Salt induced silk gel derived N and trace Fe co-doped 3D porous carbon as oxygen reduction catalyst in microbial fuel cells

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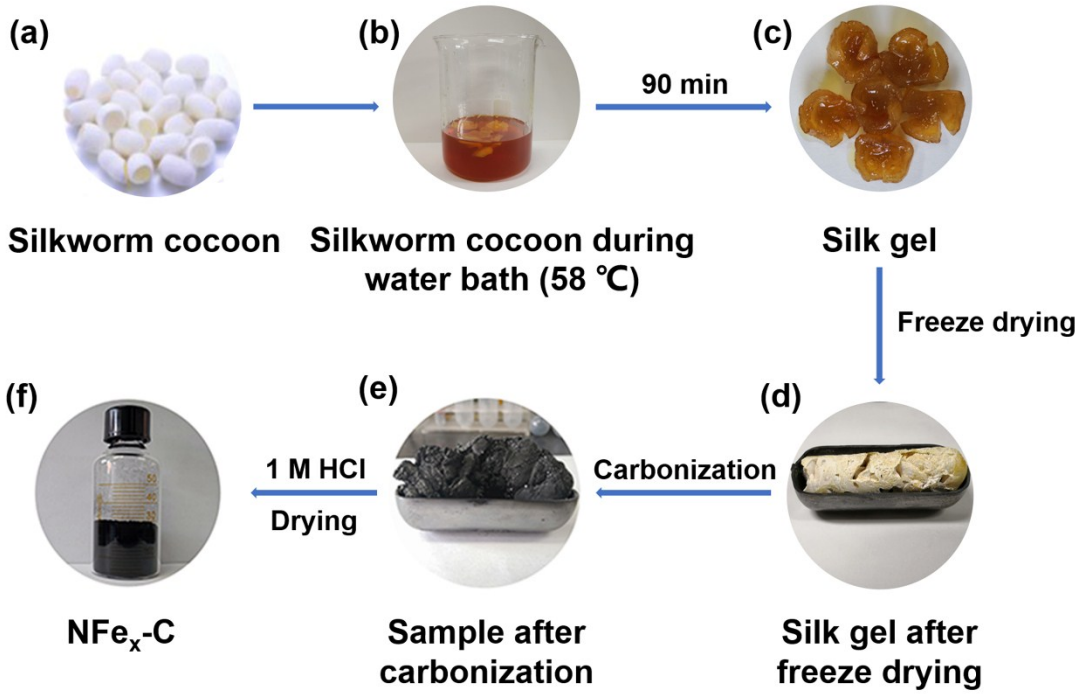

Fig. S1 Morphologies of various samples in process of preparing catalysts.

