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Supporting Information

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Melamine Formaldehyde - Metal Organic Gel Interpenetrating Polymer Network Derived Intrinsic Fe-N- Doped Porous Graphitic Carbon Electrocatalysts for Oxygen Reduction Reaction

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Reference electrode calibration

Hg/HgO potential was converted to RHE using the following procedure. LSV was taken in hydrogen saturated 0.1 M KOH solution at a scan rate of 1 mV/s with Pt as the working electrode, Pt as the counter electrode and Hg/HgO as the reference electrode. From the plot of current Vs potential, the potential at which the current crosses the zero line was taken as the correction factor.



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E (RHE) = E (Hg/HgO) + 0.870
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Figure S1. Calibration curve of the Hg/HgO reference electrode in H_2 saturated 0.1 M KOH solution.



Figure S2. Raman spectra of Fe-MOG-MF-C and Fe-MOG-MFN-C.



Figure S3. XPS survey scan spectrum.



Figure S4. High resolution N 1s XPS spectra of (a) Fe-MOG-MFN-C-800 and (b) Fe-MOG-MFN-C-1000.



Figure S5. SEM images of Fe-MOG-C.



Figure S6. TEM images of Fe-MOG-C.



Figure S7. XRD pattern of Fe-MOG-C.



Figure S8. N_2 adsorption-desorption isotherms of Fe-MOG-C.



Figure S9. LSV comparison in O_2 saturated 0.1 M KOH solution measured at a scan rate of 5 mV sec⁻¹ at 1600 rpm.



Figure S10. Cyclic voltammograms of (a) Fe-MOG-MFN-C-800 and (b) Fe-MOG-MFN-C-1000 in 0.1 M KOH solution measured at a scan rate of 50 mV sec⁻¹ at 900 rpm.



Figure S11. LSVs of (a) Fe-MOG-MFN-C-800 (b) Fe-MOG-MFN-C-1000 (c) Fe-MOG-MF-C and (d) Pt/C in O_2 saturated 0.1 M KOH solution measured at different rotation rates at a scan rate of 5 mV sec⁻¹.



Figure S12. LSV recorded before and after 5000 cycles ADT analysis for Pt/C in O_2 saturated 0.1 M KOH solution with electrode rotation of 1600 rpm.

Table S1. Variation of concentration of different nitrogen species with pyrolysis temperature

Sample Name	Elemental conc (at.%)				N species at.%			
	С	0	Fe	N	pyridinic	pyrrolic	graphitic	Pyridinic N-O
Fe-MOG-MFN-C-800	88.9	7.1	0.1	2	0.57	0.29	1.14	-
Fe-MOG-MFN-C-900	88.59	8.13	0.13	2.93	0.57	-	1.97	0.38
Fe-MOG-MFN-C-1000	96	3.5	< 0.1	0.5	0.20	0.22	-	0.08