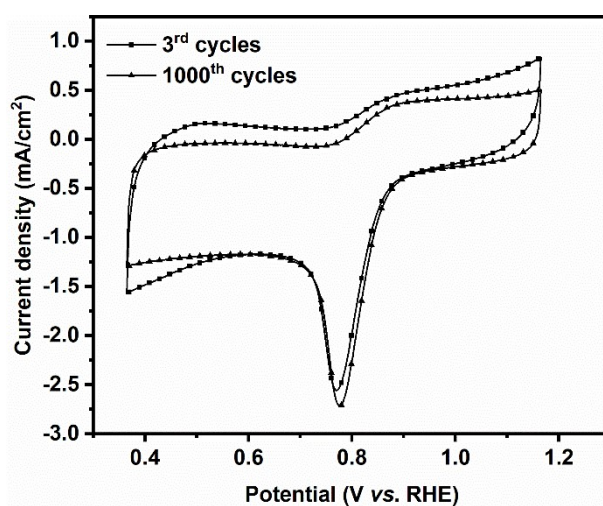


Figure S4. Performance comparison of CV profiles for FeCoZn-NC-1.5-900 between the 1000th and 3rd cycles.

References

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