Supplementary Information
for

Facile Synthesis of Fe₃O₄/Nitrogen-Doped Carbon Hybrid Nanofibers as a Robust Peroxidase-like Catalyst for Sensitive Colorimetric Detection of Ascorbic Acid

Yanzhou Jiang,ᵃ Na Song,ᵃ Ce Wang,ᵃ Nicola Pinna,ᵇ and Xiaofeng Lu*,ᵃ

ᵃAlan G. MacDiarmid Institute, College of Chemistry, Jilin University, Changchun, 130012, P. R. China.

ᵇInstitut für Chemie and IRIS Adlershof, Humboldt-Universität zu Berlin, Brook-Taylor-Straße 2, 12489 Berlin, Germany.

*Corresponding author: X.F.L. (xflu@jlu.edu.cn)
Figure S1. SEM image of the electrospun PVP/Fe(NO₃)₃ composite nanofibers.
Figure S2. XPS spectra of the prepared α-Fe₂O₃/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 Fe₃O₄/N-C hybrid nanofibers. (a) TMB concentration was kept constant at 0.1 mM and the H₂O₂ concentrations was varied. 
(b) H₂O₂ concentration was maintained at 65 mM and the TMB concentration was varied. Double reciprocal plots of catalytic activities for the two substrates (c) H₂O₂ and (d) TMB.
Figure S4. The values of absorbance at 650 nm in diverse systems containing fixed concentrations of TMB (0.1 mM), H$_2$O$_2$ (65 mM), catalyst solution (20 µg/mL) with AA (50 µM) or other different interferential substances (50 µM) on 10 min.