

Supporting information

Application of LTA zeolite-modified electrode for sensitive detection of retinoic acid in tap water

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Table

Table S1. Comparison of different electrochemical methods for determination of RA.

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Electrodes	Detection method	Linear range (μM)	LOD (μM)	Ref
thin-film lead deposited GCE	DPV	--	--	1
RA-loaded SLN ^a /GCE	DPV	9.71-45.5	1.56	2
GCE	ASV ^b	1-10	0.0075	3
LTA zeolite/GCE	DPV	0.8-20.1	0.8	This work

^aSLN, solid lipid nanoparticles; ^bASV, anodic stripping voltammetry.

Figure captions

Fig. S1. Comparison of XRD spectra between synthesized LTA zeolite and standard LTA zeolite.

Fig. S2. DPV diagrams of LTA zeolite calcined at different temperatures respectively (150, 300, 450, 600, 750, and 900 °C) with 10 μ M RA.

Fig. S3. A The simulated linear regression equation based on the relationship between current peaks (with error bar) and the RA concentration in the mixture of 5mL PBS and 5mL tap water; **B** Point line diagram based on the peak current (with A i-t C method) while the RA concentration set as 0, 2.0, 3.8, 5.7, 7.4, 9.1, 10.7, 12.3 μ M. For each concentration, the stable operation time was running for 400 s to record the current peak.

Fig. S4. CV curve of the LTA/GCE electrode cycle scanning 100 segments in 1 mM $K_3Fe(CN)_6$ and 0.1 M KCl solution, the scan rate was 100 $mV s^{-1}$.

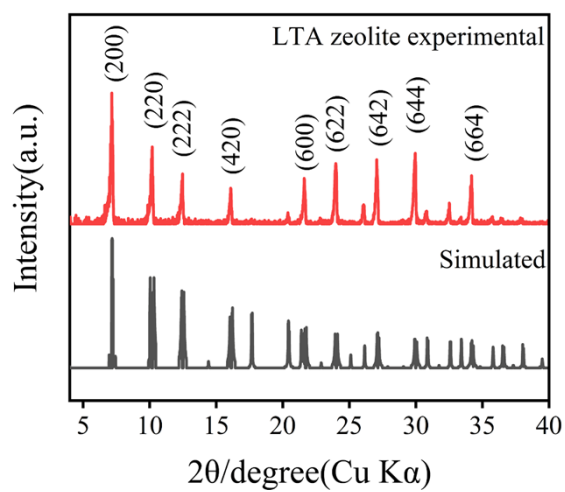


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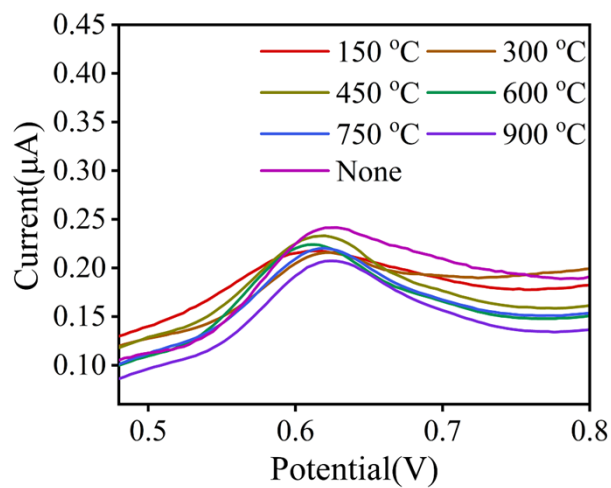


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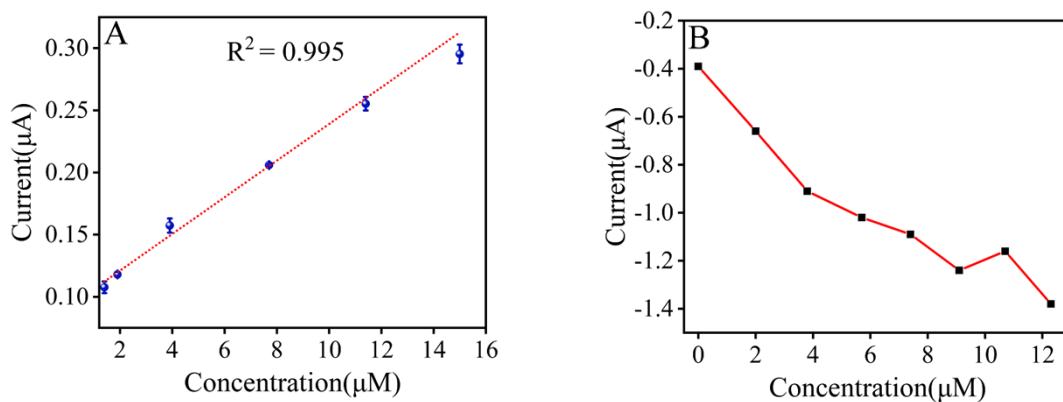


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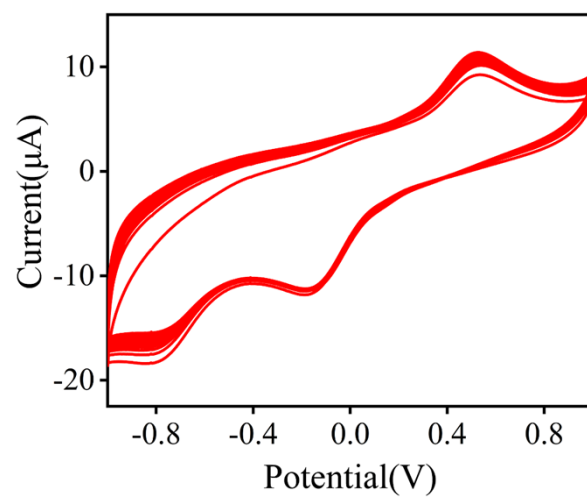


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References

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