

Supporting information for

**Deep eutectic solvents-assisted synthesis of La-Ce hybrid nanorods for the
colorimetric determination of tetracycline in foods**

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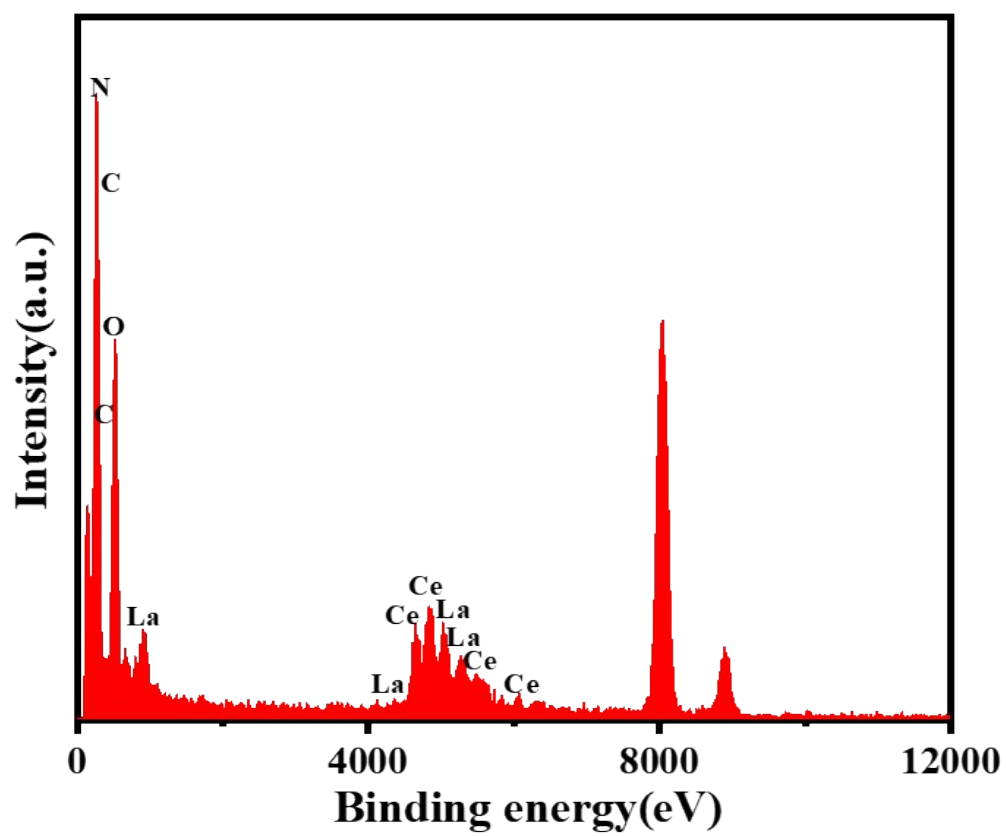


Fig. S1. EDX spectra of the La-Ce Nanorods.

