Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information for

Efficient Oxygen Reduction Reaction Electrocatalysts Synthesized from Iron-coordinated Aromatic Polymer Framework

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Figure S1

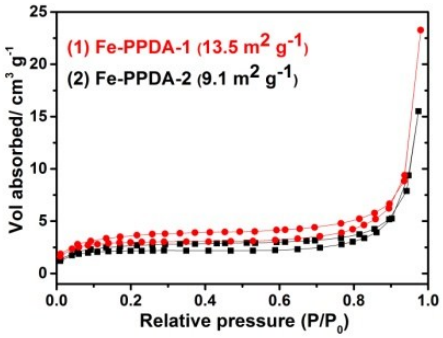

Figure S1 N_2 adsorption/desorption isotherm curves of Fe-PPDA polymers.

Figure S2

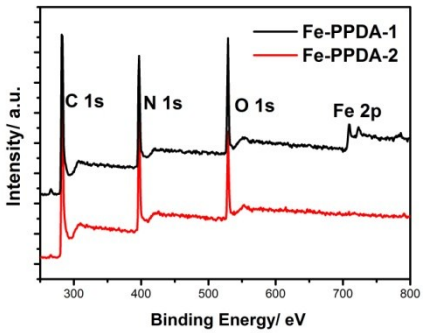

Figure S2 The XPS spectra of Fe-PPDA-1 and Fe-PPDA-2 polymers.

Figure S3

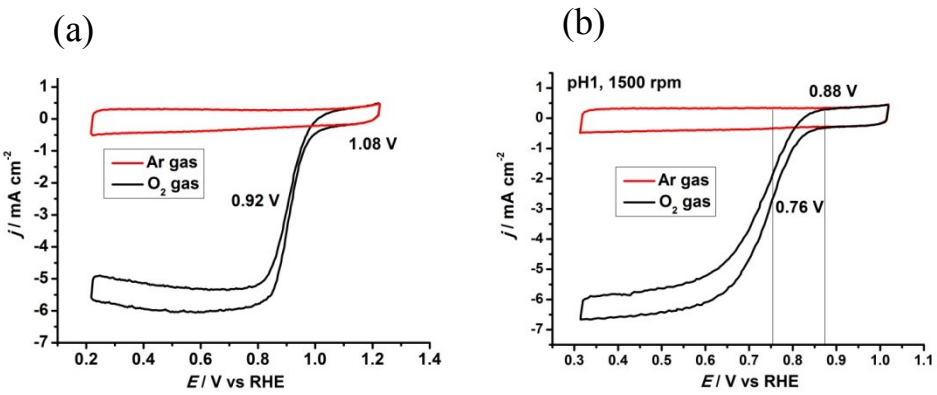

Figure S3 Original polarization curves of Fe-N_x/C-1 catalyst recorded in (a) alkaline medium (pH 13) and (b) acidic medium (pH 1) saturated with O_2 (black line) and Ar gas (red line).

Figure S4

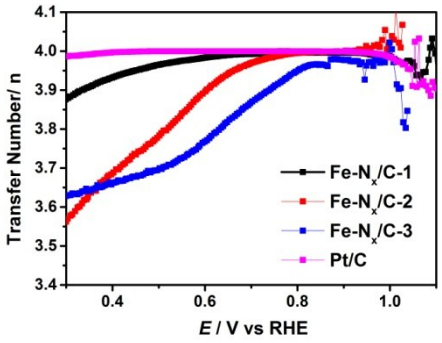

Figure S4 The calculated electron transfer numbers (n) of different Fe-N_x/C materials and commercial Pt/C from Figure 2 with the following equation: $n=I_d/(I_d+I_r/N)$.

Figure S5

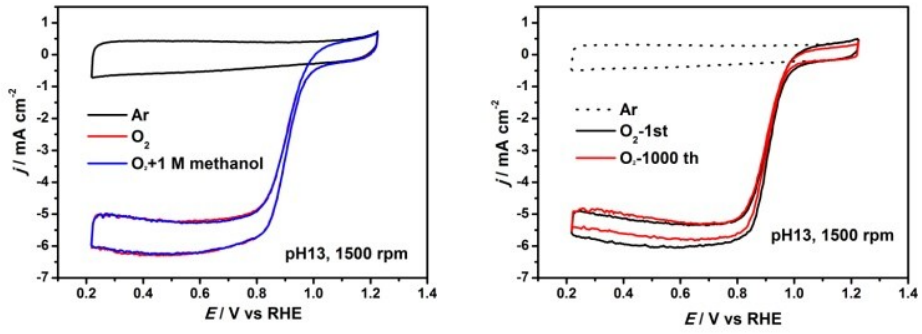

Figure S5 (a) the methanol tolerance effect and (b) stability test of Fe-N_x/C-1 catalyst in alkaline medium (pH 13).

Figure S6

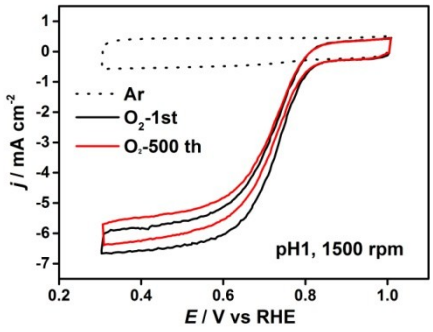

Figure S6 The ORR stability test of Fe-N_x/C-1 catalyst in acidic medium (pH 1).

Table S1 The calculated ratios of Fe, Fe^{2+}, Fe^{3+} species and total Fe^{2+} and Fe^{3+} species in the Fe-N_x/C materials.

	Fe-N_x/C-1	Fe-N_x/C-2	Fe-N_x/C-3
Fe/(Fe+Fe^{2+}+Fe^{3+}) (mol%)	6. 4%	10. 1%	15.3%
(Fe^{2+} +Fe^{3+})/(Fe+Fe^{2+}+Fe^{3+}) (mol%)	93.6%	89.9%	84.7%
Total Fe species (mol%)	0.6%	0.1%	0.3%
Total (Fe^{2+} +Fe^{3+})species (mol%)	0.56%	0.09%	0.25%