

Supplementary Information

**Facile solution synthesis of FeN_x atom clusters supported on
nitrogen-enriched graphene carbon aerogel with superb
electrocatalytic performance toward oxygen reduction reaction**

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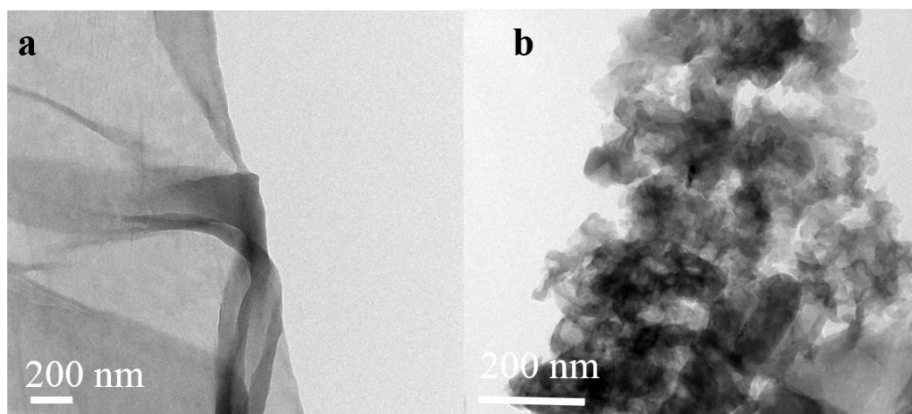


Fig. S1 TEM images of GO (a) and g-C₃N₄(b)

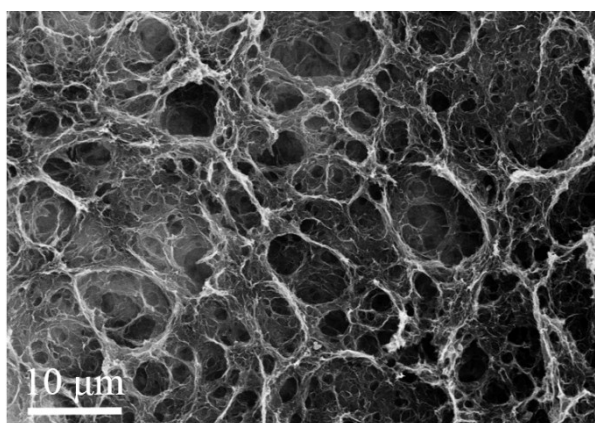


Fig. S2 SEM images of FePc-gC₃N₄/g-GEL

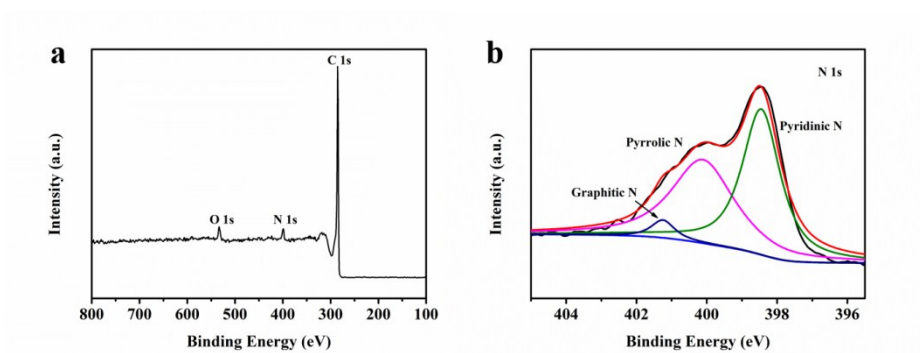


Fig. S3 XPS survey spectrum (a) and N 1s high resolution spectra (b) of CN/g-GEL.

