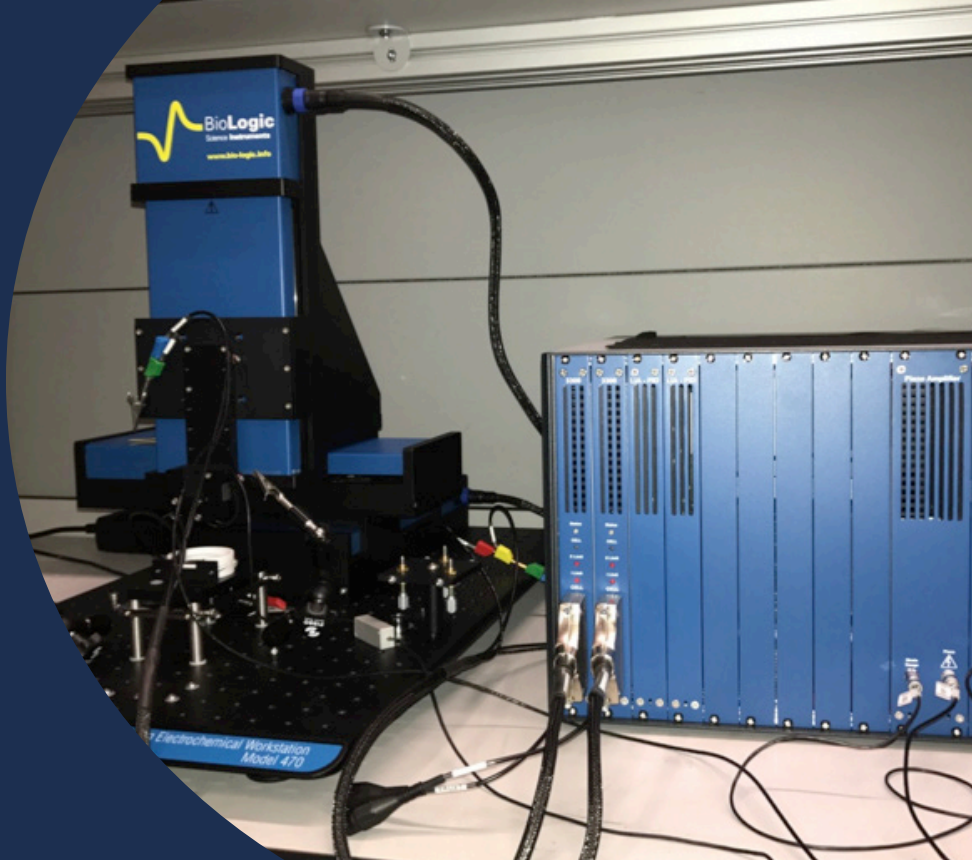


# SCANNING ELECTROCHEMICAL MICROSCOPE



Scanning electrochemical microscopy measures the local electrochemical behaviour at a liquid-solid interface. Typically, a solid sample is used and forms the counter electrode. This sample is immersed in electrolyte and a ultramicrocapillary containing the working electrode is scanned across the surface.

This allows the redox behaviour of catalysts and energy storage materials to be investigated as a function of location.

## Specifications:

- ic-SECM470 Intermittent Contact Scanning Electrochemical Microscopy
- Constant distance and constant height modes
- Compliance voltage  $\pm 12$  V
- Applied potential and resolution  $\pm 10$  V FSR @ 32-bit (4.7 nV)
- Measured potential and resolution  $\pm 10$  V FSR @ 24-bit (1.2 mV)
- Current ranges: 10-decades 1 nA to 1 A
- Maximum current: 500 mA
- Current resolution: 23.8 fA
- Accuracy: <0.5 %
- Maximum ADC sample rate: 4 MHz
- Maximum ADC resolution: 24-bit
- Minimum pulse duration: 100 ms
- Scan rate: 1 mV/s to 200 V/s
- Piezo crystal extension: 100 mm
- Vibration frequency: 80 – 600 Hz
- Vibration control: 20 nm – 2 mm peak to peak
- Minimum increment: 1 nm
- Z control resolution: 0.09 nm
- Topology resolution: 1 mm