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2 **A cost-effective method for the sensitive detection of levofloxacin using a 3D**
3 **composite electrode composed of nail polish, graphite and aluminum oxide**
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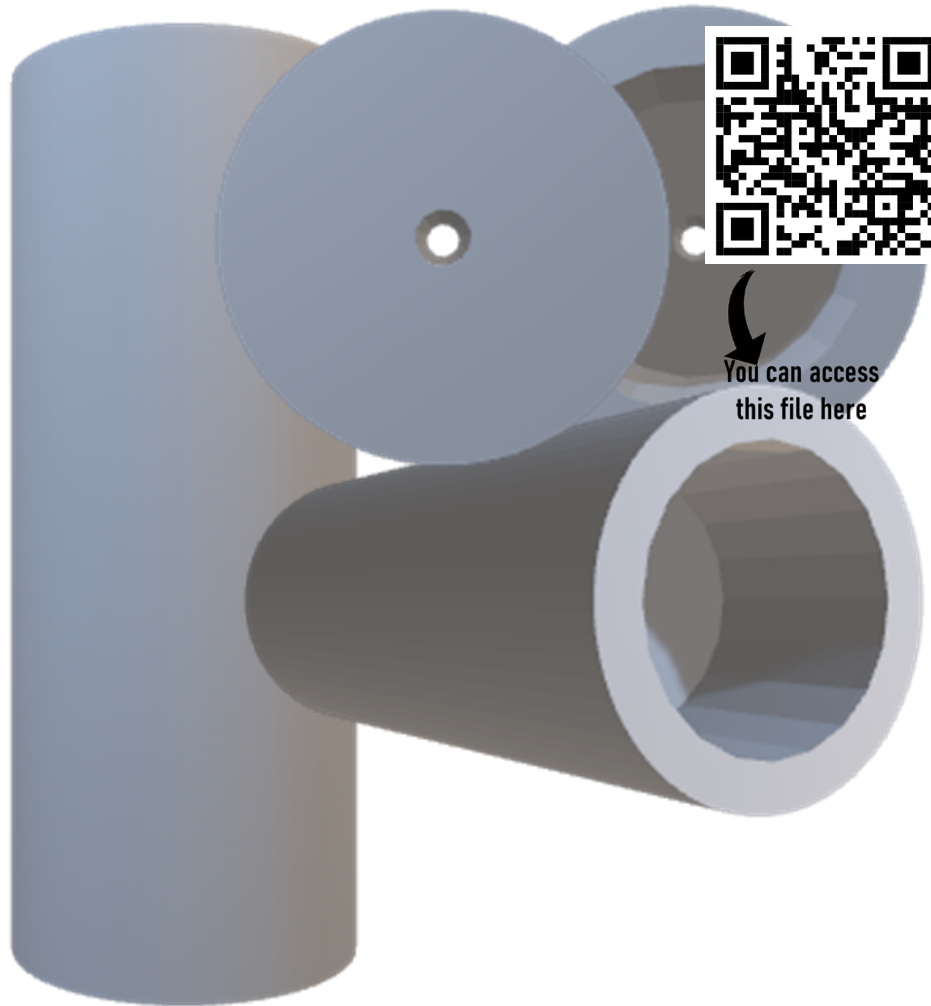
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19 **Supplementary Information**
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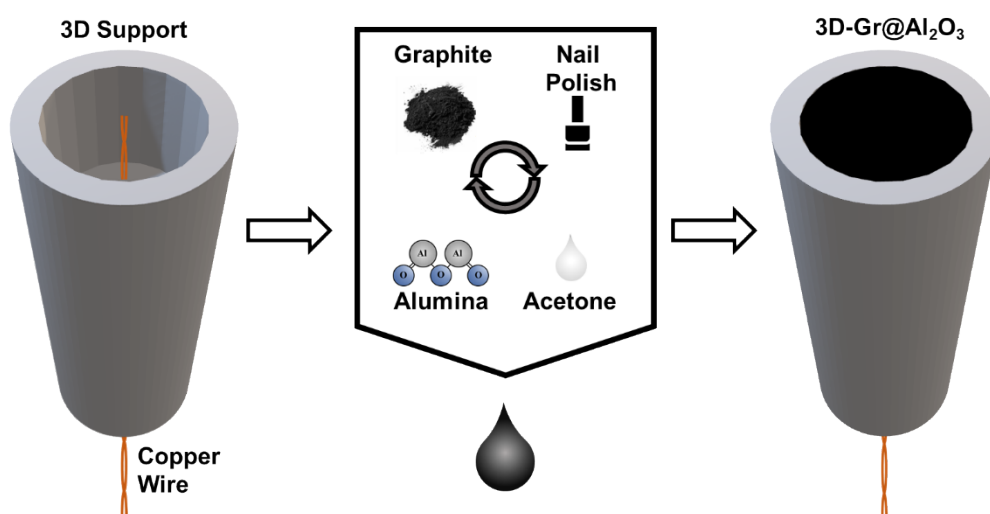


