Supporting Information

Glucose oxidase and polyacrylic acid based water swellable enzyme–polymer conjugates for promoting glucose detection

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I. Electrochemical and polarization curve measurements of catalysts

Electrochemical measurements were performed using potentiostat workstation connected to computer (Bio-Logic SP-240, USA). For the CV measurement, Pt wire was used as a counter electrode and Ag/AgCl (soaked in 3.0 M NaCl) was used as reference electrode. The working electrode was prepared by depositing 10 µL of catalyst solution on the glass carbon electrode (GCE). After drying, 5% nafion 117 solution was deposited upon the catalyst. For the electrolyte solution, 0.01 M phosphate buffer solution (PBS, pH 7.4) was used, while high purity N₂ and air gases were provided to the electrolyte solution to form the predetermined atmosphere (N₂- and air-states). All the tests were performed at room temperature [1,2].

References
Fig. S1. a) Cyclic voltammograms of GO-PEI composite measured with H$_2$O$_2$ injection of 0, 5, 10 and 20 mM, and b) a relationship between current densities observed at 0.6 V and H$_2$O$_2$ concentration in electrolyte. For CV tests, high purity N$_2$ is supplied to create O$_2$-free state, 0.01 M PBS (pH 7.4) electrolyte and 10 mV·s$^{-1}$ potential scan rate were used.