Electrochemical Multiplexed N-terminal Natriuretic Peptide and Cortisol detection in human artificial saliva: heart failure biomedical application

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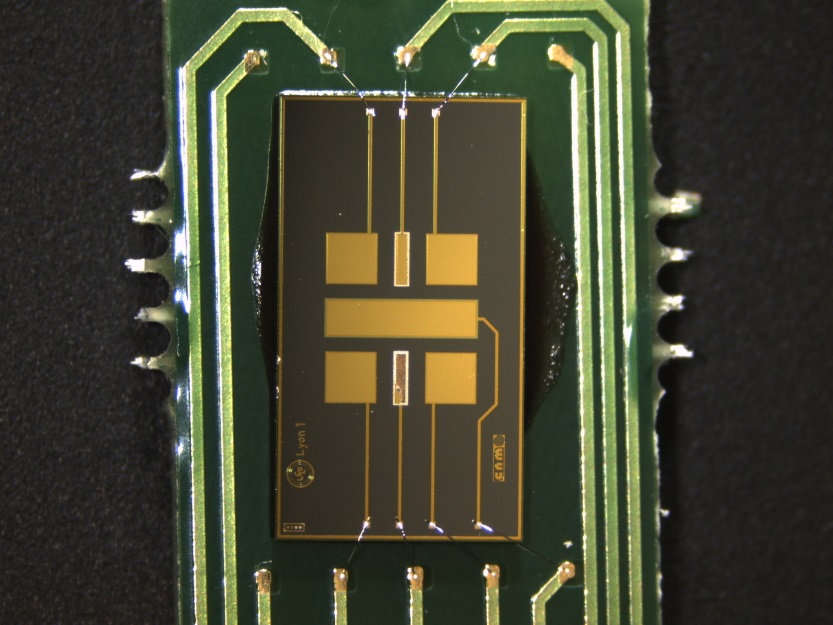
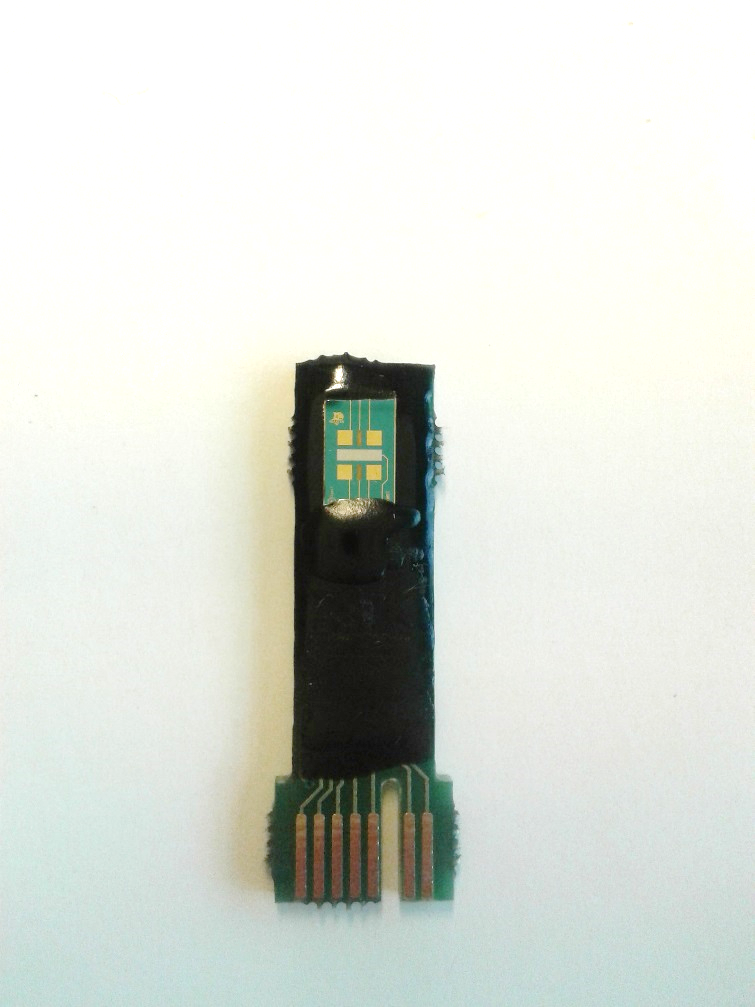
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**Supplementary Material**

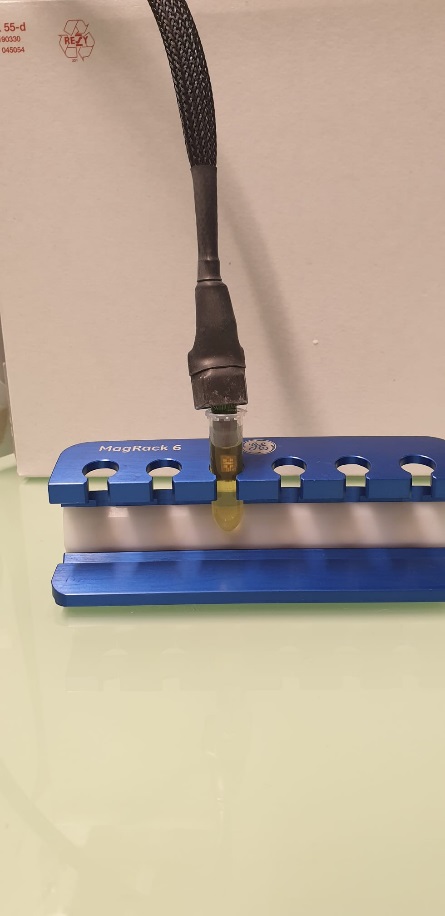
**Figure 1S**: Ghedir et al.

