

Supplementary Material

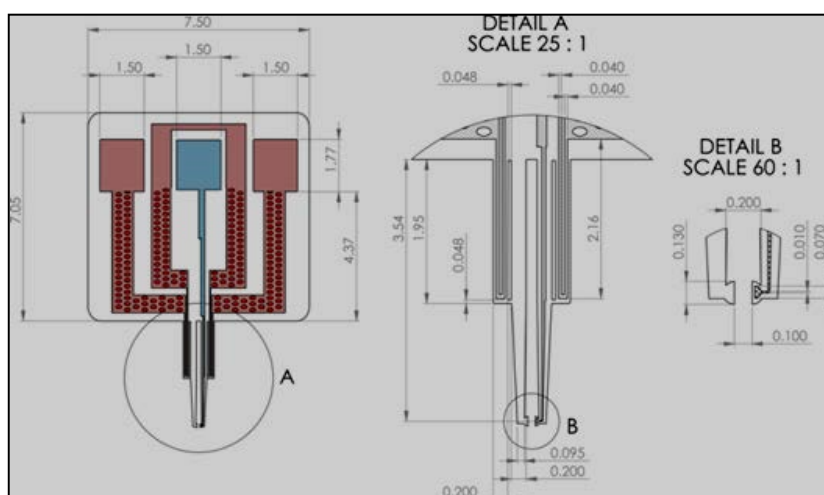


Figure ES 1. Technical drawing of the microgripper including the metal actuation (red) and electrode (blue) tracks. All dimensions are in millimetres.

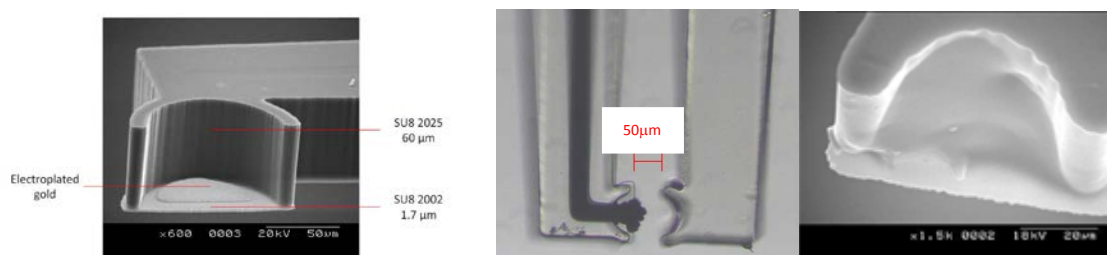


Figure ES2a, b and c

- Figure ES 2a: Gold microelectrodes on gripper
- Figure ES 2b: Image of the microgripper tips showing the fibril texture of the PEDOT deposition onto the electrode.
- Figure ES2c: PEDOT modified microgripper tips with ion-selective membrane

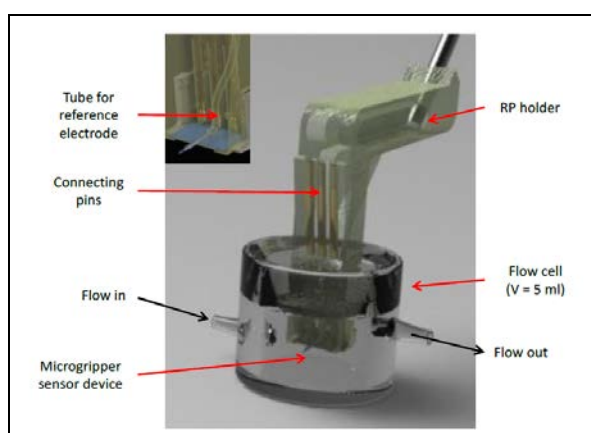
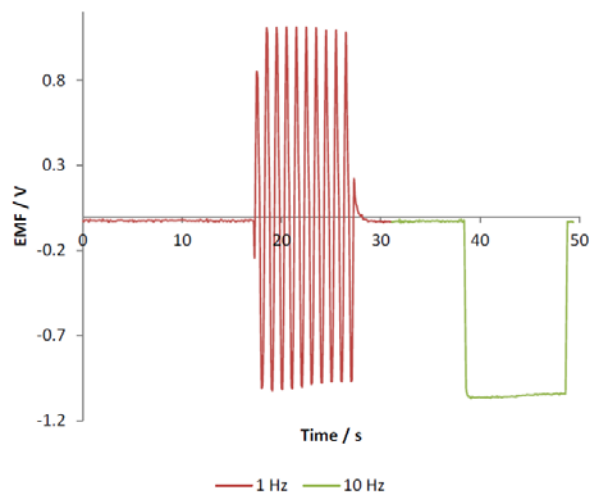


Figure ES3: Specially designed flow cell for calibrating L-shaped microgripper holder. Insert show tubing through which a home-made Ag/AgCl reference electrode was fed.



(a)

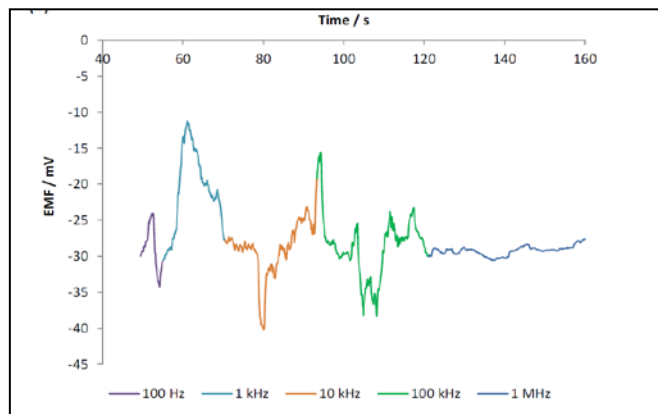


Figure 4ES (a) and (b): AC actuation interference at different frequencies.



Leica video.AVI

Figure 5ES Actuation of the microgripper whilst manipulating a 30 micron mouse oocyte cell