Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.
This journal is © The Royal Society of Chemistry 2018
Please do not adjust margins

PAPER

Oxidase-mimicking activity of perovskite $LaMnO_{3+\delta}$ nanofibers and their application for colorimetric sensing

Received 00th January 20xx,
Accepted 00th January 20xx

DOI: 10.1039/x0xx00000x

www.rsc.org/

Lifei Song, Yun Zhu, Zezhou Yang, Ce Wang, Xiaofeng Lu*

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

Corresponding Author: xflu@jlu.edu.cn

Please do not adjust margins

Please do not adjust margins

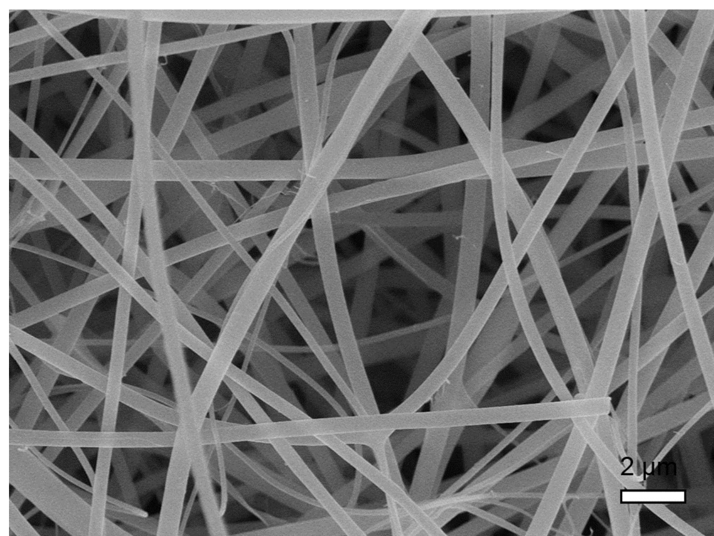

Fig. S1. SEM image of the electrospun PVP/$La(NO_3)_3$/$Mn(Ac)_2$ nanofibers.

