# Supporting Materials

## Microfluidic Device Directly Fabricated on Screen-Printed Electrodes for Ultrasensitive Electrochemical Sensing of PSA

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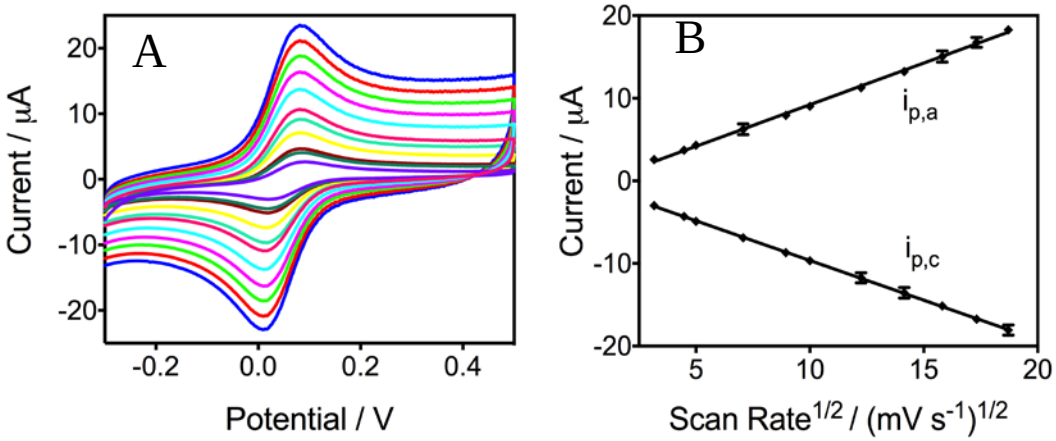


**Fig. S1.** (A) Cyclic voltammogramms of 0.5 mM ferrocene carboxylic acid in bulk solution in CASPE-MFD at different scan rates (ascending along y-axis): 10, 25, 50, 80, 100, 150, 200, 250, 300, 350mV/s. (b) Calibration plots of the anodic ($i_{pa}$) and cathodic peak current ($i_{pc}$) vs the square scan rate. The two lines represent a linear curve with regression equation, respectively: Y ($i_{pa}$) = 1.008X - 0.8604 ($R^2$ = 0.9988, n = 8); Y ($i_{pc}$) = -0.9610X - 0.0318 ($R^2$ = 0.9998, n = 8).

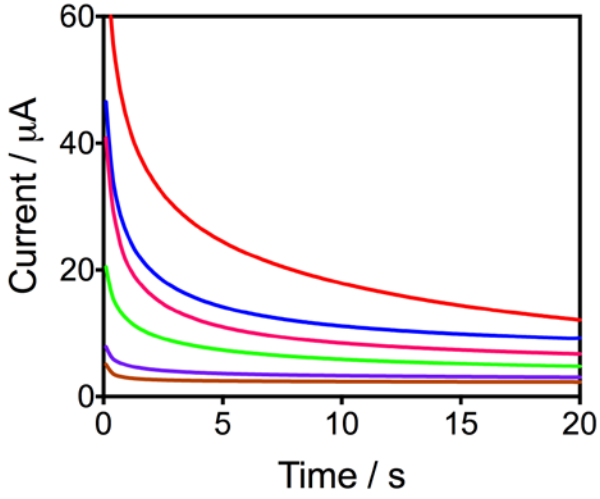


**Fig. S2** Chronoamperometric curves for various concentrations of PSA antigen (ascending along y-axis): 0, 0.001, 0.01, 0.1, 1 and 10 ng/mL in human serum samples containing 4.5 mM hydroquinone and 0.1 mM $H_2O_2$ solution in CASPE-MFD at -2.0 mV step potential (vs. a silver pseudo-reference electrode).