Electronic Supplementary Information

Flexible, nonenzymatic glucose biosensor based on Ni-coordinated, vertically aligned carbon nanotube arrays

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**Fig. S1** Cyclic voltammograms of Ni/VCNTs/G electrode in 5.0 mM K₃[Fe(CN)₆] containing 1.0 M KCl in 1.0 M phosphate buffered saline at different scan rates (10 – 200 mV·s⁻¹). Insets are the plots of peak current vs. scan rate¹⁄². The electrochemical active surface area of the Ni/VCNTs/G was calculated by Randles–Sevcik equation:

\[
I_p = 2.69 \times 10^5 AD^{1/2} n^{3/2} \gamma^{1/2} C
\]

- **Iₚ**: the peak current (A)
- **A**: the electrochemically effective surface area of the working electrode (cm²)
- **D**: the diffusion coefficient (7.64 × 10⁻⁶ cm²·s⁻¹ for K₃[Fe(CN)₆] at 25 °C)
- **n**: the number of electrons involved in the reaction
- **γ**: the scan rate (V·s⁻¹)
- **C**: the concentration of the reactant (mol·cm⁻³)
Table S1. The detection of glucose in human serum samples. (from three separate experiments)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Concentration (mM)</th>
<th>RSD (%)</th>
<th>Added (mM)</th>
<th>Recovery (%)</th>
</tr>
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<td>0.1</td>
<td>98.3</td>
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<td>3.28</td>
<td>0.1</td>
<td>99.9</td>
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<td>3.622</td>
<td>3.34</td>
<td>0.1</td>
<td>101.2</td>
</tr>
</tbody>
</table>