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(57) Abstract :

A method of fabrication of an electrochemical dengue sensor or DENV sensor (200) comprising: depositing a 6 μ L of a 1 mg/mL of a high surface porous carbon (HSPC) in a 2 % polyethylenimine (PEI) aqueous solution on to a glassy carbon electrode (GCE) and incubating for drying to form a HSPC/GCE electrode assembly (201); casting a 4 μ L of a 10 mg/mL solution of an anti-NS1 on the HSPC/GCE electrode assembly and incubating again at room temperature and washing with phosphate-buffered saline (PBS) to remove any undesired physical adsorption to form an anti-NS1/HSPC/GCE electrode assembly (202); depositing a 0.1% of a bovine serum albumin solution (BSA) carefully on to the surface of the anti-NS1/HSPC/GCE electrode assembly to obstruct nonspecific binding sites and drying and washing with PBS to obtain a biosensor configuration BSA/anti-NS1/HSPC/GCE electrode assembly or an electrochemical dengue biosensor (DENV sensor) (203), wherein the fabricated electrochemical dengue sensor (DENV sensor) by a drop-casting method for early detection of dengue virus enabling timely intervention and ultimately improving patient outcomes. << FIG. 2 >>

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