



Sense4Med

Smart Sensors for Sustainable Life



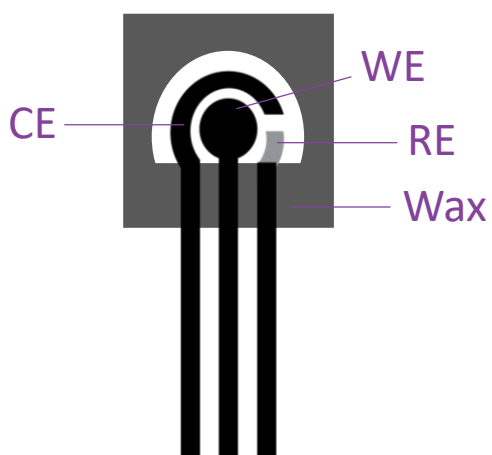
Office Paper-based Graphite
Screen-printed electrodes

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These electrodes are fabricated by wax technology coupled with screen-printing technology on a low-cost and eco-friendly office paper support.

Screen-printed features



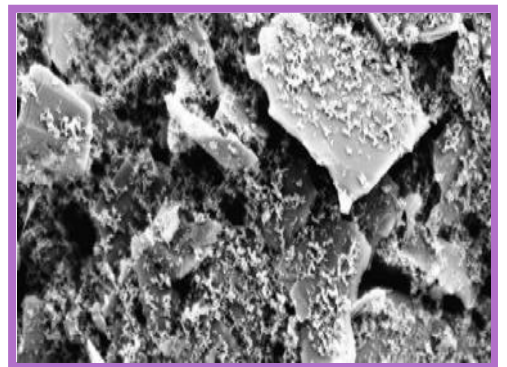
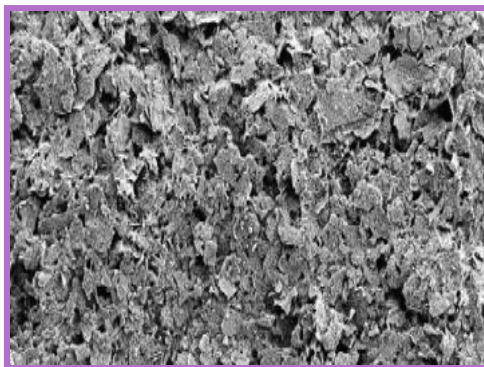
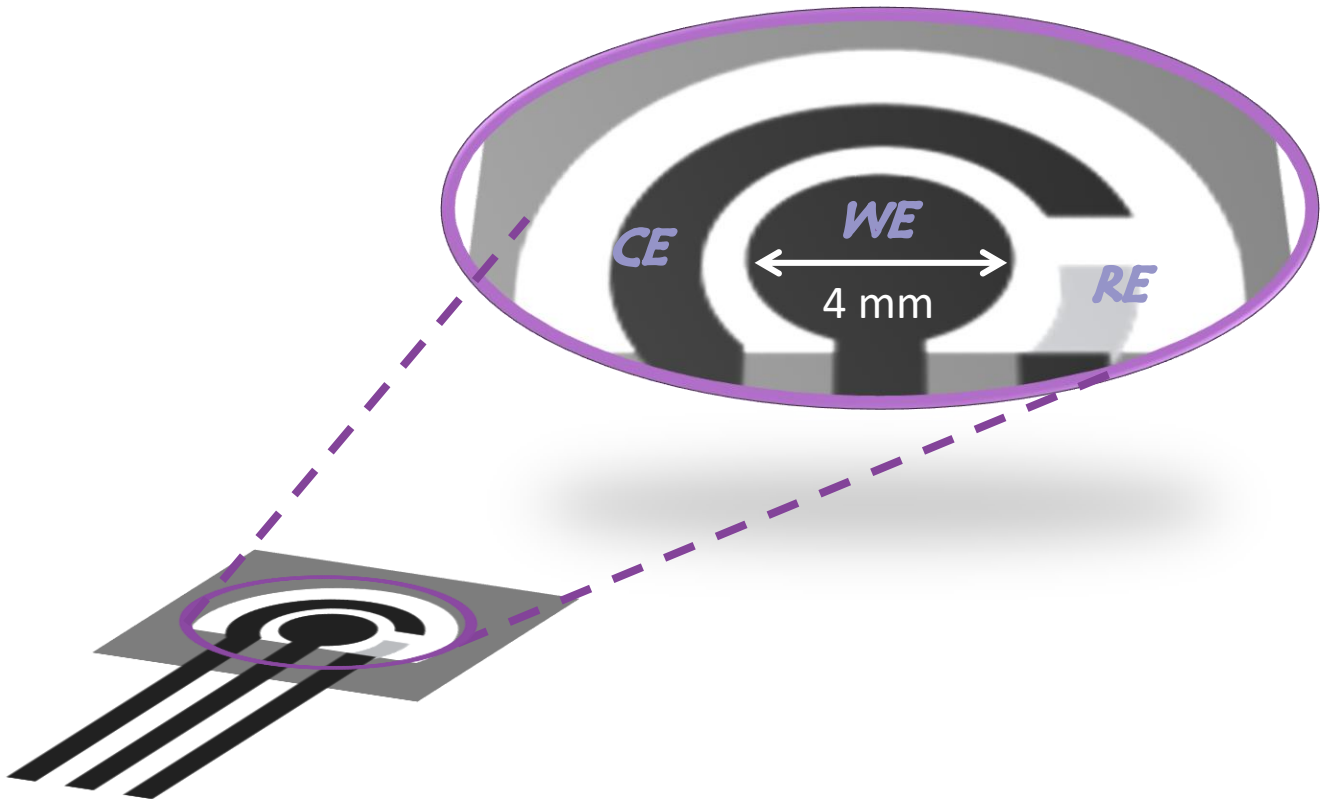
- **Standard dimensions** 28 x 12 mm
- **Substrate** Office paper
- **Substrate weight** 67 g/m²
- **WE surface area** 12,56 mm²
- **Sample volumes** 20-100 μL
- **Electrode materials**