This journal is © The Royal Society of Chemistry 20xx

Please do not adjust margins

Please do not adjust margins

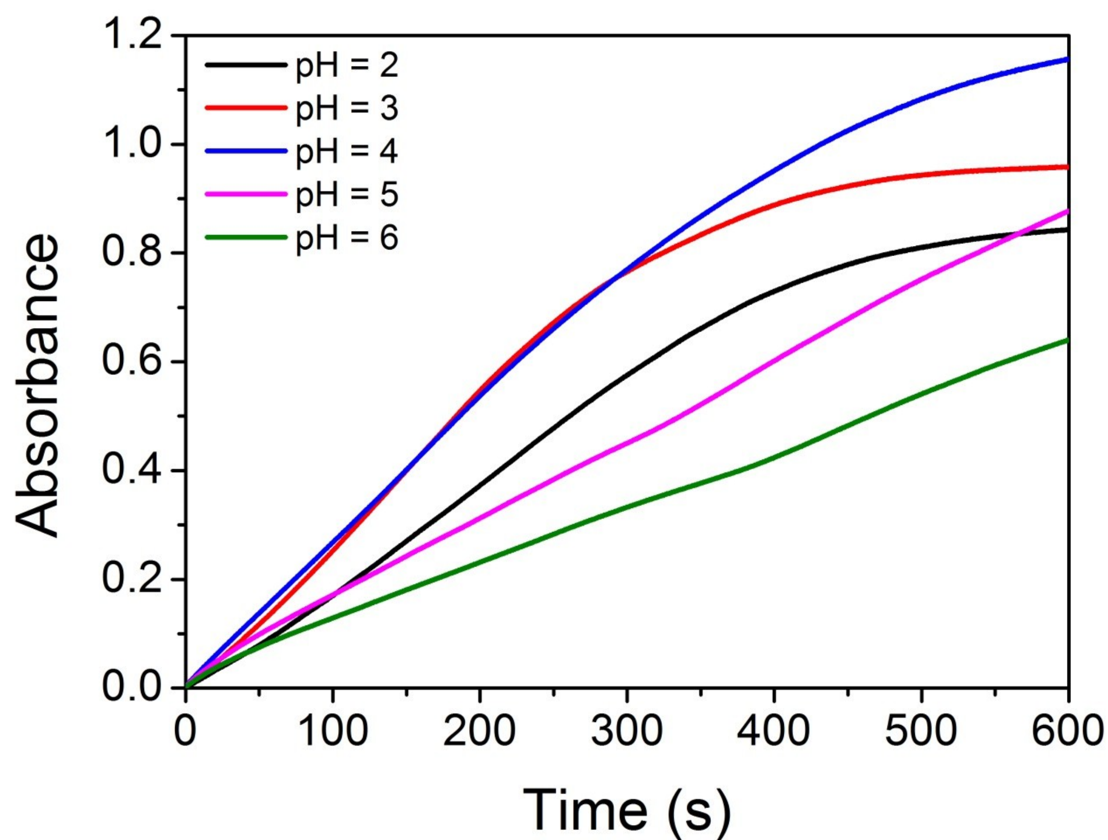

Fig. S2. The oxidase-like catalytic activity of the catalyst in acetate buffer solution with diverse pH values.

