Supplementary Information

for

Facile Synthesis of Fe$_3$O$_4$/Nitrogen-Doped Carbon Hybrid Nanofibers as a Robust Peroxidase-like Catalyst for Sensitive Colorimetric Detection of Ascorbic Acid

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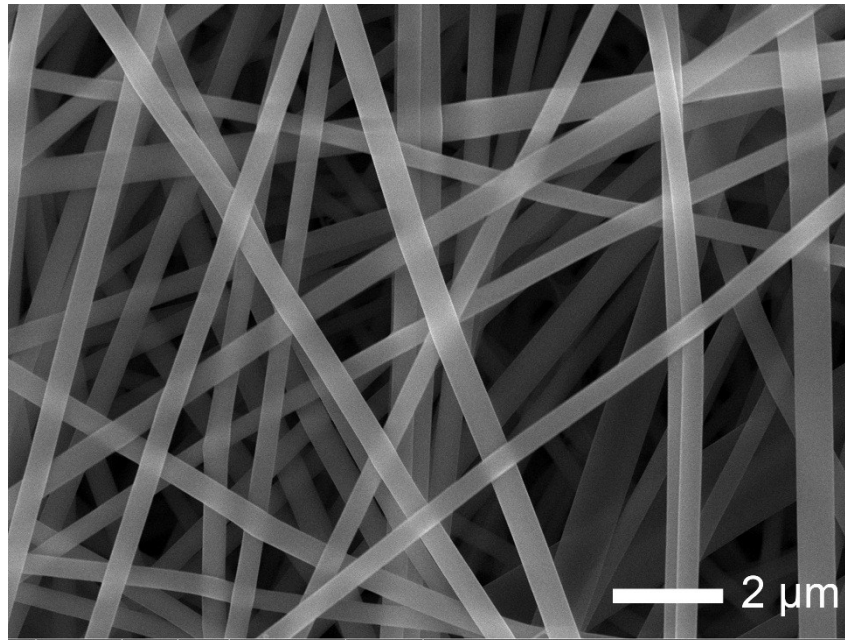
*Corresponding author: X.F.L. (xflu@jlu.edu.cn)

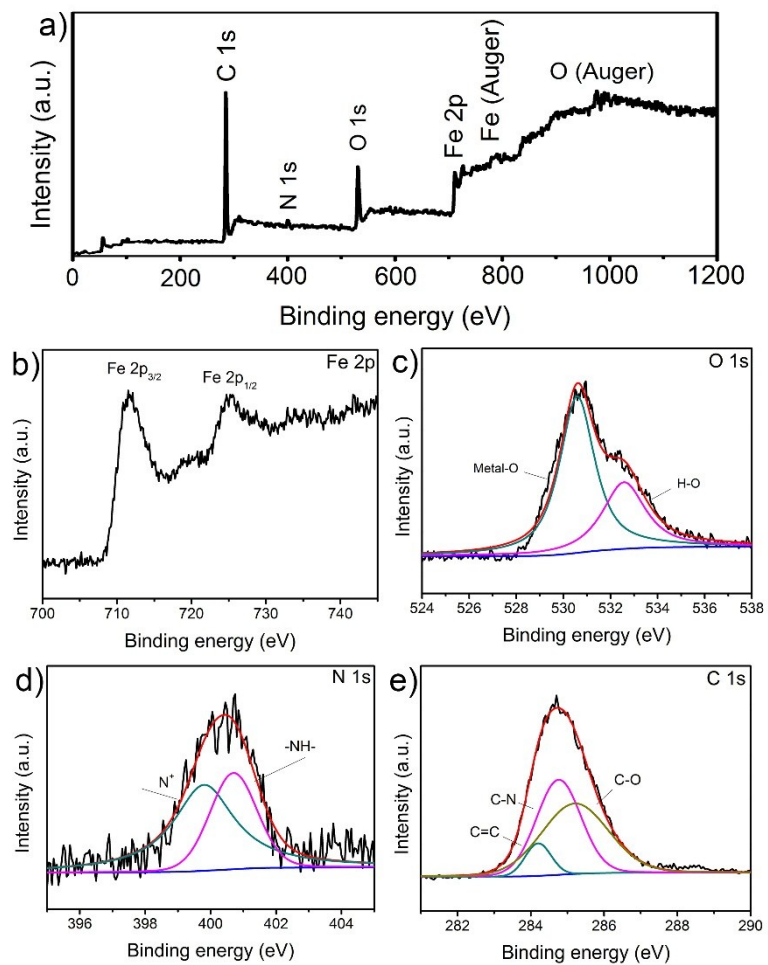**Figure S1.** SEM image of the electrospun PVP/Fe(NO$_3$)$_3$ composite nanofibers.

