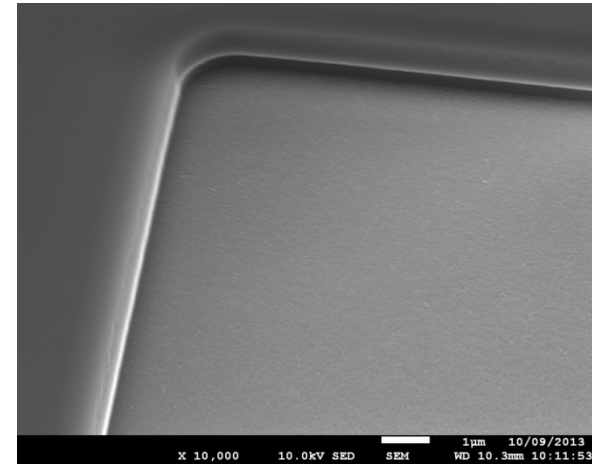
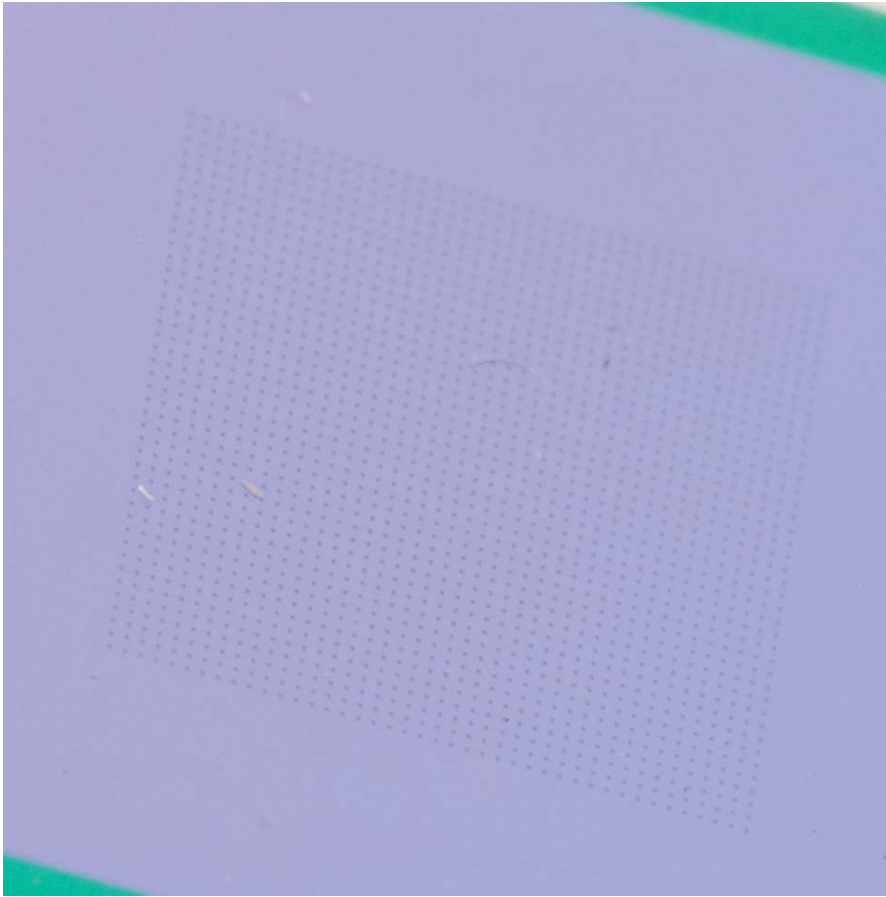


The CAVIARE™ Nanoband Array Electrode

Dr. Nicola Kay
Senior Application Scientist
NanoFlex Ltd.