This journal is © The Royal Society of Chemistry 20xx

Please do not adjust margins

Please do not adjust margins

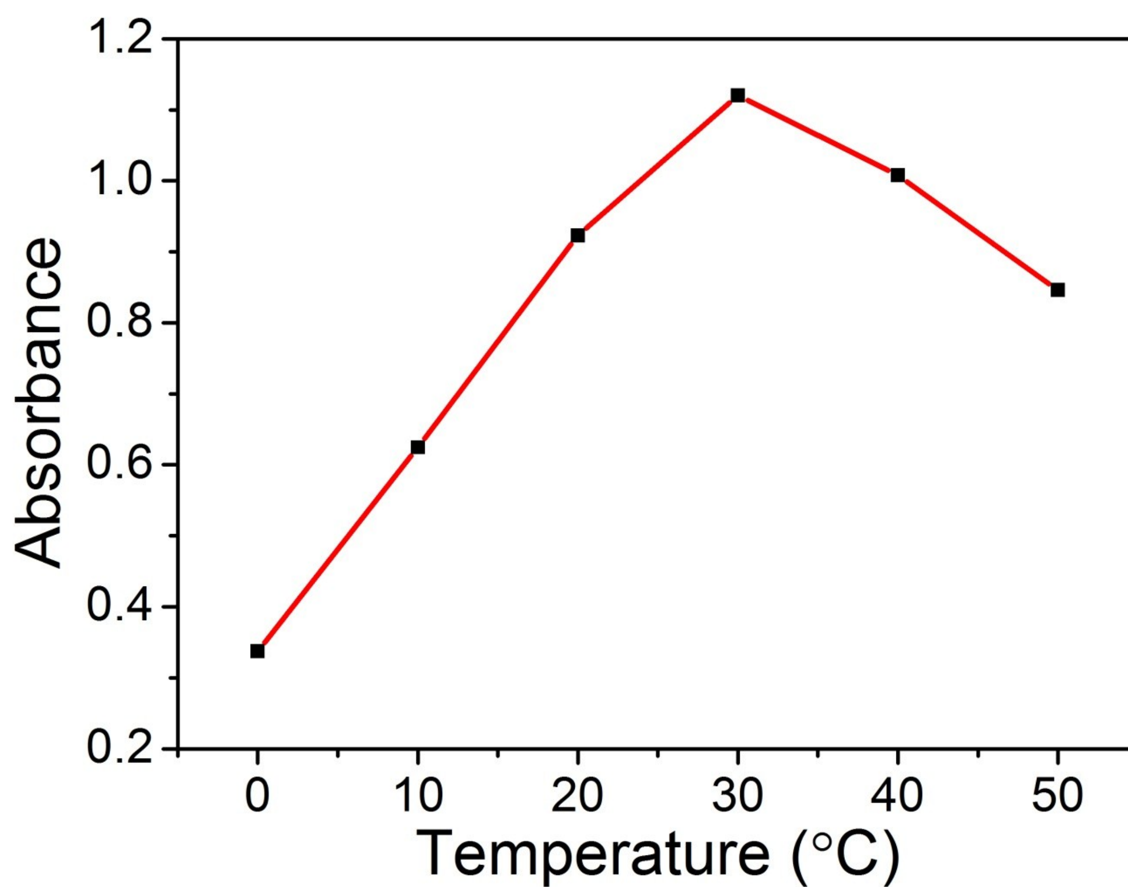

Fig. S3. Dependence of the oxidase-like activity of perovskite $LaMnO_{3+\delta}$ nanofibers on the temperature.