**RE**

**WE**

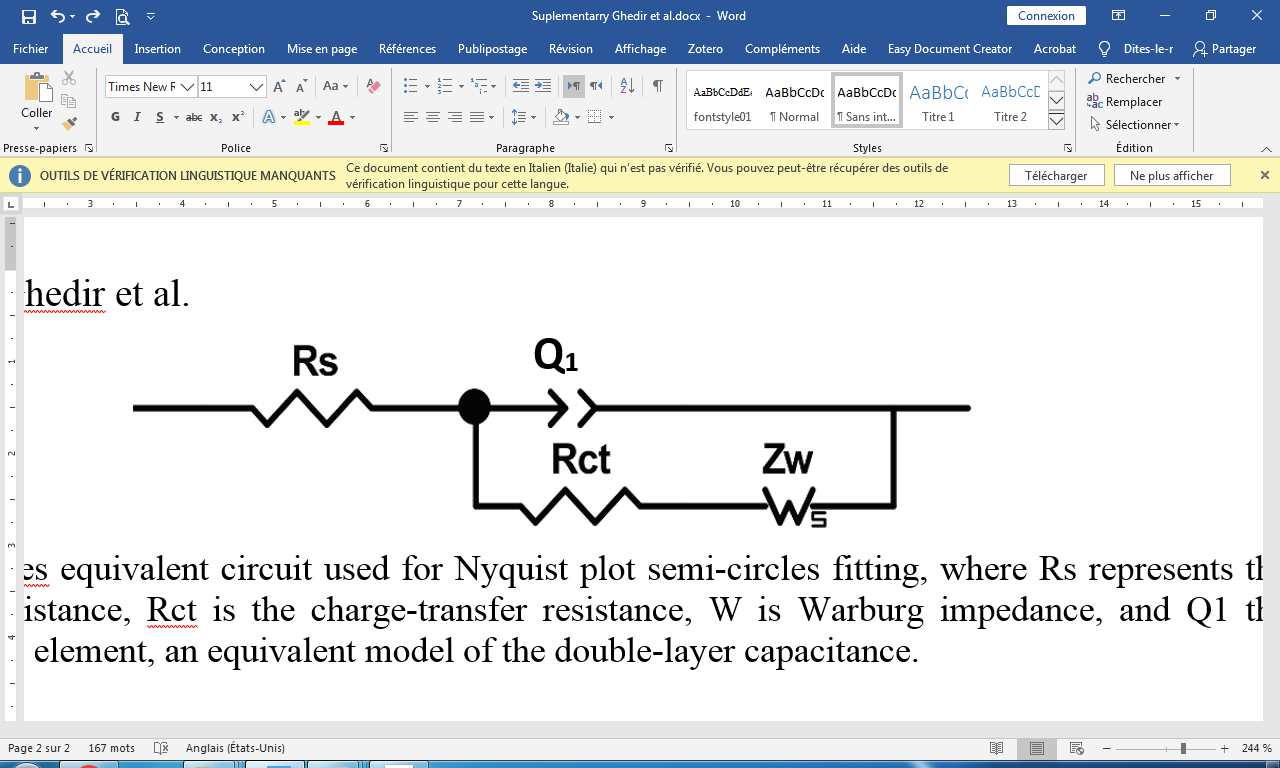
 

**CE**



**Figure 1S**: **(A)** Electrochemical biosensor platform sealed onto the PCB board using an epoxy resin (Epo-Tek H70E-2LC, from Epoxy Technology) and the microelectrode pads were wire bonded to the gold tracks of the BCP through aluminum wire (25μm Ø) by wire-bonding (Kulicke&Soffa 4523A). **(B)** The bonding area of the device, the bonding wires, and the gold tracks of the PCB were encapsulated using the same resin (Epo-Tek H70E-2LC) to protect them from the electrolyte solution. **(C)** The biosensor based on silicon substrate sizes 7x4mm and contains four gold WE, two RE and central platinum CE **(D)** The biosensor is dropped in 1.5 mL of ferric electrolyte solution and connected to the potentiostate through sheilded cable to avoid all electrical noises.

**Figure 2S**: Ghedir et al.



**Figure 2S**: Randles equivalent circuit used for Nyquist plot semi-circles fitting, where Rs represents the electrolyte resistance, Rct is the charge-transfer resistance, W is Warburg impedance, and Q1 the constant phase element, an equivalent model of the double-layer capacitance.