Nanoband Array Electrode Structure



- 50 nm nanoband on vertical wall of aperture
- Over 1700 apertures in the array

Thanks to Nano Investigation Centre at Liverpool for SEM image

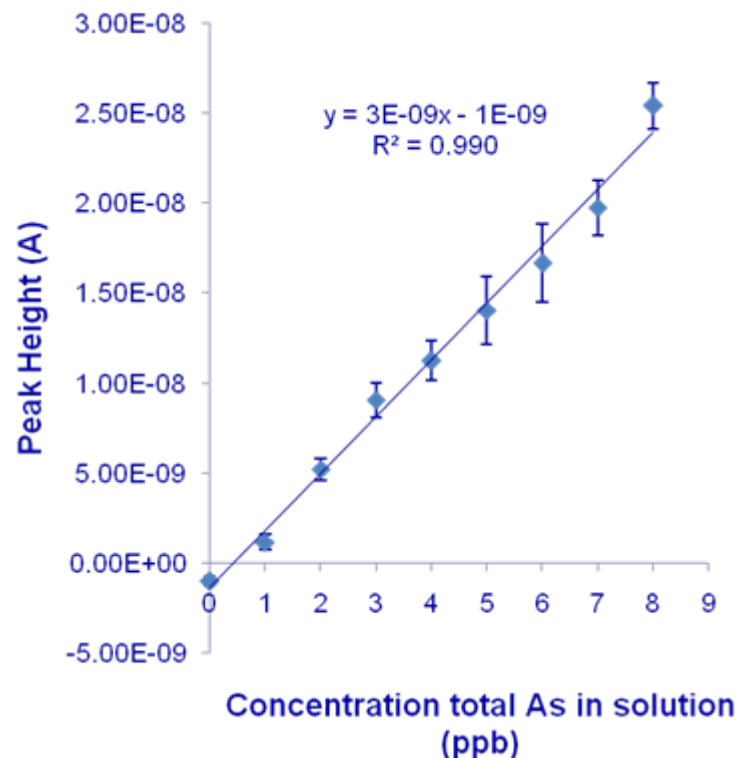
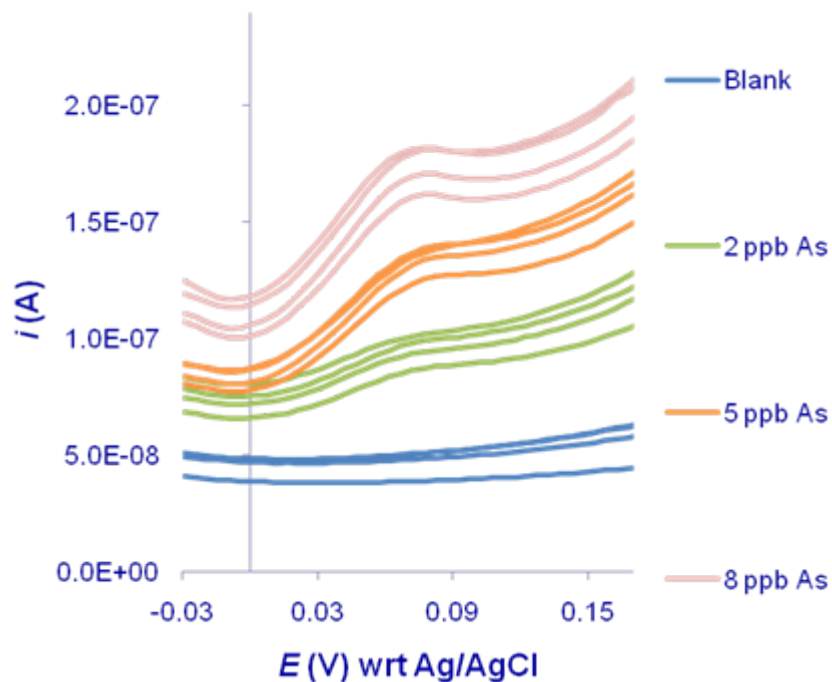
Ease Of Use



