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## Supplementary Materials

### **Biosensor Based on Peroxidase-Mimetic Nanozyme and Lactate Oxidase for Accurate L-Lactate Analysis in Beverages**

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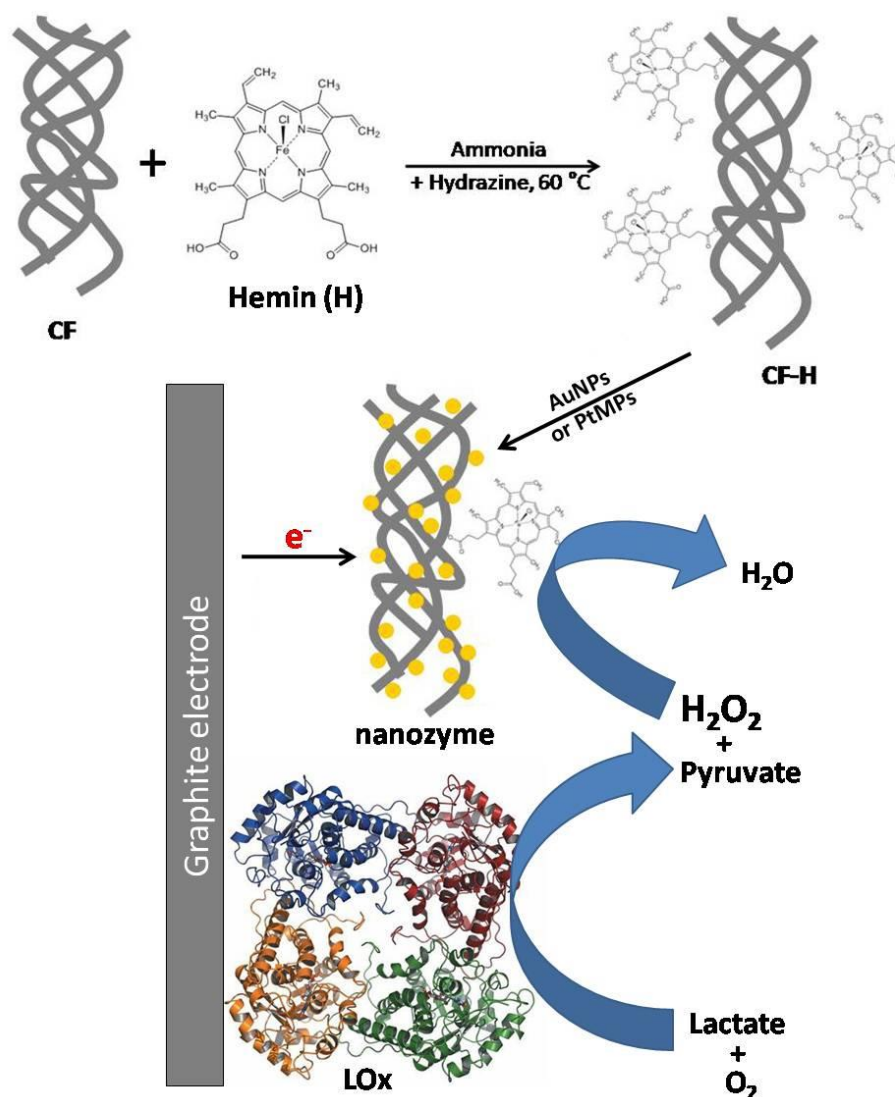
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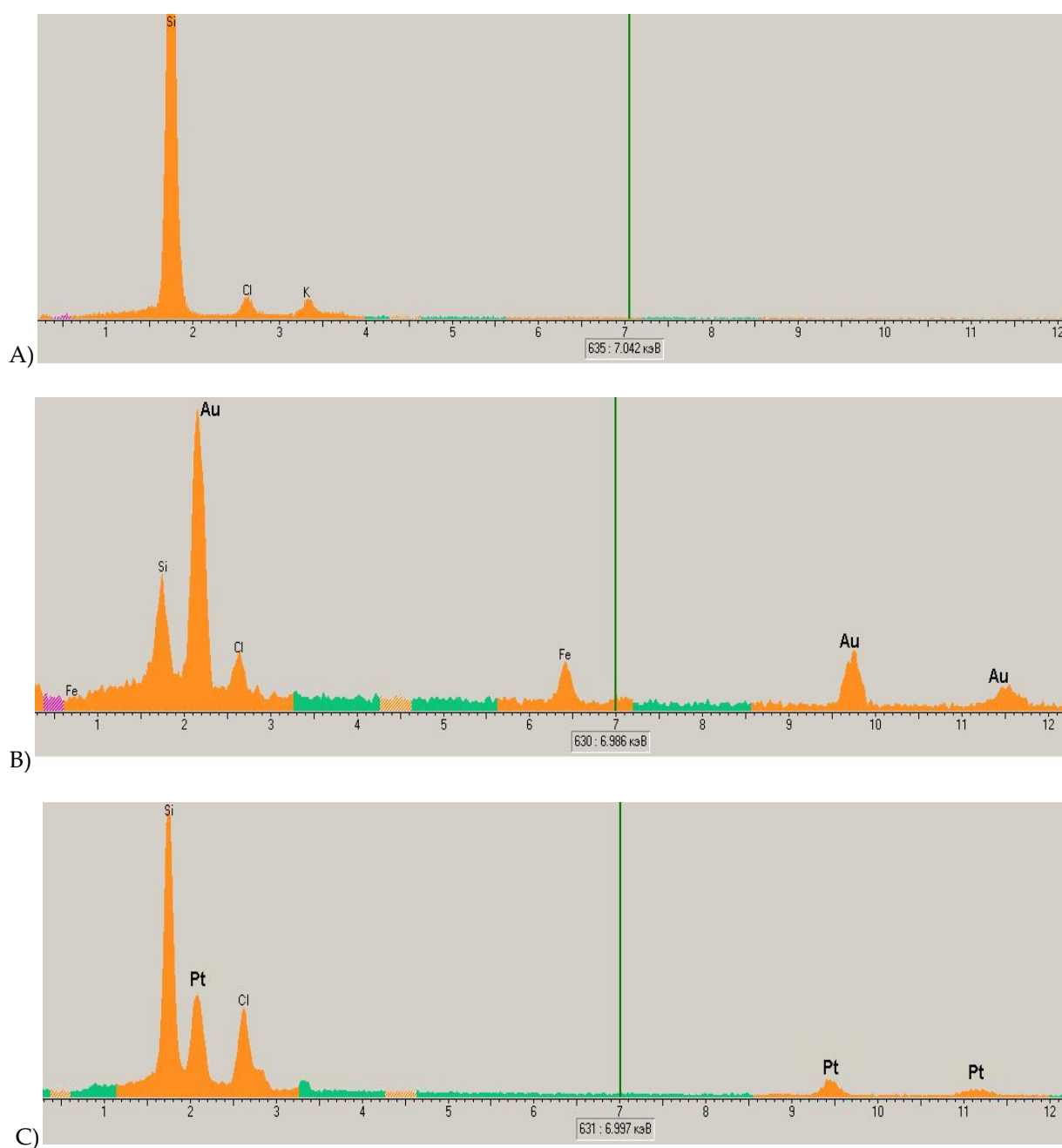
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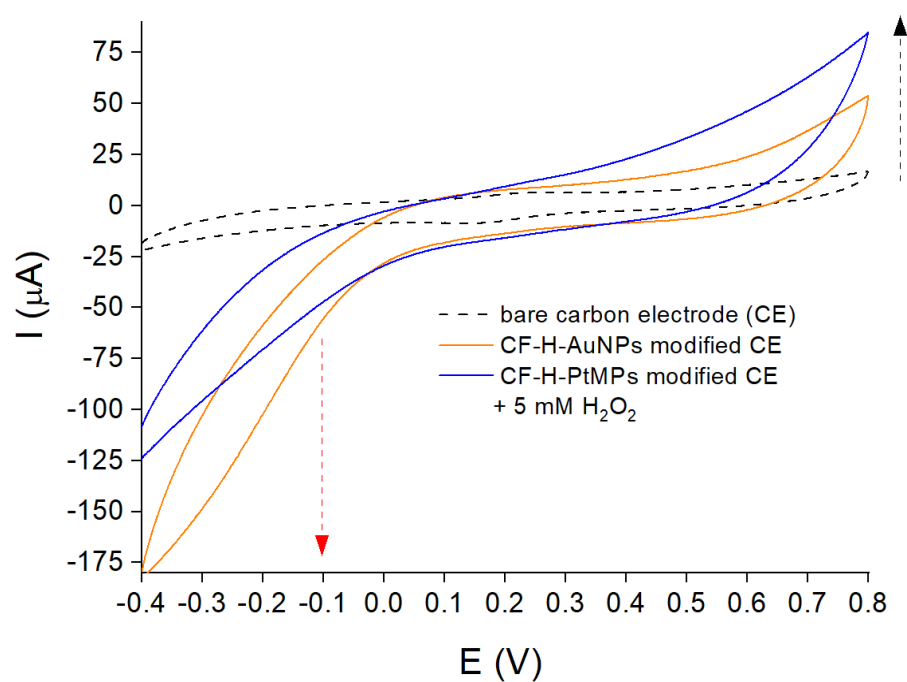
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**Figure S1.** The schematic figure illustrates the research concept. Abbreviations: CF – carbon microfibers; H – hemin; CF-H – carbon microfibers modified by hemin; AuNPs – gold nanoparticles; PtMPs – platinum microparticles; LOx – lactate oxidase.



**Figure S2.** X-ray spectral analysis of non-modified debris of CF (A), CF-H-AuNPs (B), and CF-H-PtMPs (C).



**Figure S3.** Cyclic voltamperograms of bare graphite electrode (dash line), CF-H-AuNPs-modified (orange line), and CF-H-PtMPs-modified (blue line) electrodes at addition of 5 mM  $\text{H}_2\text{O}_2$ . Conditions: scan rate  $50 \text{ mV}\cdot\text{s}^{-1}$  vs Ag/AgCl/KCl (3M) in 50 mM PB, pH 6.8 at room temperature.