<i>Working electrode (WE)</i>	Graphite
<i>Reference electrode (RE)</i>	Silver
<i>Counter electrode (CE)</i>	Graphite

- **Applications**
- Biomedical
 - Materials
 - Environmental
 - Defence

Paper-based printed electrodes are a suitable tool for multiple applications, providing many advantages such as miniaturization, low-cost, disposable, low reagent consumption and eco-friendly.

Electrochemical cell

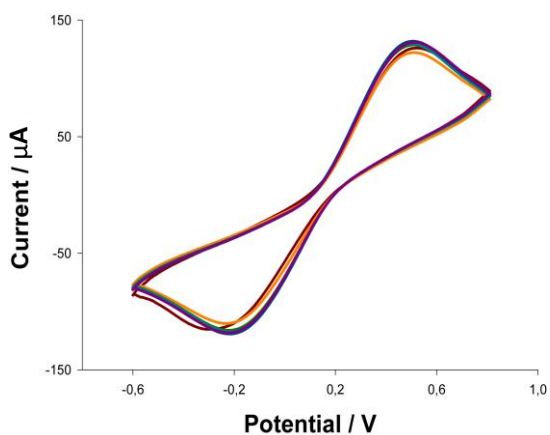


SEM Images

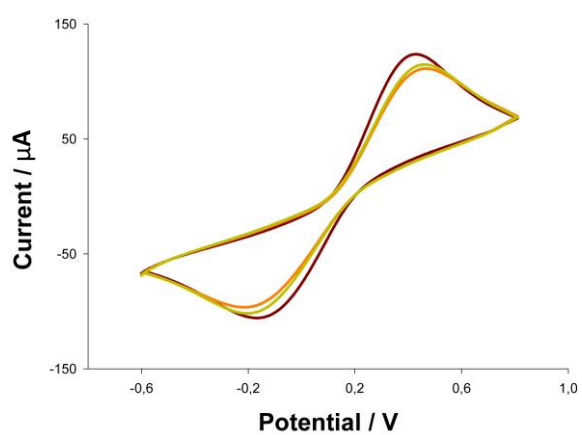
Office paper-based graphite screen-printed electrode



Performances



Cyclic voltammograms for 5 mM $K_4Fe(CN)_6$ in 100 mM KCl using the same office paper-based graphite screen-printed electrode. Scan rate= 100 mV/s.



Cyclic voltammograms for 5 mM $K_4Fe(CN)_6$ in 100 mM KCl using different office paper-based graphite screen-printed electrodes. Scan rate= 100 mV/s.

➤ Intra-electrode Repeatability

➤ Inter-electrode Repeatability



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