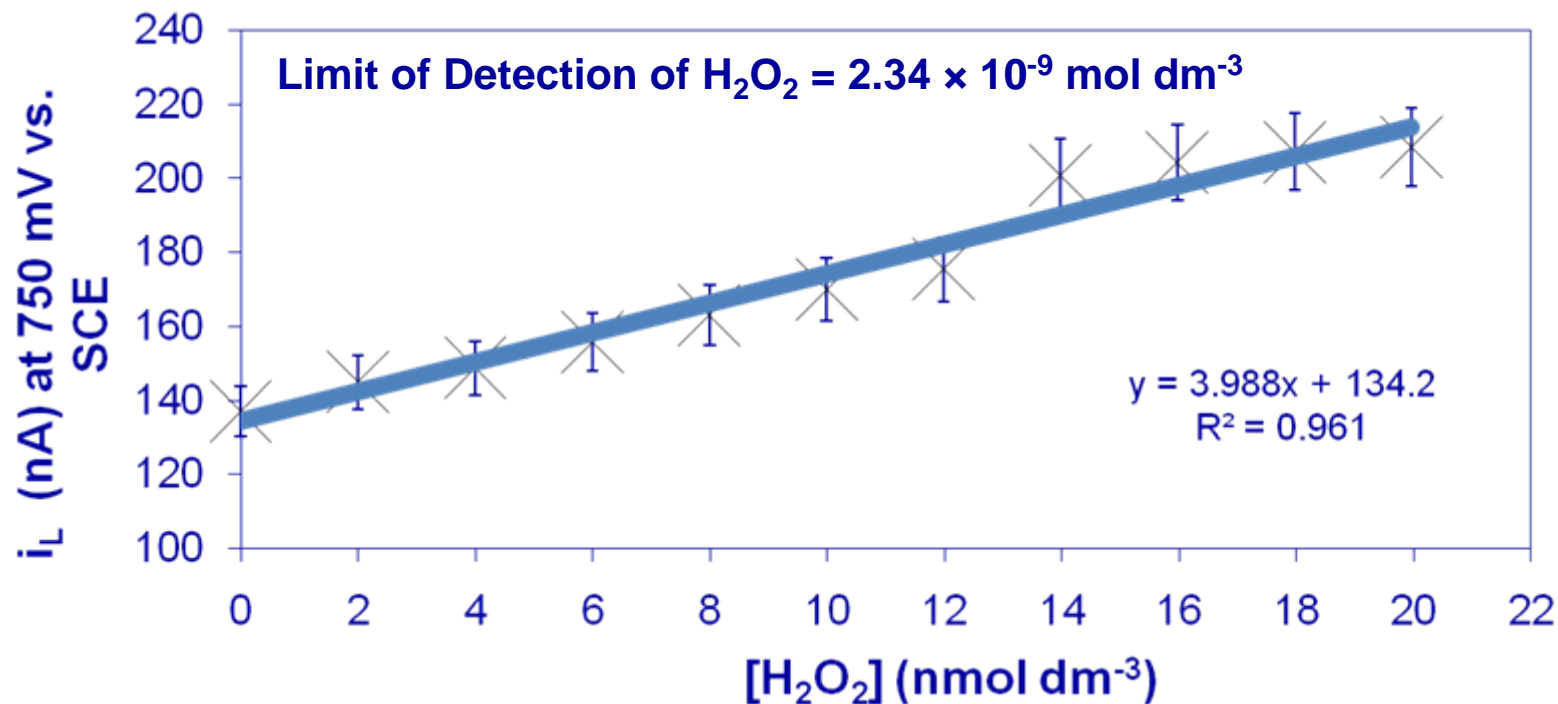
- The CAVIARE™ Nanoband Array Electrode is a drop-in replacement for a conventional electrode
- Designed to fit into a Metrohm VA system and most standard electrochemical cells
- Does not require manual polishing
- Can be electrochemically conditioned quickly, easily and reproducibly

Applications: Trace Metal Analysis in water

- Total Arsenic Detection limit of **0.32 ppb** (30 s t_{dep} in 0.1 mol dm⁻³ H₂SO₄)
- LOD **half** of that of a rotating disk electrode (2000 rpm)



Applications: Biosensing



Calibration curve using a Pt electrode for H_2O_2 . © Elsevier 2014

LOD comparable to those obtained by using modified electrodes for enhanced detection and nanowire electrodes

Product Range

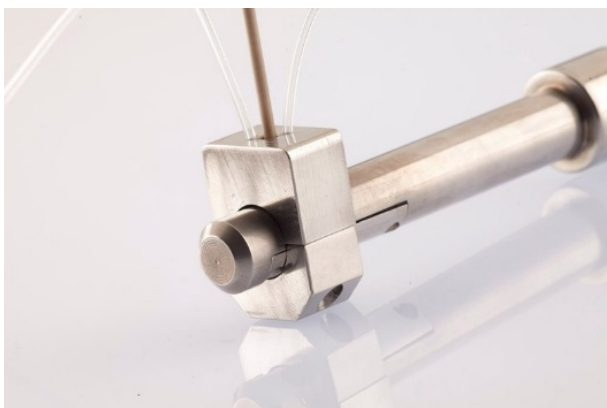
CAVIARE™ Nanoband Array Electrode Kit, Platinum/Gold 303D



CAVIARE™ Nanoband Array Substrate, Platinum/Gold 303D



Microfluidic Flowcell



CAVIARE™ Fixed Electrode



Why use a CAVIARE™?

- Easy to use
- Robust, stable and long-lasting
- Immune to stirring
- Enhanced sensitivity
- Greater certainty

