**Supporting information**

**Facile bottom-up preparation of WS2-based water-soluble quantum dots as luminescent probes for hydrogen peroxide and glucose**

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**Figure S1**. (a) PL spectra of WS2 QDs under 360 nm irradiation with different concentrations of H2O2. (b) The linear calibration plot for H2O2 concentration.



**Figure S2**. (a) The PL spectra of WS2 QDs under 360 nm irradiation with different amounts of glucose. (b) The correlation between PL quenching ratios and the concentration of glucose.



**Figure S3**. Time-resolved PL spectra of WS2 QDs treated with an increasing concentration of hydrogen peroxide.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| H2O2 concentration (M) | 0 | 200 | 600 | 1000 |
| Lifetime | 3.51 | 3.62 | 3.71 | 3.52 |

**Table S1**. Calculated lifetime of TRPL spectra of CD/WS2 QDs treated with varied concentration of hydrogen peroxide.