Figure S2. XPS spectra of the prepared α-Fe$_2$O$_3$/PPy nanofibers: (a) full survey spectrum, (b) Fe 2p, (c) O 1s, (d) N 1s and (e) C 1s regions.
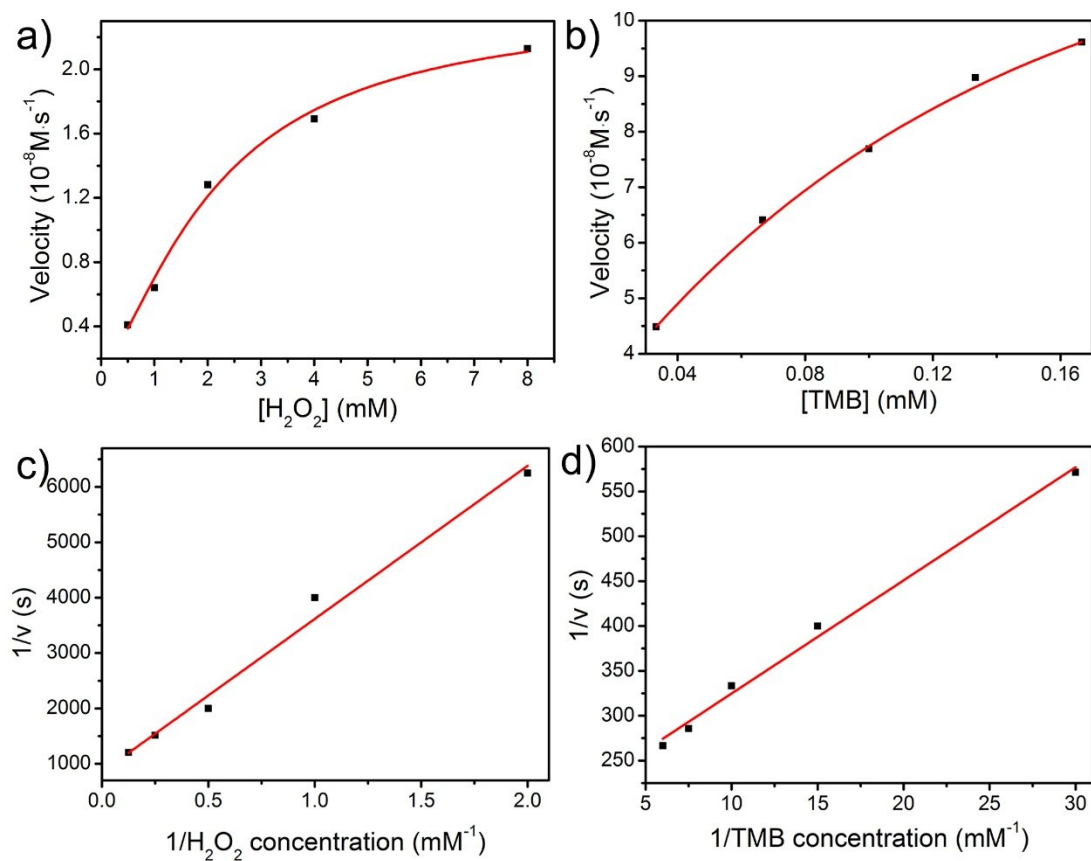
Figure S3. Steady-state kinetic assay of Fe_3O_4/N-C hybrid nanofibers. (a) TMB concentration was kept constant at 0.1 mM and the H_2O_2 concentrations was varied. (b) H_2O_2 concentration was maintained at 65 mM and the TMB concentration was varied. Double reciprocal plots of catalytic activities for the two substrates (c) H_2O_2 and (d) TMB.
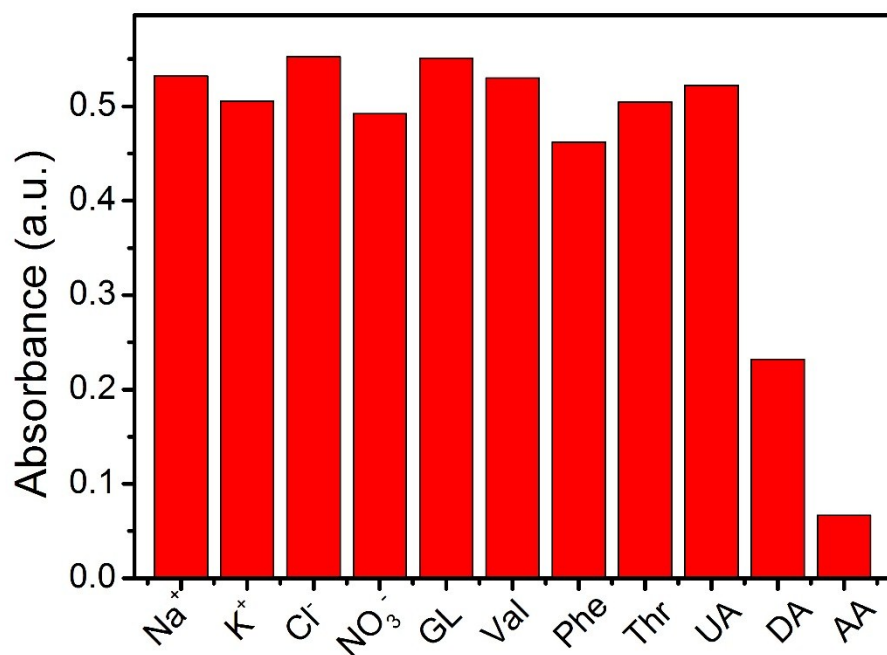
Figure S4. The values of absorbance at 650 nm in diverse systems containing fixed concentrations of TMB (0.1 mM), H_2O_2 (65 mM), catalyst solution (20 μg/mL) with AA (50 μM) or other different interferential substances (50 μM) on 10 min.