Supporting Information

Ion-biosorption induced core-shell Fe_2P@carbon nanoparticles decorated on N, P co-doped carbon materials for oxygen evolution reaction

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Table S1 The atomic composition of samples tested by XPS

Sample name	Atomic composition (%) (XPS)				
	C	N	P	Fe	O
NPC-1	83.69	4.33	2.26	0.00	9.32
NPC-2	84.2	4.84	1.66	0.58	8.73
S-800	71.91	5.37	2.44	4.01	16.28

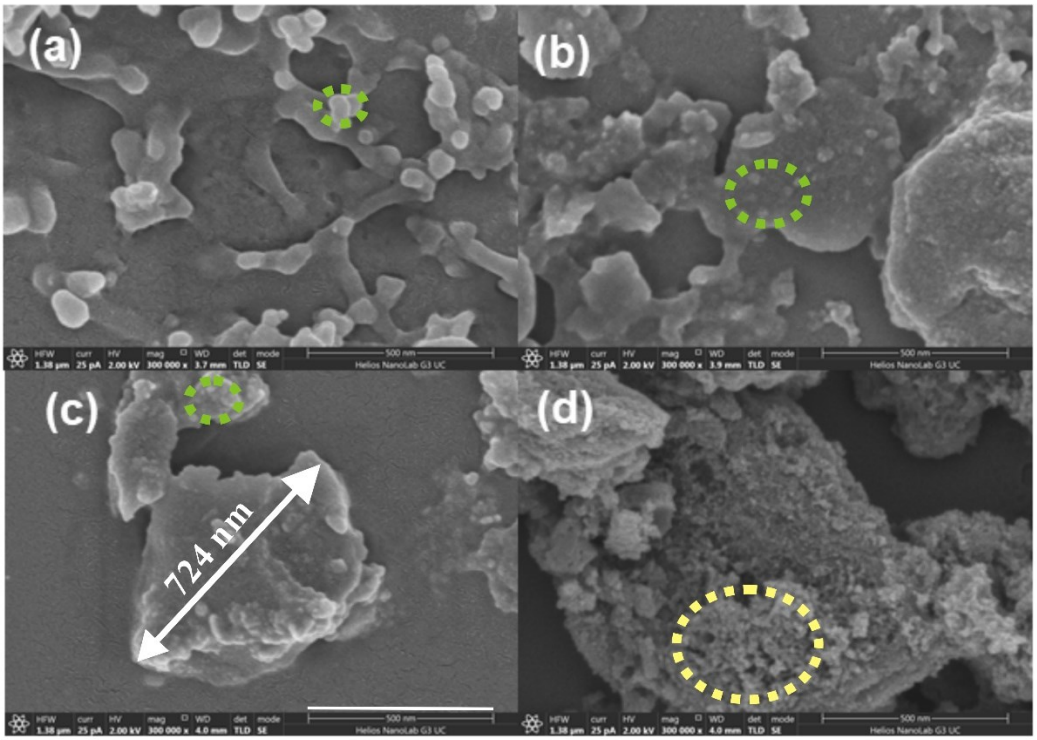

Fig. S1 The SEM images of S-500, S-600, S-700 and S-800 at the scale bar of 500 nm

