Electronic Supplementary Information for

Astridia velutina-like S, N-codoped hierarchical porous carbon from silk cocoon for superior oxygen reduction reaction

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Supplemental Figures and Tables

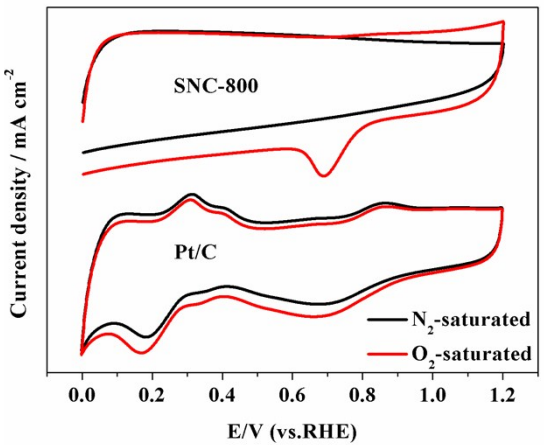

Figure S1. CV curves of SNC-800 and Pt/C electrode in N_2-saturated (black line) or O_2-saturated (red line) 0.1 M KOH.

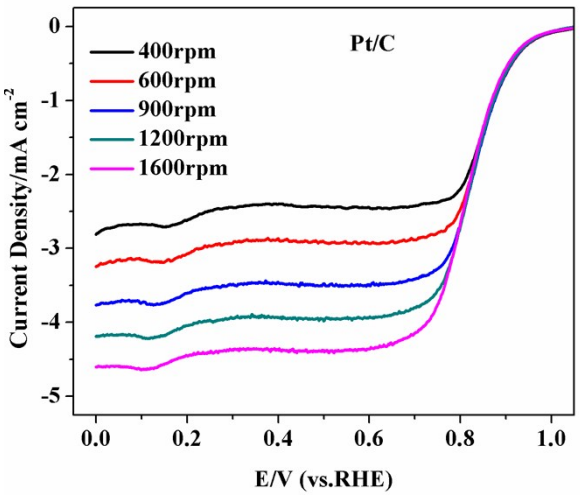

Figure S2. LSV curves of Pt/C electrode at different rotating speed in an O_2-saturated 0.1 M KOH.

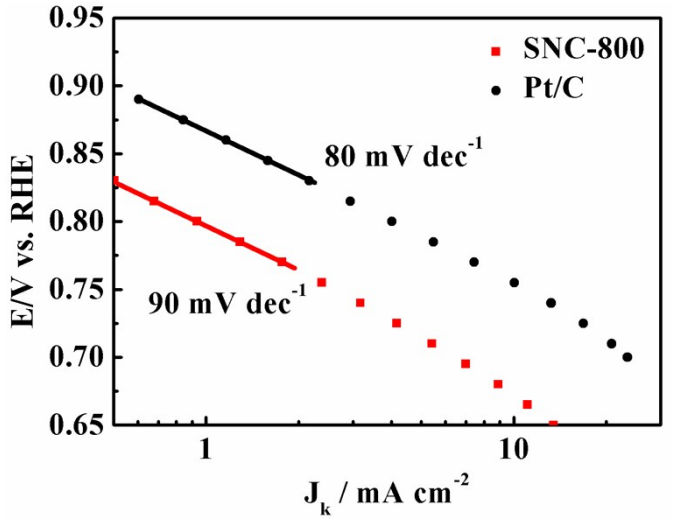

Figure S3 Tafel plots of SNC-800 derived from the corresponding LSV curves

Table S1. Comparison of ORR activity of different non-metal catalysts in 0.1 mol L^{-1} KOH electrolyte.

As known, different electrochemical measurement methods have different influences on onset and half-wave potential of electrocatalysts. Therefore, we chose ΔE_{onset} and $\Delta E_{1/2}$ to determine the eletrocatalytic performance. We defined $\Delta E_{onset} = E_{onset}$ (Pt/C) $-E_{onset}$ (Sample) and $\Delta E_{1/2} = E_{1/2}$ (Pt/C) $-E_{1/2}$ (Sample).

Catalyst	**Loading (mg cm^{-2})**	**ΔE_{onset} (mV)**	**$\Delta E_{1/2}$ (mV)**	**Reference**
NG-SCC_f	0.24	124	101	This work
G-CBP-a	—	160	90	J. Mater. Chem. A 2014, 2, 7742.
NCNC700/900	0.10	100	—	Adv. Mater. 2012, 24, 5593.
NGSH	0.25	80	~60	Small 2014, 10, 2251.
NG-900	0.14	70	—	Phys. Chem. Chem. Phys. 2012, 14, 3381.
CNF@NG	0.45	100	~70	Angew. Chem. Int. Ed. 2014, 53, 6905.
PCN-CFP	~0.20	50	130	Angew. Chem. Int. Ed. 2014, 53, 1.
N-MLG-45	—	60	~75	Carbon 2014, 76, 1.
GD_5-900	—	~90	~90	Nanoscale 2015, 7, 12598.