This journal is © The Royal Society of Chemistry 20xx

Please do not adjust margins

Please do not adjust margins

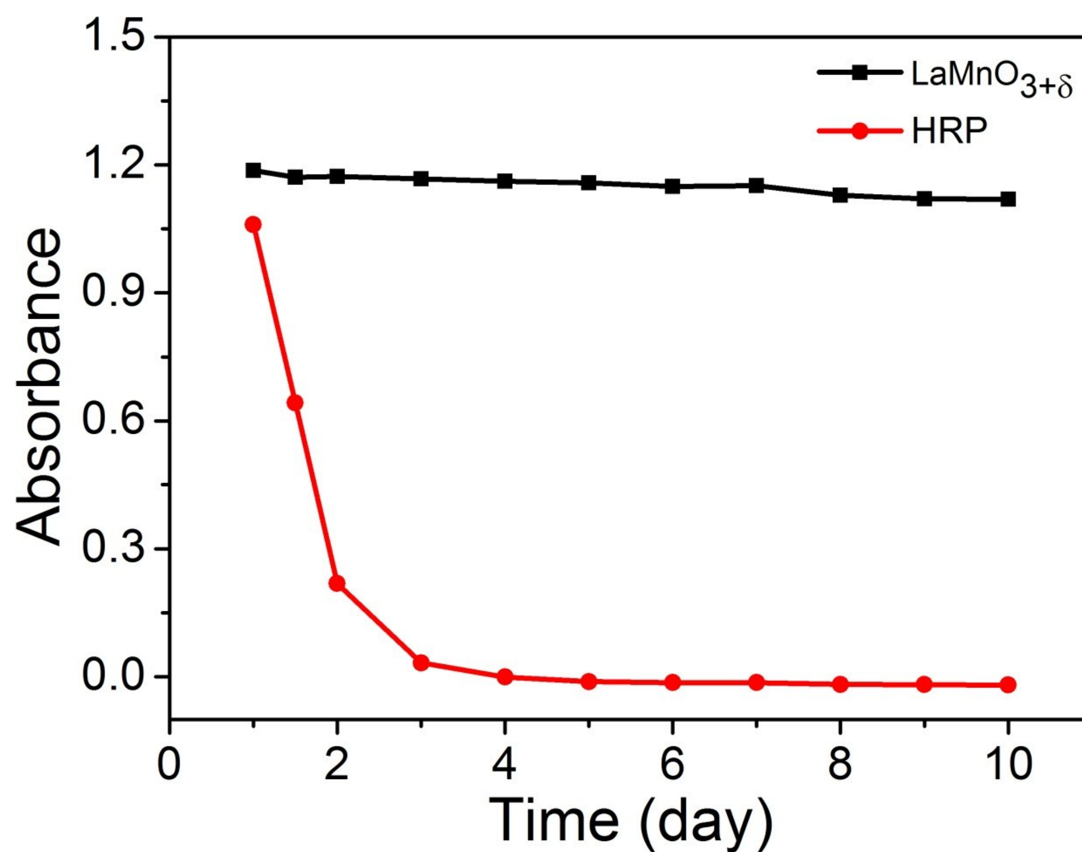

Fig. S4. Long-term stability of $LaMnO_{3+\delta}$ nanofibers and HRP for enzyme mimicking. The upper system contains 20 μg/mL of $LaMnO_{3+\delta}$ nanofibers and 0.1 mM TMB in an acetate buffer solution (pH = 4) and the bottom system contains 40 ng/mL of HRP, 0.1 mM TMB and 65 mM H_2O_2 in an acetate buffer solution (pH = 4).

This journal is © The Royal Society of Chemistry 20xx

Please do not adjust margins

Please do not adjust margins

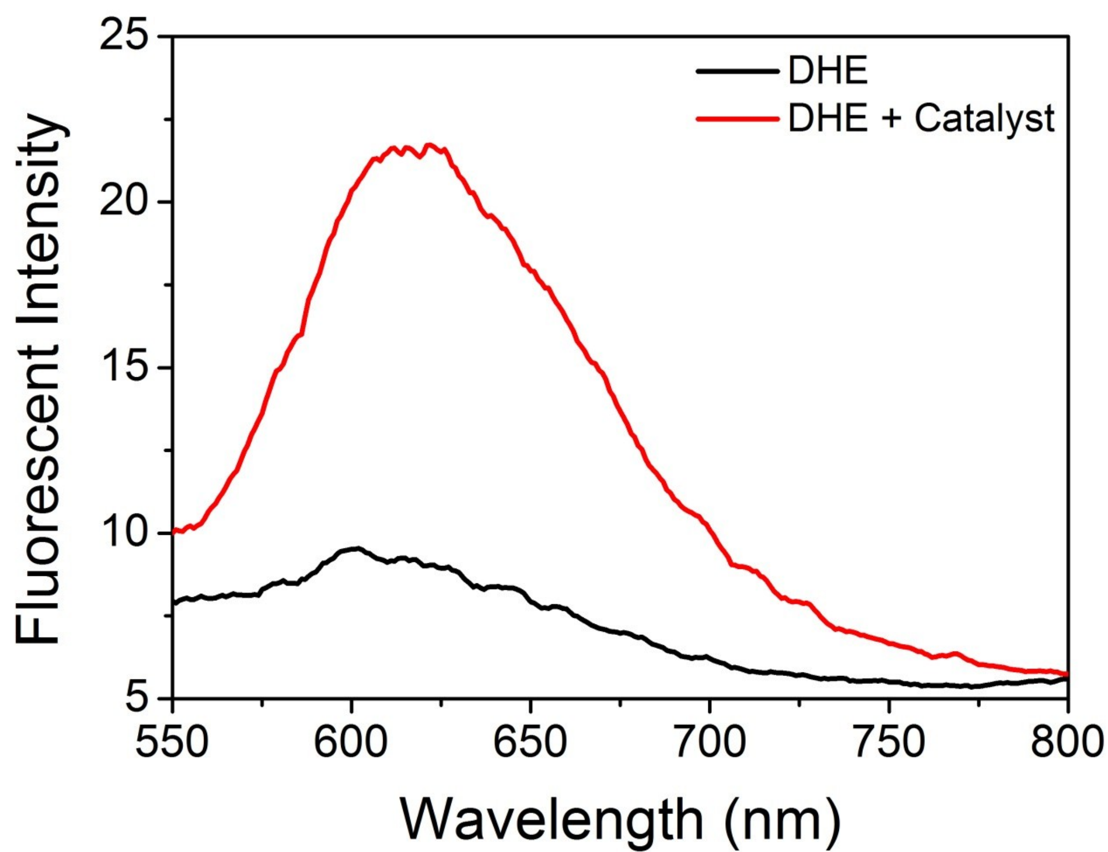

Fig. S5. The fluorescent spectrum of the specific detection of ROS using DHE as fluorescence probes. λ_{ex} = 500 nm.

