Supplementary Information

Ingenious fabrication of metal–organic framework/graphene oxide composites as aptasensors with superior electrochemical recognition capability

Qian-Qian Zhu, a Han-Wen Zhang, a Rongrong Yuan, b and Hongming He a

a Tianjin Key Laboratory of Structure and Performance for Functional Molecules, College of Chemistry, Tianjin Normal University, Tianjin 300387, P. R. China.

b Department of Materials Science and Engineering, Jilin Jianzhu University, Changchun 130118, P. R. China.

Corresponding Author

*E-mail: hehongminghz@163.com or hxyhhm@tjnu.edu.cn (for H. He)
Figure S1. PXRD patterns of UiO-66-NH$_2$ and UiO-66-NH$_2$/GO.
Figure S2. TGA curves of UiO-66-NH$_2$ and UiO-66-NH$_2$/GO.
Figure S3. BET surface area plots and pore size distribution of GO.
Figure S4. BET surface area plots and pore size distribution of UiO-66-NH$_2$. 
Figure S5. BET surface area plots and pore size distribution of UiO-66-NH\textsubscript{2}/GO.

Table S1 BET surface area reports of GO, UiO-66-NH\textsubscript{2}, and UiO-66-NH\textsubscript{2}/GO.

<table>
<thead>
<tr>
<th>Material</th>
<th>BET (m\textsuperscript{2} g\textsuperscript{-1})</th>
<th>Slope (g cm\textsuperscript{-3})</th>
<th>Y-Intercept (g cm\textsuperscript{-3})</th>
<th>C</th>
<th>Qm (cm\textsuperscript{3} g\textsuperscript{-1})</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>GO</td>
<td>25.6593 ± 0.2694</td>
<td>0.148309 ± 0.001739</td>
<td>0.021320 ± 0.000383</td>
<td>7.956219</td>
<td>5.8952</td>
<td>0.9995878</td>
</tr>
<tr>
<td>UiO-66-NH\textsubscript{2}</td>
<td>831.6632 ± 8.2183</td>
<td>0.005229 ± 0.000052</td>
<td>0.000005 ± 0.000001</td>
<td>1076.771264</td>
<td>191.0737</td>
<td>0.9997356</td>
</tr>
<tr>
<td>UiO-66-NH\textsubscript{2}/GO</td>
<td>307.0955 ± 0.8324</td>
<td>0.014163 ± 0.000038</td>
<td>0.000010 ± 0.000001</td>
<td>1371.065264</td>
<td>70.5548</td>
<td>0.9999853</td>
</tr>
</tbody>
</table>
Figure S6. The full XPS survey scan spectrum of GO.
Figure S7. The full XPS survey scan spectrum of UiO-66-NH$_2$. 
Figure S8. The full XPS survey scan spectrum of UiO-66-NH$_2$/GO.
Figure S9. The high-resolution XPS spectrum of P 2p in UiO-66-NH$_2$/GO.
Figure S10. CV curves of different modified electrodes for the GO-based aptasensor.
Figure S11. CV curves of different modified electrodes for the UiO-66-NH$_2$-based aptasensor.
Figure S12. CV curves of different modified electrodes for the UiO-66-NH$_2$/GO-based aptasensor.
Figure S13. EIS Nyquist plots and equivalent circuit.