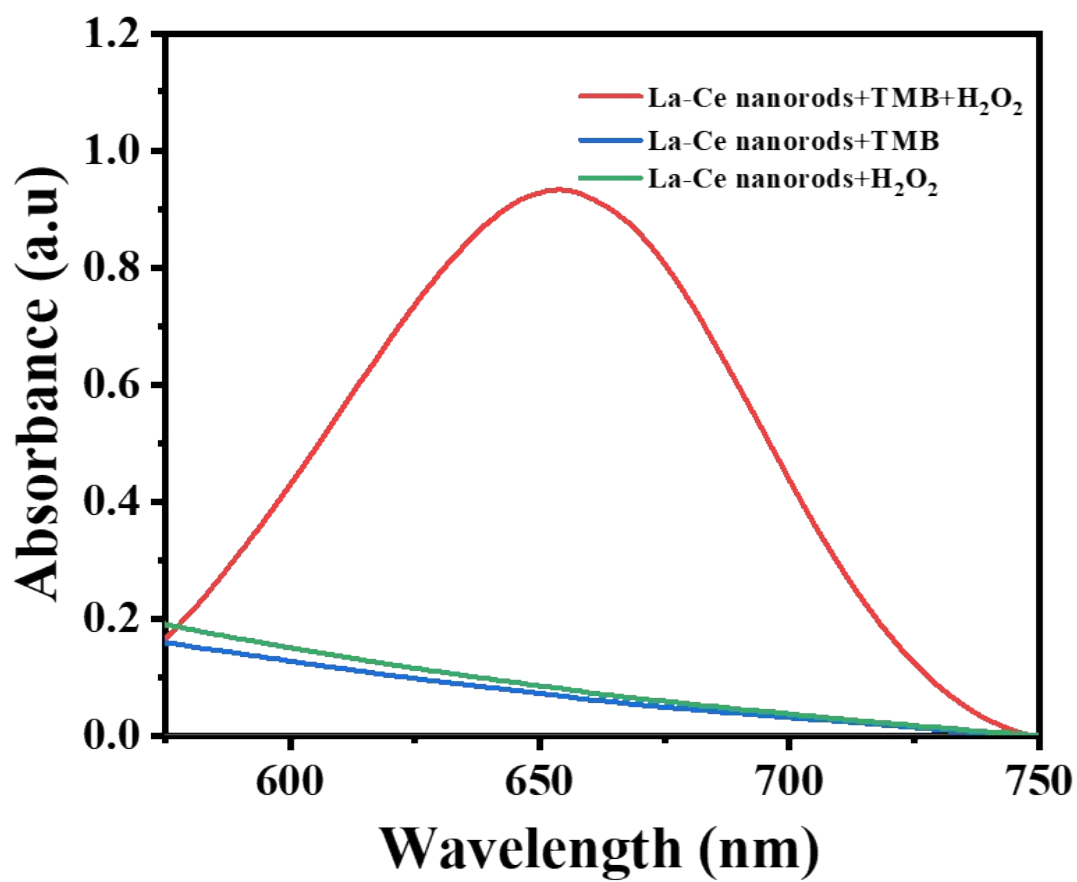


Fig. S2. UV-Vis spectra of La-Ce nanorods in different reaction solution.

Table S1. Comparison of the kinetic parameters of the peroxidase-like enzymes of La-Ce Nanorods with other nanoenzymes.

Materials	Digestive substance	K_m (mM)	V_{max} ($\mu\text{M}\cdot\text{s}^{-1}$)	References
HRP	TMB	0.434	0.1	1
	H ₂ O ₂	3.7	0.087	
AuNCs-Apt	TMB	0.325	13.618	2
	H ₂ O ₂	3.664	30.991	
CeO ₂	TMB	1.5	69	3
	H ₂ O ₂	/	/	
Ce/ZnCo ₂ O ₄	TMB	0.0886	18.796	4
	H ₂ O ₂	0.553	26.18	
LaCoO ₃	TMB	0.24	36.9	5
	H ₂ O ₂	15	35	
La-Ce nanorod	TMB	0.723	0.206	This work
	H ₂ O ₂	0.727	0.0282	

Table S2. Comparison of analytical performance of different methods for the determination of La-Ce Nanorods.

Material	Linearity range (μM)	LOD (μM)	Type of enzyme-like activity	Methods	References
Eu-based MOF	0.05-60	0.003	Peroxidase-like enzyme	Fluorescence method	6
Fe@Co-N-SPC and DNAzyme	0.0022-9	0.75	Peroxidase-like enzyme	Colorimetric method	7
Ru@V ₂ O ₄ nanowires	1-500	0.778	Oxidase-like enzyme; Peroxidase-like enzyme; Catalase-like enzyme; Superoxide dismutase	Colorimetric method	8
Pt/CeO ₂	0.5-30	0.080	Oxidase-like enzyme	Colorimetric method	3
Mn@Co ₃ O ₄ NSs	1.0-8.0	0.40	Peroxidase-like enzyme	Colorimetric method	9
Co-CQDs	10-400	0.27	Peroxidase-like enzyme	Fluorescence colorimetric dual determination method	10
DNAzyme	0.0105-1	3.2	Peroxidase-like enzyme	Fluorescence colorimetric dual determination method	11
Ta ₂ O ₅ -Asp-GQD-Pt	1-5000	0.41	Catalase-like enzyme	Electrochemical method	12
La-Ce nanorods	0.05-10	0.016	Peroxidase-like enzyme	Colorimetric method	This work

Table S3. Determination and recovery test of TC in milk, honey and pork.

Materials	Spiked concentration (μM)	Determination concentration (μM)	Recovery (%)	RSD (%) n=3	National food safety standard
Milk	0	0.042	0		
	0.5	0.554	102	0.99	0.521
Honey	0	0.069	0		
	0.5	0.518	91.4	4.16	0.489
Pork	0	0.070	0		
	0.5	0.514	93.2	7.3	0.506

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