This journal is © The Royal Society of Chemistry 20xx

Please do not adjust margins

Please do not adjust margins

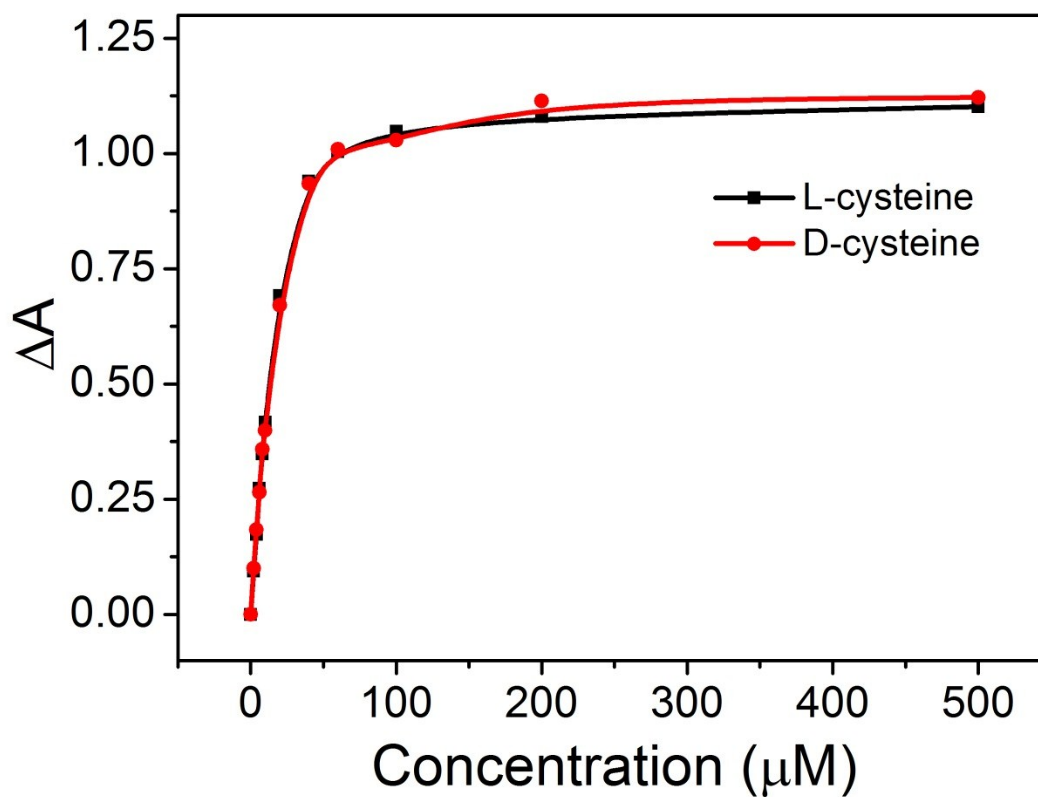

Fig. S6. Comparison of the absorbance evolution at 651 nm of the oxidation of TMB after 10 min with the existence of L-cysteine or D-cysteine at different concentrations.

Please do not adjust margins

Please do not adjust margins

Table S1. Determination of L-cysteine concentration in the serum sample.

Serum sample (150-folds diluted)	Without spiking (μM) ± SD (n=3)	L-cysteine spiking (μM)	Inhibitor measured (μM) ±SD (n=3)	Recovery (%)
		4	8.209±0.057	101.3
Sample	4.155±0.236	6	10.047±0.237	98.2
		8	12.171±0.258	100.2

This journal is © The Royal Society of Chemistry 20xx

Please do not adjust margins