

Electronic Supporting Information

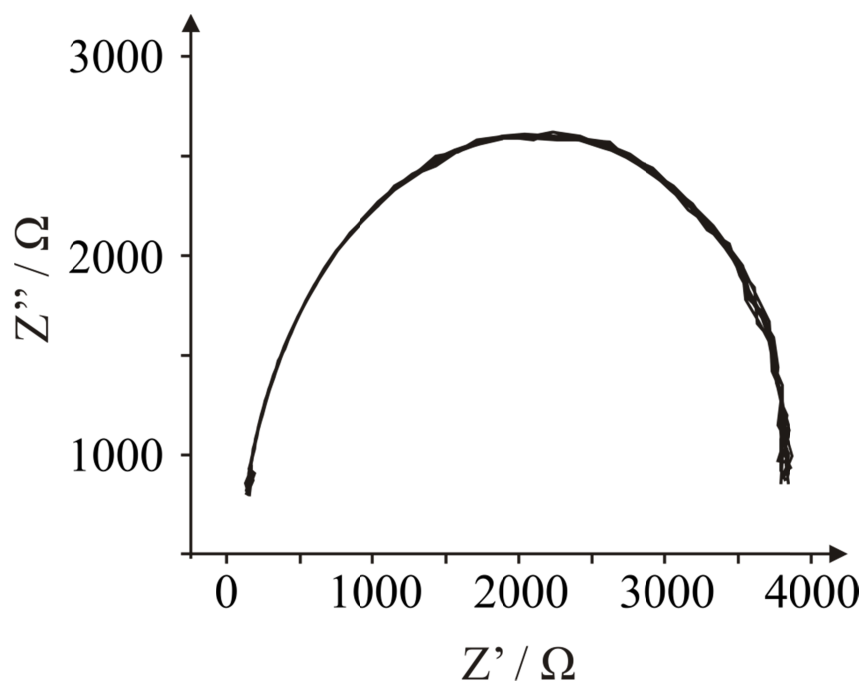
Electrochemical Impedance Spectroscopy *versus* Cyclic Voltammetry for the Electroanalytical Sensing of Capsaicin Utilising Screen Printed Electrodes

Edward P. Randviir, Jonathan P. Metters, John Stainton and Craig E. Banks*

*Faculty of Science and Engineering, School of Chemistry and the Environment,
Division of Chemistry and Environmental Science, Manchester Metropolitan University,
Chester Street, Manchester M1 5GD, Lancs, UK*

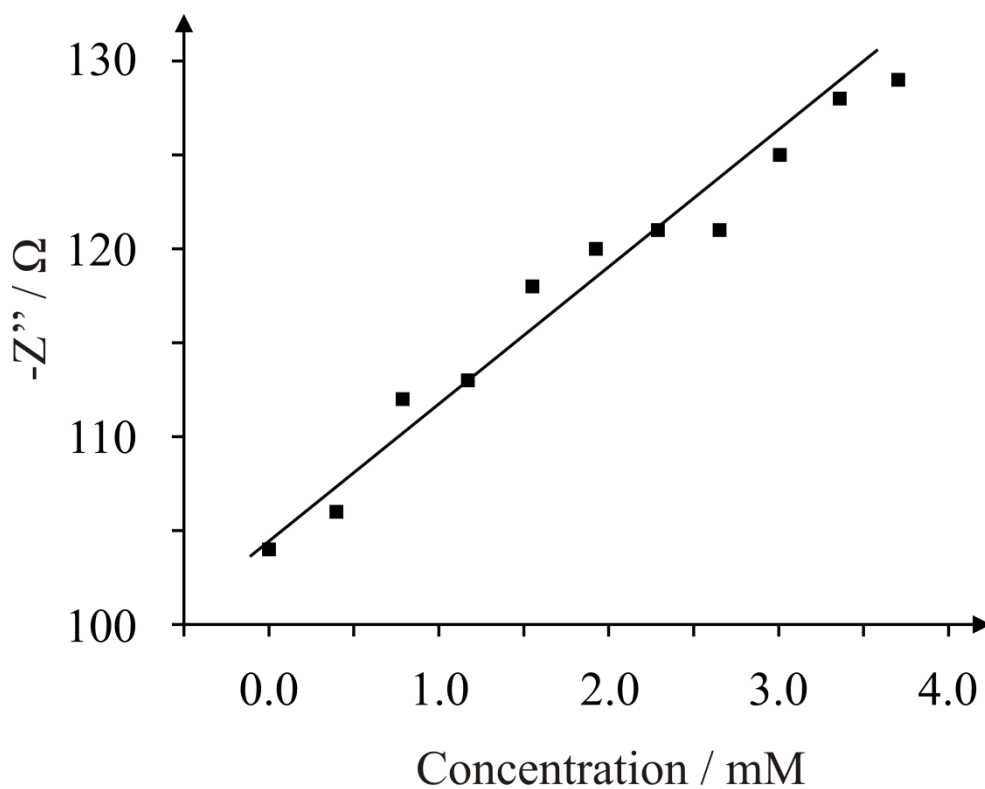
SI Figure 1

Nyquist plots indicative of the change in holding potential between 0 - + 0.45V for a fixed capsaicin concentration of 5 μM in pH 1.25 PBS utilising SW-SPEs. The plots are superimposed upon one another with no change between the measured impedance within the experimental error of $\sim 4\%$.



SI Figure 2

Concentration *versus* the imaginary component, $-Z''$, characteristic of the electroanalytical sensing of synthetic capsaicin in 60% pH 1.25 PBS and 40% methanol utilising MW-SPEs over the concentration range of 0 – 4 mM using EIS. Holding potential: + 0.3V. Frequency: $10^6 - 10^5$ Hz with 50 frequencies scanned per decade.



SI Figure 3

Typical chromatograms obtained using HPLC of scotch bonnet pepper (solid line) and Tabasco sauce (dashed line).