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25 **Fig. S1:** 3D model (.stl) of the printed support used in the construction of the electrochemical
26 sensor.

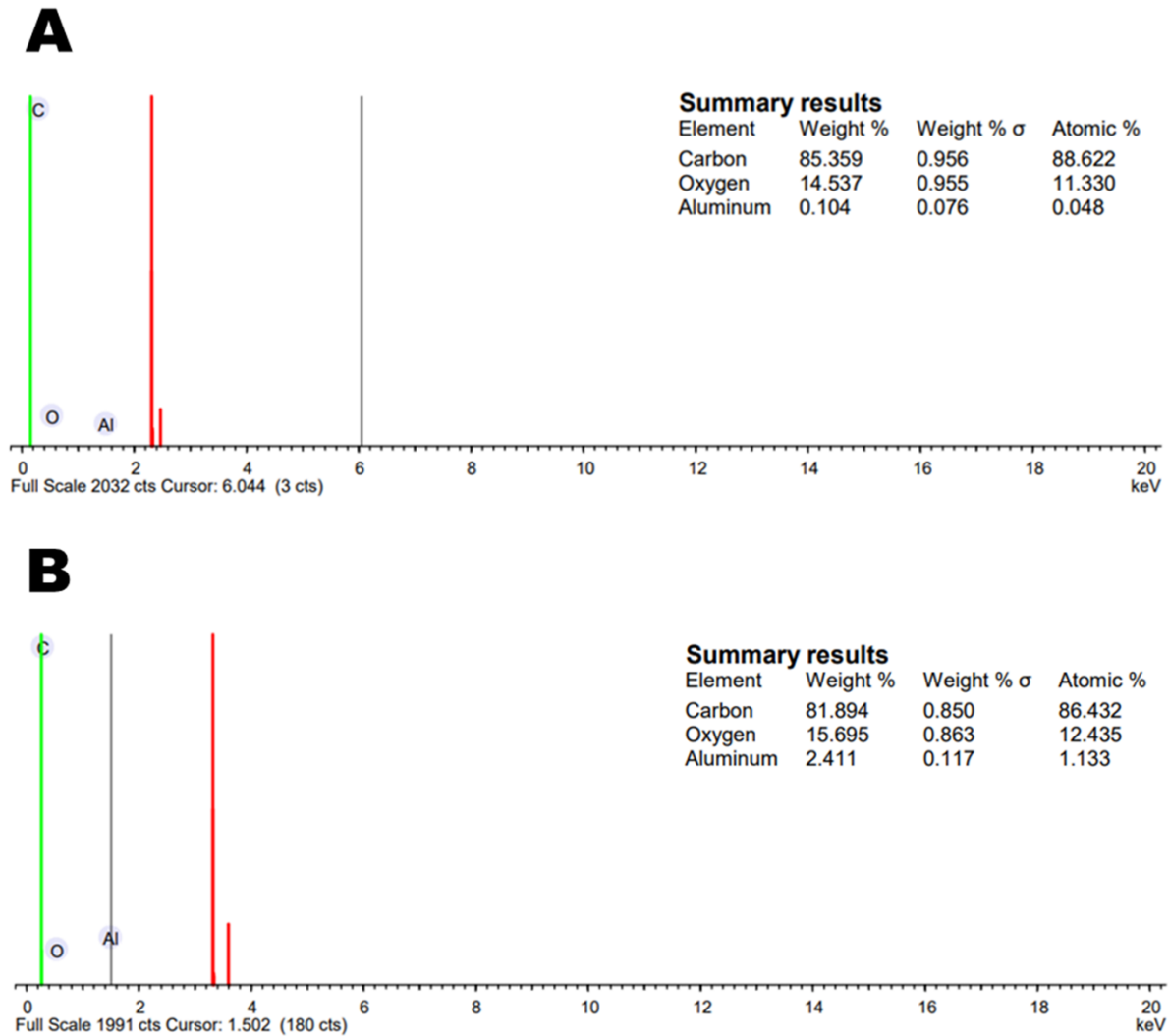
27 Available at: <https://drive.google.com/file/d/1hLLzohlYhEIYAYqcwCt5Fo6Y-CUdyHvO/view?usp=sharing>.

