Supporting Information

Carbon Quantum Dots and Rhodamine Based Ratiometric Fluorescent Complex for Recognition of Histidine in Aqueous System

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Figure S1: TEM image of CQDs
Figure S2: DLS histograms of CQDs

Figure S3: XRD pattern of CQDs
<table>
<thead>
<tr>
<th>No.</th>
<th>Method</th>
<th>LOD (µM)</th>
<th>Ref.</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>HPLC</td>
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<td>[1]</td>
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<tr>
<td>2.</td>
<td>Capillary Electrophoresis</td>
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<td>[2]</td>
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<td>3.</td>
<td>Electrochemical Analysis</td>
<td>5</td>
<td>[3]</td>
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<td>Photoluminescence</td>
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<td>[4]</td>
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<td>5.</td>
<td>Photoluminescence</td>
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<td>[5]</td>
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<td>6.</td>
<td>Photoluminescence</td>
<td>1.5</td>
<td>This Work</td>
</tr>
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**Figure S4:** Comparison of LODs of reported references and our work

**Figure S5.** Bar diagram for selectivity study of CQDs-Fe-HS30 in the presence of various biomolecules and anions. (1) CQDs-Fe-HS30 (2) Histidine (3) L-Glutamine (4) Arginine (5) Glycine (6) Alanine (7) Valine (8) Leucine (9) Isoleucine (10) Tryptophan (11) Histamine (12) Spermine (13) Tyramine (14) Cadaverine (15) Perchlorate (16) Nitrate (17) Chloride (18) Hydroxide (19) Acetate (20) Iodide (21) Cyanide (22) Bisulphate (23) Fluoride (24) Citric Acid (25) Ascorbic Acid (26) Glutamic Acid. The selectivity studies were carried out using 75 µM of 2-26.
Figure S6: $^1$H-NMR of HS30

Figure S7: $^{13}$C-NMR of HS30
Figure S8: Mass Spectra of HS30

References


