

Kanichi 3 mm Electrodes (*Graphite, KRS-1001; Graphene, KRS-G1001; Carbon nanotube, KRS-N1001; Cobalt (II) phthalocyanine, KRS-C1001; Medola, KRS-M1001 and Bismuth oxide, KRS-B1001*)

Disposable screen-printed electrodes. Suitable for working with microvolumes (100 μ L to 1 mL) or by dipping them in solution. Ideal for decentralized assays or to develop specific (bio)sensors.

Readily alleviates requirement presented by traditional electrode systems for laborious polishing and positioning.

Plastic substrate: L42 X W8 X D0.25 mm

Electric contacts: Graphite

The electrochemical configuration consists of:

Working electrode: Graphite / Graphene (3 mm diameter) or Carbon nanotube / Cobalt (II) phthalocyanine / Medola / x % Bismuth Oxide (3.1 mm)

Counter electrode: Graphite

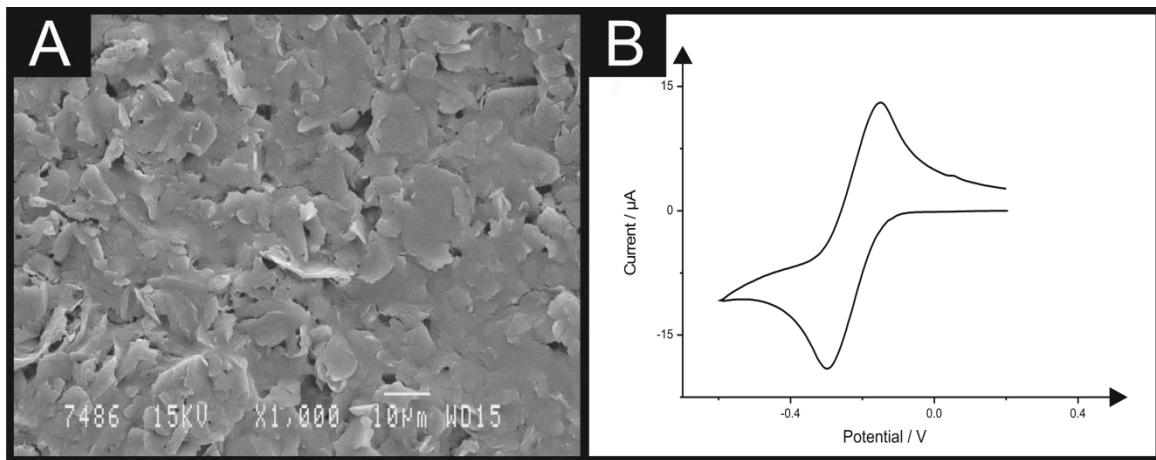
Reference electrode: Silver / Silver Chloride

Storage: The sensors should be stored at room temperature, in a dry environment and out of direct sunlight.



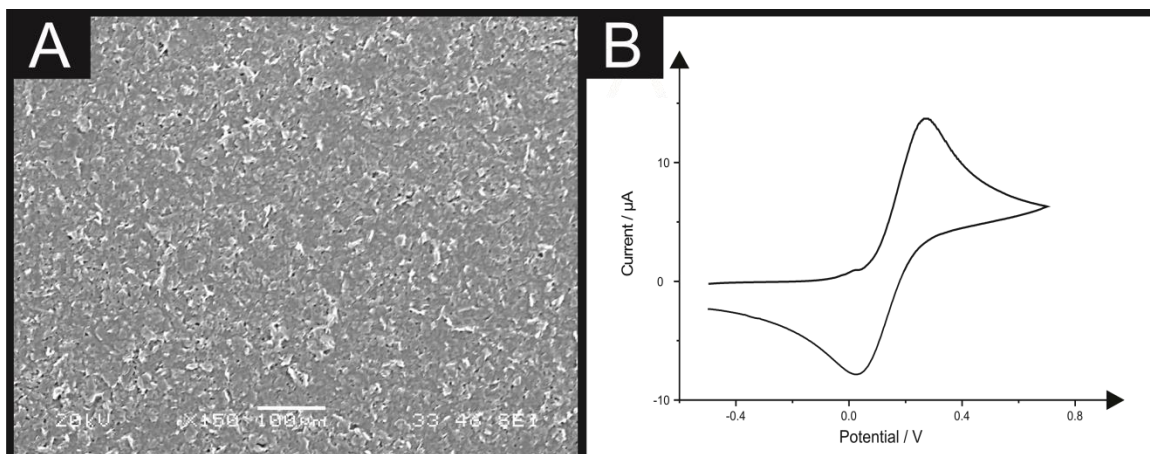
Imaging and electrochemical behaviour of Kanichi 3 mm screen-printed electrodes