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30 **Fig. S2:** Illustrated diagram showing the construction of the proposed 3D-Gr@Al₂O₃ sensor,
 31 including the insertion of the conductive cable into the printed support, the composition of the
 32 composite material, and its immobilization within the support.

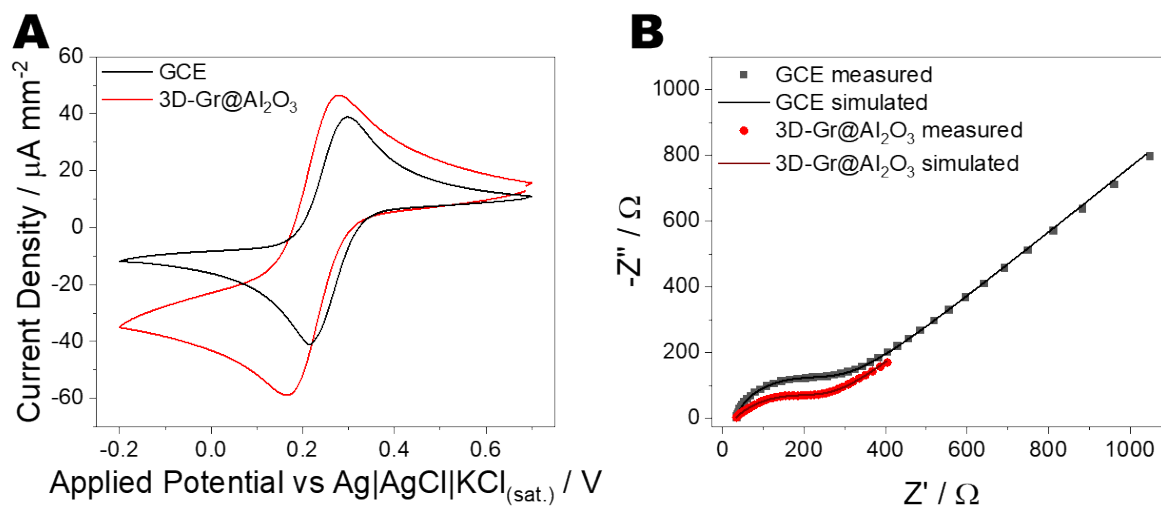


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34 **Fig. S3:** EDX analysis of sensors with (A) 0% e (B) 5% (m/m) of Al₂O₃ in your composition.

35 Analysis condition: Acquisition time 10 s, accelerating voltage 15 kV, process time 5 s.

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38 **Fig. S4:** (A) CV voltammograms and (B) Nyquist diagrams of 3D-Gr@Al₂O₃ (RED Line) and
 39 GCE (Black Line) in 2.5 mmol L⁻¹ potassium ferricyanide/ferrocyanide in KCl medium 100 mmol
 40 L⁻¹. CV scan rate 0.1 V. EIS Conditions: applied potential of 0.224 V, 10 mV of amplitude, and
 41 the frequency region ranging from 10,000 to 0.1 Hz.

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