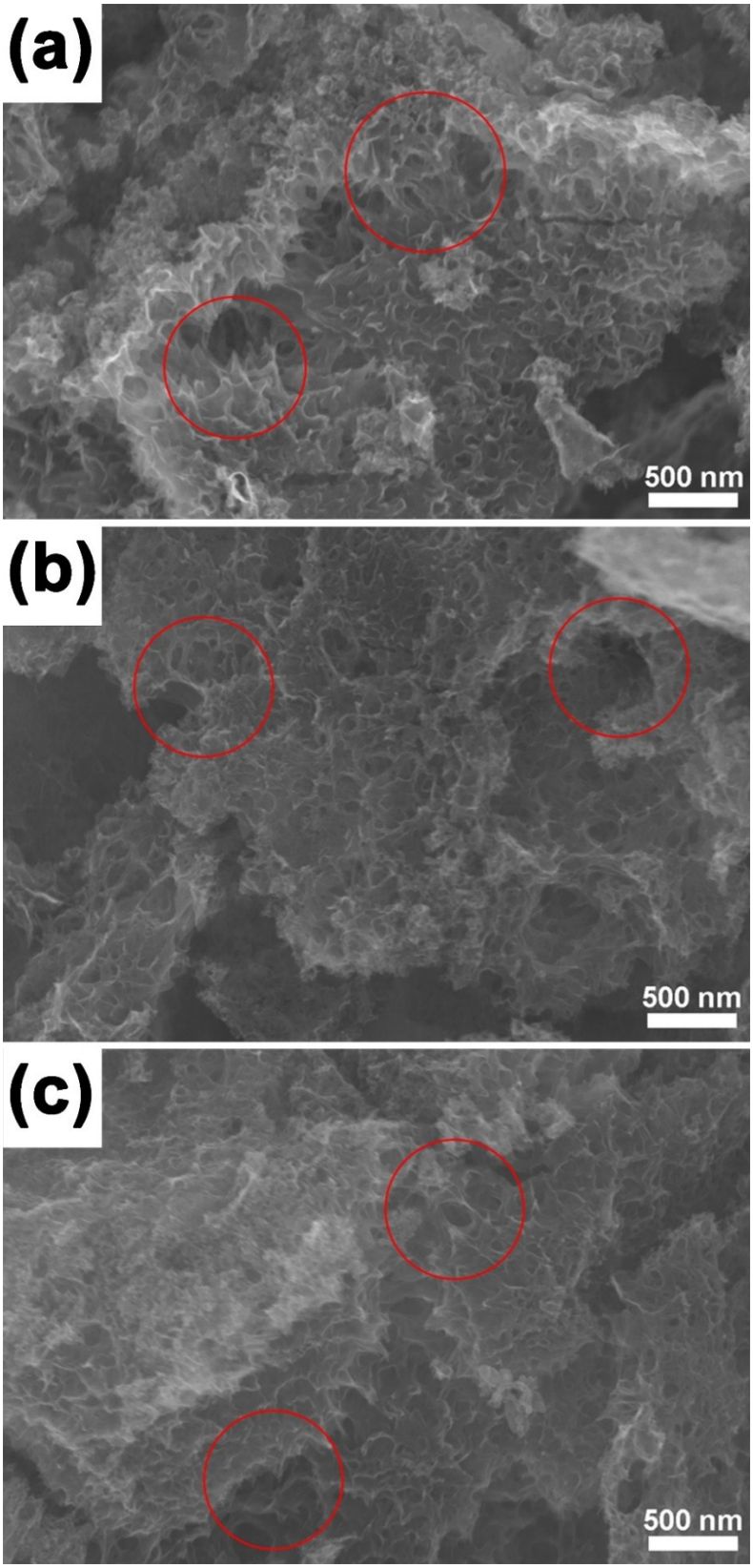

Fig. S2 SEM images of (a) N-C, (b) $NFe_{0.5}$-C and (c) $NFe_{1.0}$-C. The 3D porous structure of carbon materials (in red circles).

