Supporting information

Impact of different lignin sources on nitrogen-doped porous carbon toward the electrocatalytic oxygen reduction reaction

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1. Supplemental tables

Table S1 Contents of each element analysed by XPS

Sample	C (at%)	O (at%)	N (at%)	S (at%)
ELC-900	89.71	8.31	1.80	0.18
ELC-1-900	85.72	6.21	7.73	0.33
ELC-2-900	86.31	5.32	8.32	0.14
ELC-4-900	84.08	5.64	10.02	0.27
ELC-1-800	80.63	8.14	10.93	0.31
ELC-1-1000	88.18	6.75	4.83	0.24

Table S2 Comparison of the ORR properties of ELC-1-900 and other nonmetallic catalysts under alkaline conditions

Sample	$E_{1/2}$ (V)	E_{onset} (V)	Reference
N–S–C 900	0.83	0.97	[1]
N–S/C_700	0.75	0.80	[2]
Fe_2-N/CNTs-850 °C	0.846	0.972	[3]
Fe_5C_2/Mn, N, S-CNTs	0.85	1.04	[4]
AL-Ni/Co@GC	0.81	0.97	[5]
ELC-1-900	0.88	0.98	This work

2. References

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