Graphite



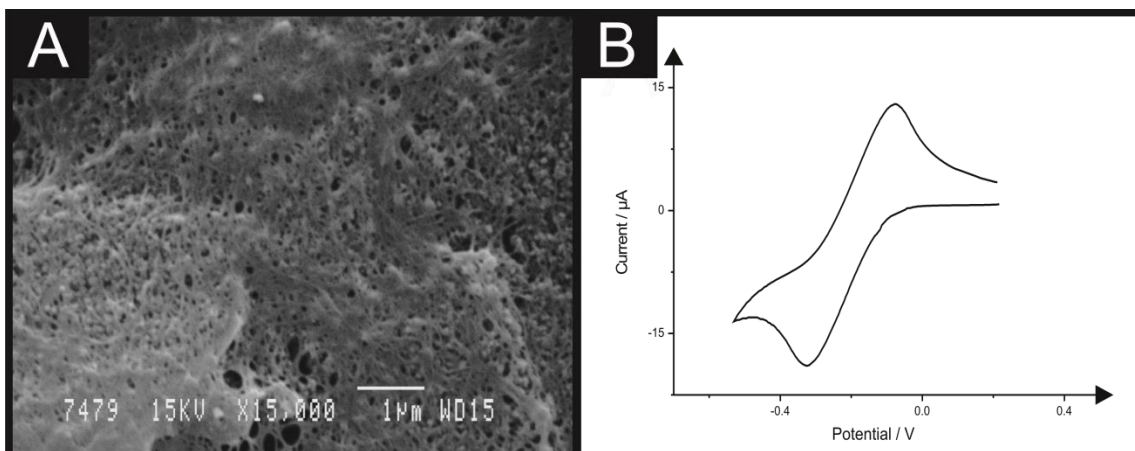
Scanning electron microscope image of a graphite Kanichi 3 mm screen-printed electrode (A) and a cyclic voltammogram (B) of 1 mM hexaammine-ruthenium (III) chloride in 0.1 M potassium chloride at 100 mV s⁻¹.

Graphene



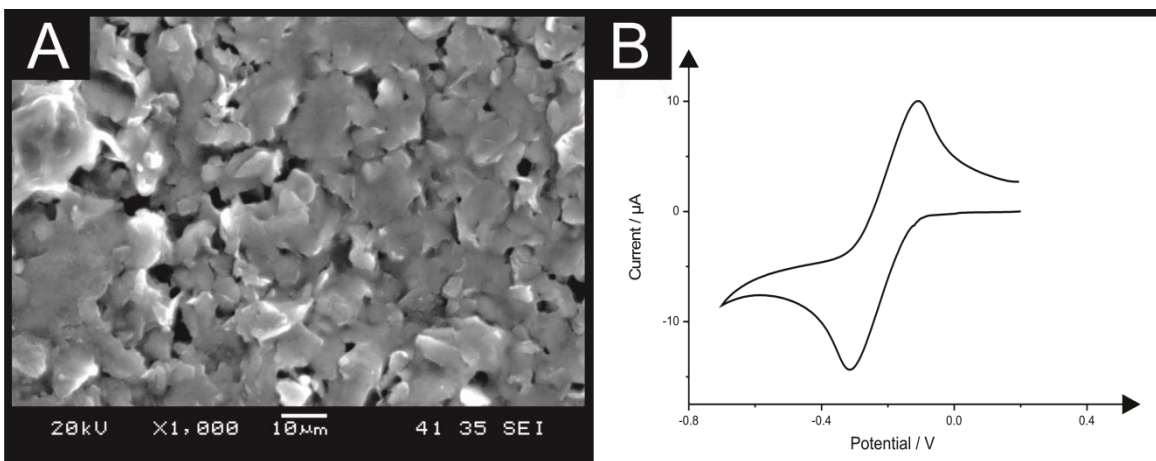
Scanning electron microscope image of a graphene Kanichi 3 mm screen-printed electrode (A) and a cyclic voltammogram (B) of 1 mM potassium ferrocyanide (II) in 0.1 M potassium chloride at 100 mV s⁻¹.

Carbon nanotube



Scanning electron microscope image of a carbon nanotube Kanichi 3 mm screen-printed electrode (A) and a cyclic voltammogram (B) of 1 mM hexaammine-ruthenium (III) chloride in 0.1 M potassium chloride at 100 mV s^{-1} .

Cobalt (II) phthalocyanine



Scanning electron microscope image of a cobalt (II) phthalocyanine Kanichi 3 mm screen-printed electrode (A) and a cyclic voltammogram (B) of 1 mM hexaammine-ruthenium (III) chloride in 0.1 M potassium chloride at 100 mV s^{-1} .

Kanichi 3 mm electrodes have featured in many academic publications including: Sens. Actuators: B, (2009), **138**, 556; Phys.Chem.Chem.Phys., (2014), **16**, 4598; Sens. Actuators: B, (2013), **177**, 1043; Electroanalysis, (2014), **26**, 262; Electroanalysis, (2010), 22, 1455 & Electroanalysis, (2009), 21, 2410.