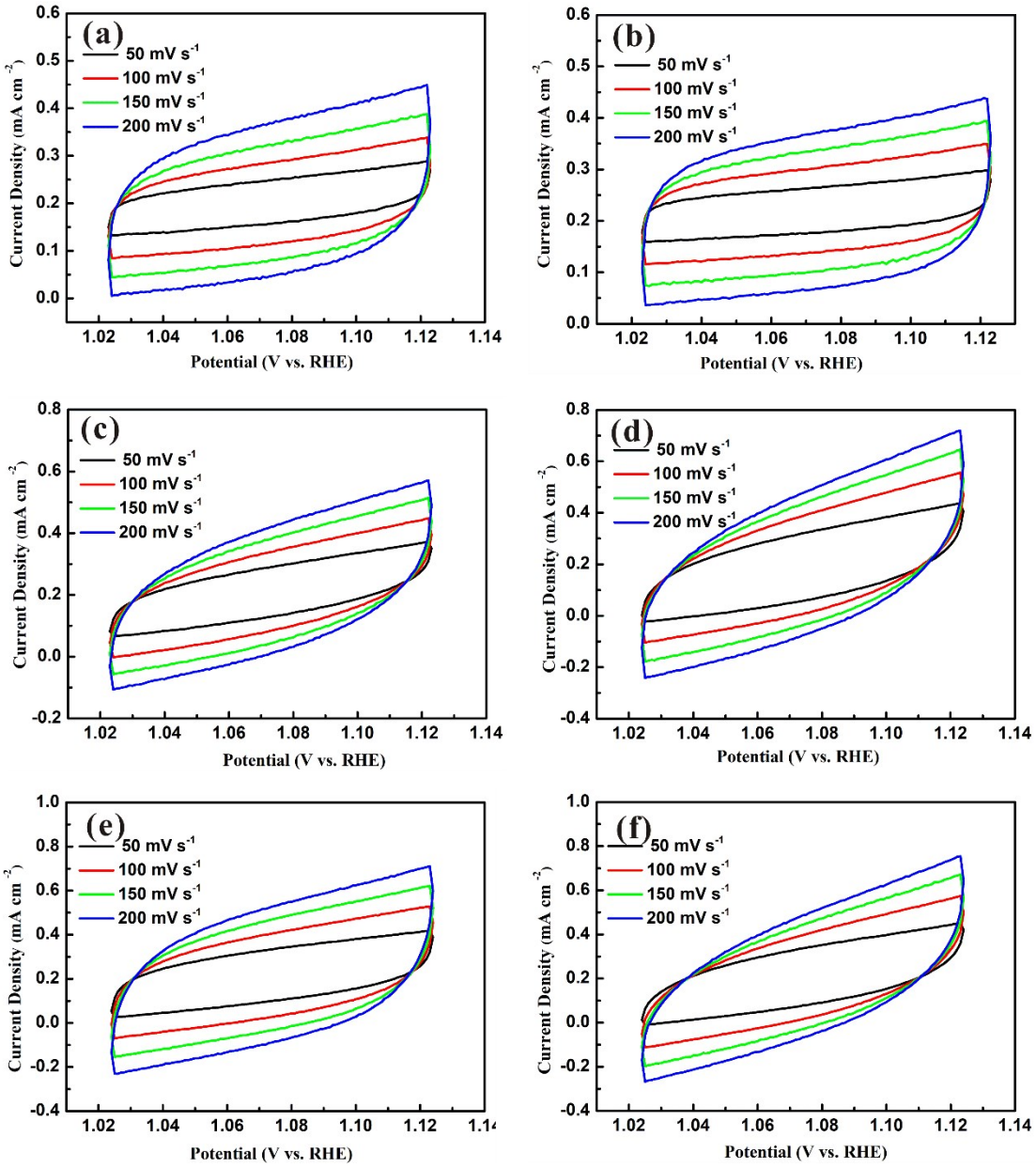

Fig. S2 CV curves of S-500 (a), S-600 (b), S-700 (c), S-800 (d), NPC-1 (e) and NPC-2 (f) obtained at 50, 100, 150 and 200 mV s^{-1} in the range of 1.023−1.123 V vs. RHE.

Table S2 Summary of electrochemical parameters of metal phosphides using common synthesis method for oxygen evolution reaction

Sample	Precursor	$\eta_{j = 10\ mA\ cm^{-2}}$	Electrolyte	Ref.
FeP	Fe-PA	300 mV	0.1 M KOH	1
FeP@GPC	Fe-MIL-88	278 mV	1.0 M KOH	2
CoP@NPCSs	Co(II)-PDA	350 mV	1.0 M KOH	3
$Fe_{2-x}Mn_xP$	$Fe(CO)_5$	440 mV	1.0 M KOH	4
FeP_x	$Fe(acac)_3$	320 mV	1.0 M KOH	5
NiFeP	NiFe-PA	315 mV	1.0 M KOH	6
Fe_2P@NPC	$Fe(NO_3)_3•9H_2O$	550 mV	1.0 M KOH	7
Fe_2P	$FeCl_3$	497mV	1.0 M KOH	8
Fe_2P@NC	Melamine	415 mV	1.0 M KOH	9
Co_2P@NC-Fe_2P-3	FeHP-ZIF-67-3	290mV	1.0 M KOH	10
Fe_2P	E. coli BL21	266 mV	1.0 M KOH	This work

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