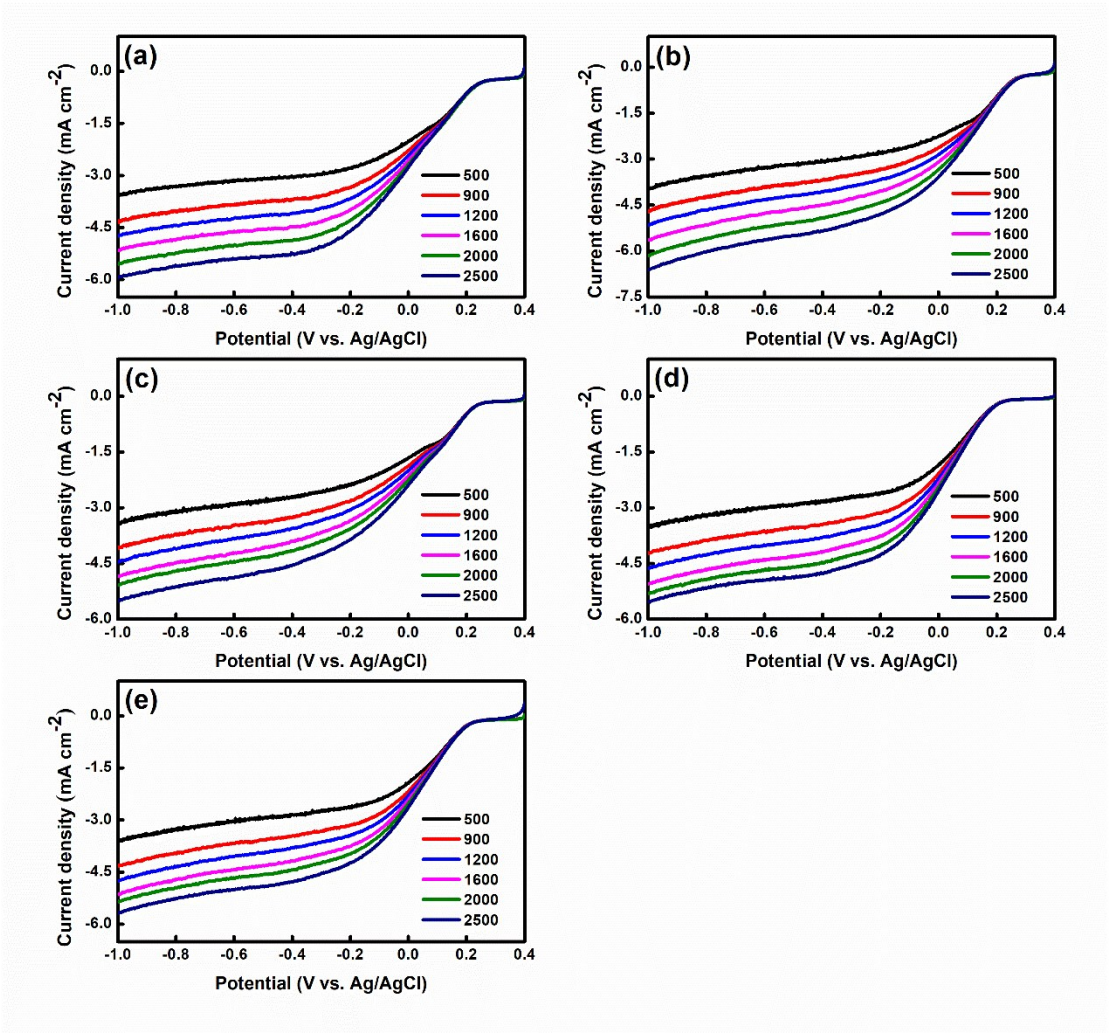

Fig. S3 LSVs of (a) N-C, (b) $NFe_{1.0}$-C, (c) $NFe_{2.0}$-C, (d) $NFe_{3.0}$-C and (e) $NFe_{4.0}$-C at different rotation speeds.

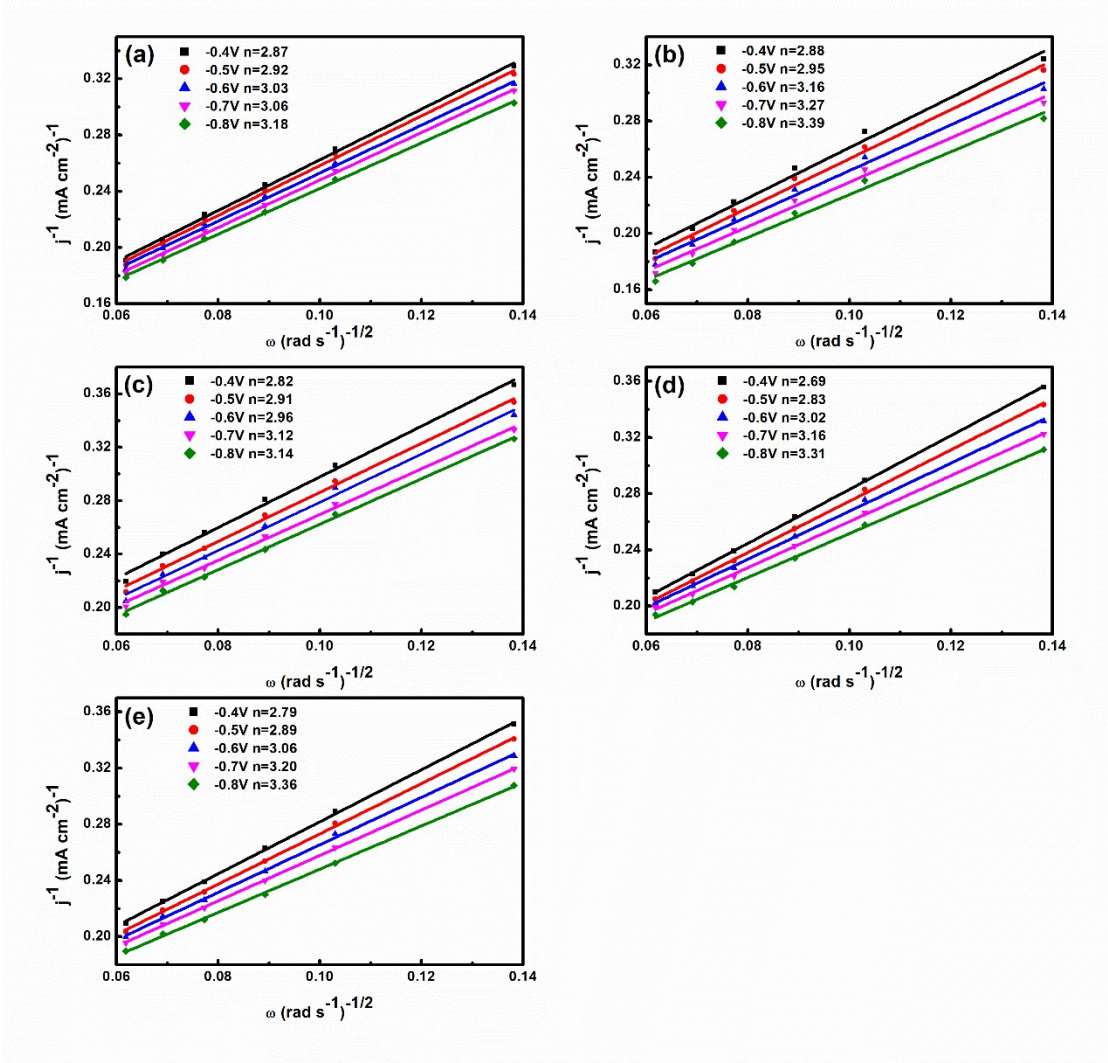

Fig. S4 The fitting plots of Koutecky-Levich from LSV plots of (a) N-C, (b) $NFe_{1.0}$-C, (c) $NFe_{2.0}$-C, (d) $NFe_{3.0}$-C and (e) $NFe_{4.0}$-C.