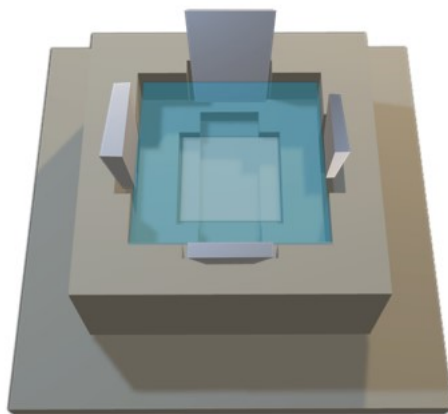


## Supporting Information

### Regio Selective Deposition of Conducting Polymers using Wireless ElectroPolymerisation

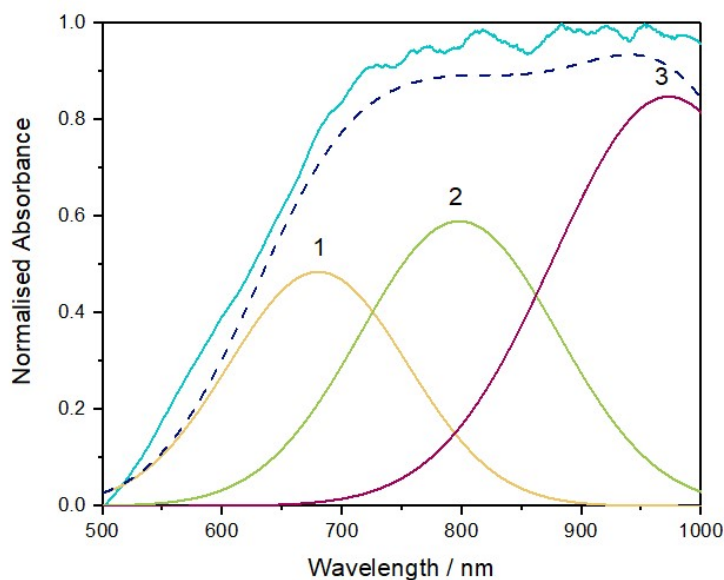
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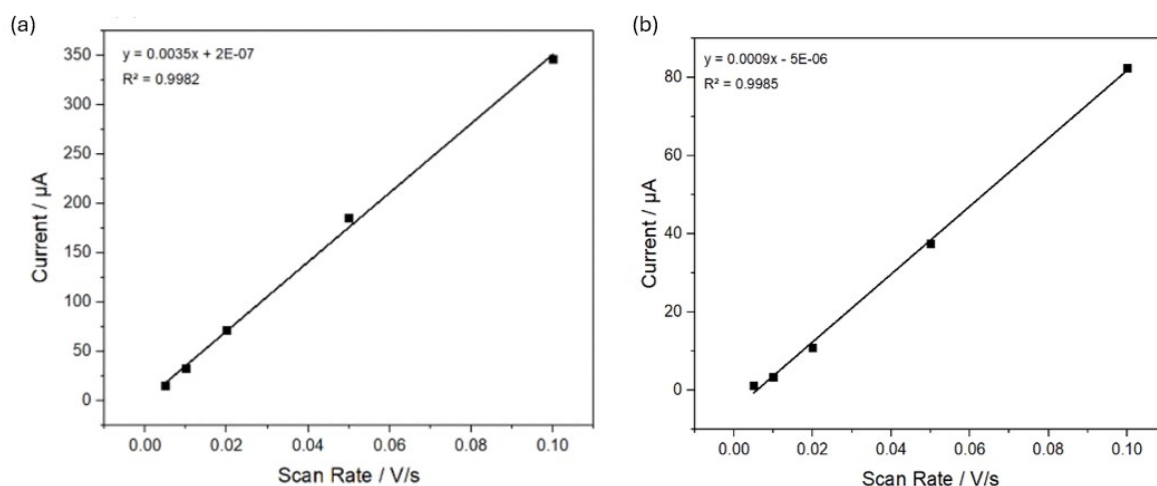


**Fig. S1.** Four feeder bipolar cell set up

FreeCAD was used to design a four-feeder bipolar electrochemical cell. The cell design was based on a novel four feeder setup, in which titanium feeder electrodes were separated by equal distances of 3 cm. This design included a BPE cut out which was of square shape (1.5cm x 1.5cm). A tweezer slot was also included in the design to allow the FTO slide to be removed without damaging the PEDOT film. The CAD file was converted to an stl file using Cura software and printed using the Ultimaker 3D printer in acrylonitrile butadiene styrene (ABS) filament.



**Fig. S2.** Deconvolutions of the UV-Vis spectrum for the BP deposited film. Blue dashed line indicated the accumulation of peak 1, 2 and 3.



**Fig. S3.** Current versus scan rate plots used to calculate capacitance values of (a) Configuration 1 and (b) Configuration 2

**Table S1.** Conductivity measurements of various solutions based off four feeder BP system Configuration 1.

Solution	Conductivity/ mS/cm
Milli-Q water	0.0009
10 mM EDOT in Milli-Q water	0.0062
10 mM EDOT in Milli-Q water after wireless polymerisation at 10 V cm <sup>-1</sup> for 20 minutes	0.0057