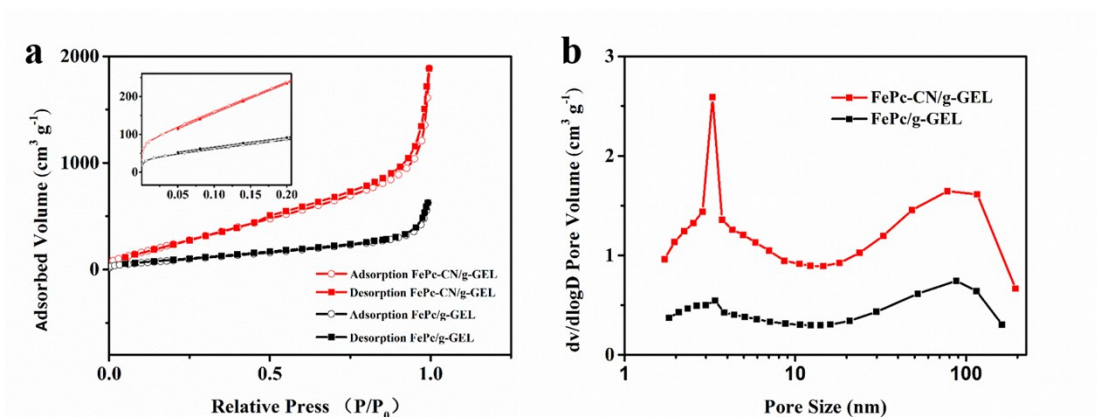


Fig.S4(a) N₂ sorption-desorption isotherms of FeNx-CN/g-GEL and FeNx/g-GEL. (b) Pore size distribution curves of FeNx-CN/g-GEL and FeNx/g-GEL

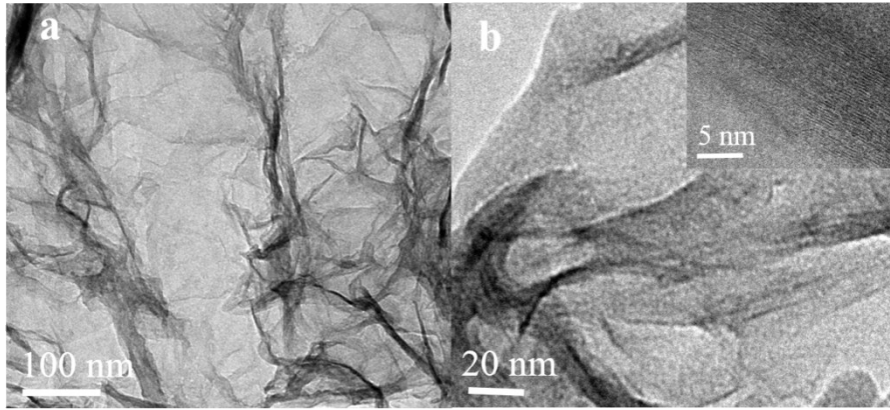


Fig. S5TEM images (a, b) and HRTEM image (the inset in Fig. S5b) of FeNx-CN/g-GEL after chronoamperometric test

Table S1 Summary of various previous reported non-platinum catalysts for ORR in 0.1 M KOH alkaline solutions.

Electrocatalysts	E_{onset}/V vs RHE	$E_{1/2}/V$ vs RHE	Reference
FeN _x -CN/g-GEL	1.0	0.90	This work
CoN-doped-CNT	0.87	0.81	1
Fe-Fe ₃ C@Fe-N-C	0.97	0.88	2
Co/N-RGO	----	0.896	3
Co@NHCC	0.938	0.837	4
NiN-dopedMG	1.0	0.85	5
Cu-Co ₂ P@2D-NPC	0.95	0.835	6
Atomic FeN _x -embedded PNC	0.997	0.86	7
Atomic Fe-NSDC	0.96	0.84	8
Atomic Fe-N-C HNSs	1.046	0.87	9
Atomic Co-N-C@F127	0.93	0.84	10
Atomic Fe-dopedZIF	----	0.864	11
Fe-N ₄ SAs/NPC	0.972	0.885	12
Co-SAS/HOPNC	----	0.892	13
Atomic Fe-N _x /HGPC	----	0.845	14

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