

Supplementary Information

A Label-Free Impedance Immunosensor Using Screen-Printed Interdigitated Electrodes and Magnetic Nanobeads for the Detection of *E. coli* O157:H7. *Biosensors* 2015, 5, 791-803

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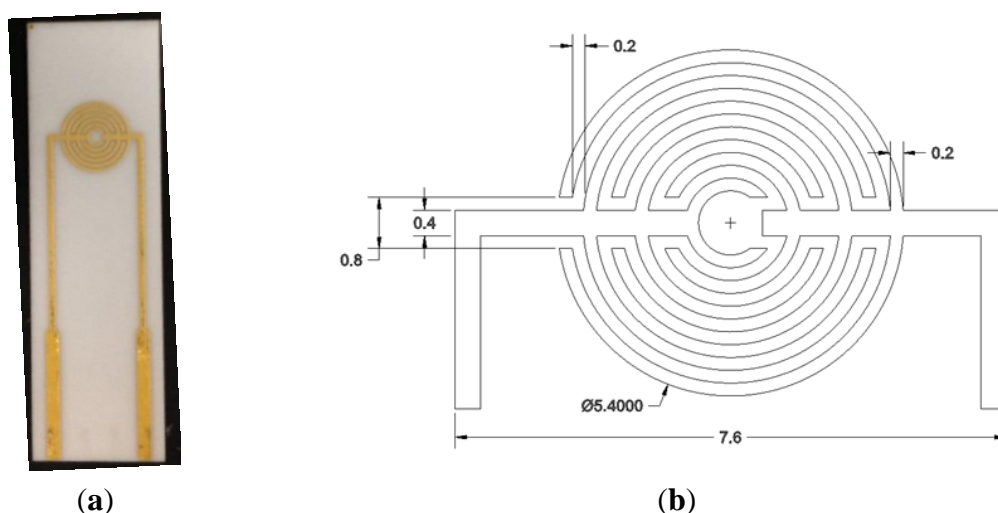


Figure S1. (a) A photograph of the screen printed electrode and (b) drawing of the interdigitated electrode. Dimensions are given in millimeters.

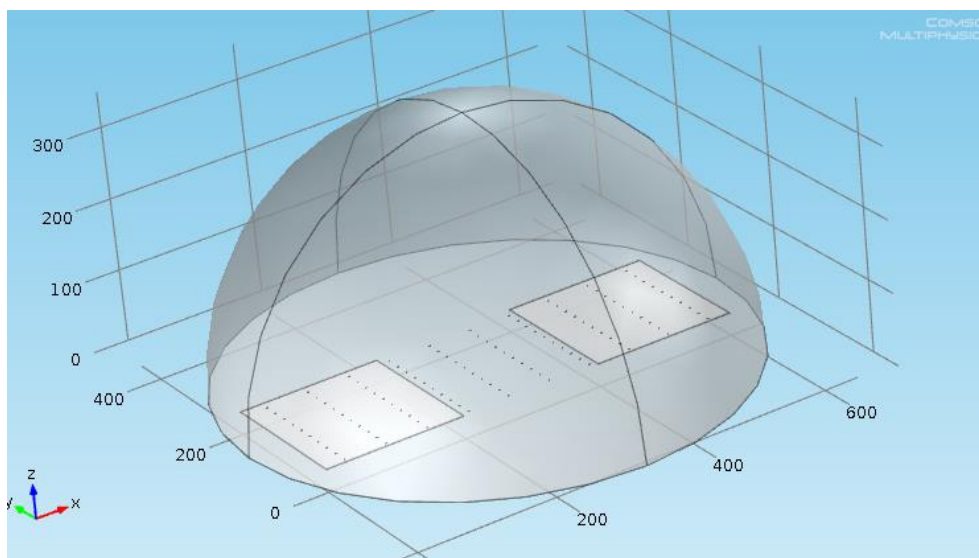


Figure S2. COMSOL model of simplified biosensor system with a pair of electrodes and 100 cells of *E. coli* evenly distributed on the electrode surfaces and the space between two fingers.

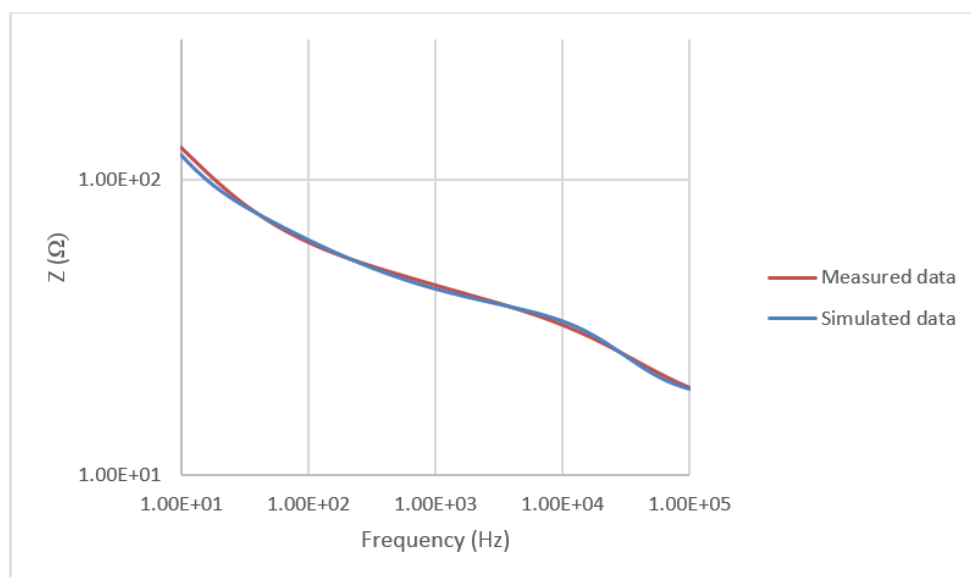


Figure S3. Bode diagram of measured impedance data and simulated impedance data generated by curve fitting of equivalent circuit. Measured data was taken with a sample containing 10^7 cfu mL^{-1} *E. coli* O157:H7.

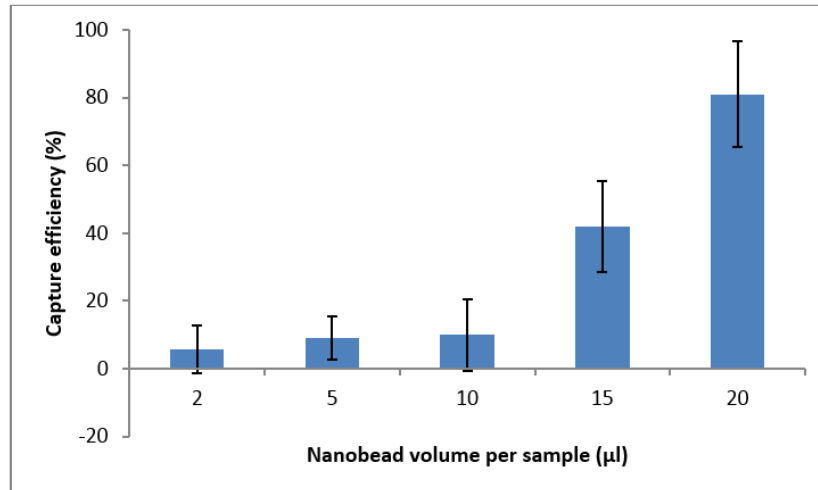


Figure S4. Capture efficiency of 10^5 cfu mL⁻¹ *E. coli* O157:H7 using different amounts of antibody-coated magnetic nanobeads. The concentration of nanobeads was 1 mg mL⁻¹.

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