## **Supporting information**

Novel Scandium-MOF Nanocrystals as Peroxidase-mimicking Nanozymes for Highly Sensitive Colorimetric Detection of Ascorbic Acid in Human Serum

Yiqian Su<sup>a</sup>, Hongjiao Wu<sup>a</sup>, Jiaqi Chen<sup>a</sup>, Huiqin Li<sup>a</sup>, Pengcheng Lin<sup>a,\*</sup>, Wei Xiao<sup>b</sup> and

Donglin Cao<sup>b,\*</sup>

<sup>a</sup>Guangdong Provincial Key Laboratory on Functional Soft Condensed Matter,

Materials and Energy School, Guangdong University of Technology

Panyu District, Guangzhou, 510006, China

E-mail: pclin@gdut.edu.cn

<sup>b</sup>Department of Laboratory Medicine, Guangdong Second Provincial General Hospital,

Guangzhou, 510317, China

E-mail: xkevent@foxmail.com, caodl@126.com

Figure S1	Zeta potential of the Sc-MOF nanozyme dispersion.	3
Figure S2	EDX-analysis of the element composition of the Sc-MOF nanozyme.	4
Table S1	The element composition of Sc-MOF nanozyme.	5
Figure S3	Full-survey-scan spectrum of the Sc-MOF nanozyme sample.	6
Figure S4	The gradually deepened color of dispersion containing TMB and $H_2O_2$ along with the increased concentration of Sc-MOF nanozyme from 0 to 50 mg L <sup>-1</sup> , a-g: 0, 0.5 mg L <sup>-1</sup> , 2 mg L <sup>-1</sup> , 5 mg L <sup>-1</sup> , 10 mg L <sup>-1</sup> , 25 mg L <sup>-1</sup> and 50 mg L <sup>-1</sup> .	7
Fig S5	Zeta potential of the binary Sc-MOF nanozyme-TMB dispersion.	8



Figure S1. Zeta potential of the Sc-MOF nanozyme dispersion.



Figure. S2. EDX-analysis of the element composition of the Sc-MOF nanozyme.

Elements	At%
С	29.04
0	59.46
Sc	11.50
Total	100.00

Table S1. The element composition of Sc-MOF nanozyme.



Figure. S3. Full-survey-scan spectrum of the Sc-MOF nanozyme.



Figure. S4. The gradually deepened color of dispersion containing TMB and  $H_2O_2$  along with the increased concentration of Sc-MOF nanozyme from 0 to 50 mg L<sup>-1</sup>, a-g: 0, 0.5 mg L<sup>-1</sup>, 2 mg L<sup>-1</sup>, 5 mg L<sup>-1</sup>, 10 mg L<sup>-1</sup>, 25 mg L<sup>-1</sup>and 50 mg L<sup>-1</sup>.



Figure. S5. Zeta potential of the binary Sc-MOF-TMB dispersion.