Supplementary materials

Facile synthesis of water-soluble and pH-stable silicon quantum dot and its application in enzyme-free hydrogen peroxide sensing

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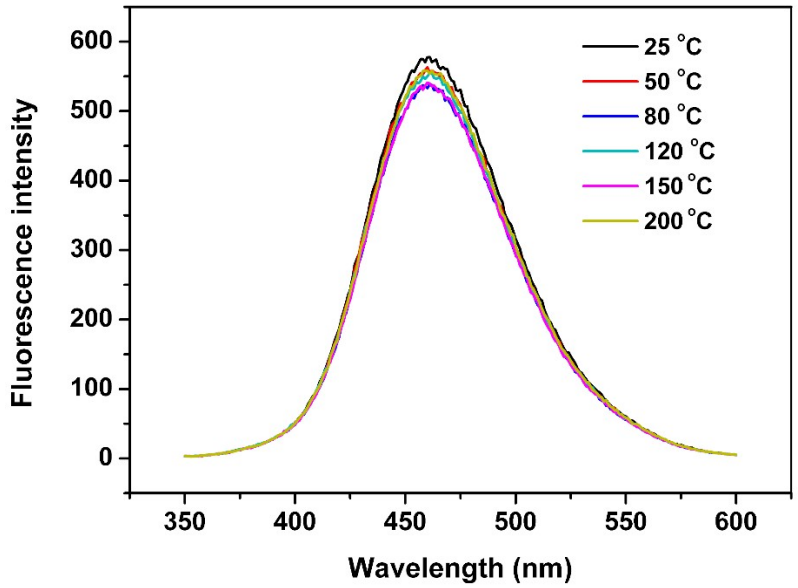

Fig. S1 The effect of temperature on the fluorescence intensity of SiQDs (500 μg/mL, pH 7.4).

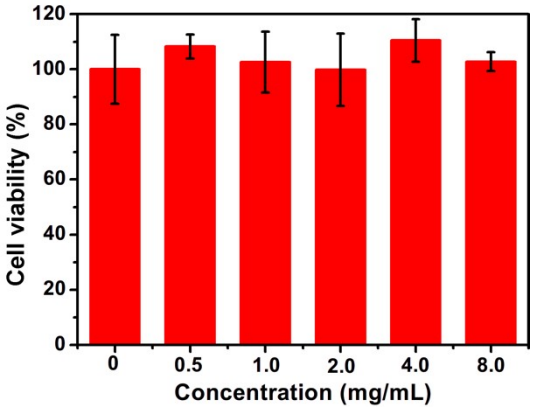

Fig. S2 The effect of the concentration of the SiQDs on cell viability.

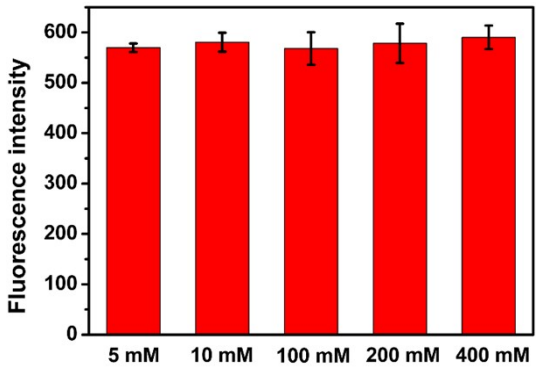

Fig. S3 The effect of PBS concentration (5–400 mM) on the fluorescence intensity of SiQDs (500 μg/mL, pH 7.4).

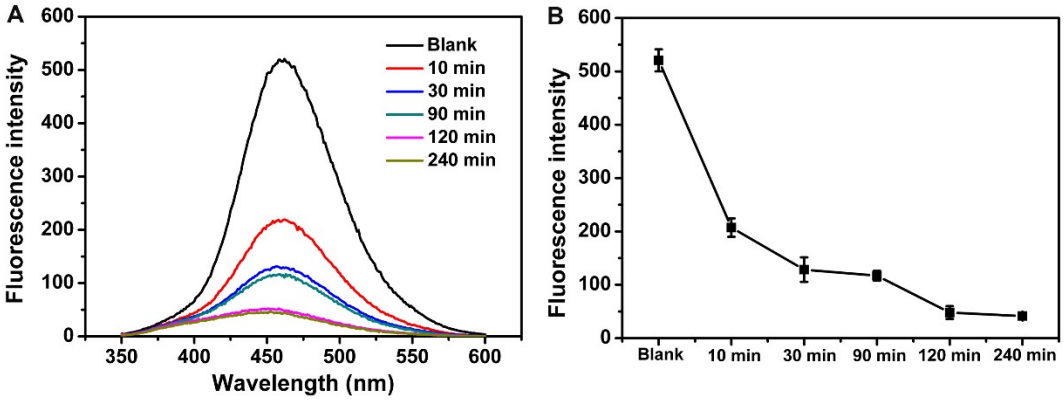

Fig. S4 (A) Fluorescence spectra of SiQDs after interaction with H_2O_2 at different times. (B) Effect of interaction time on the fluorescence intensity of SiQDs. The concentration of SiQDs and H_2O_2: 500 μg/mL and 500 μM, respectively.

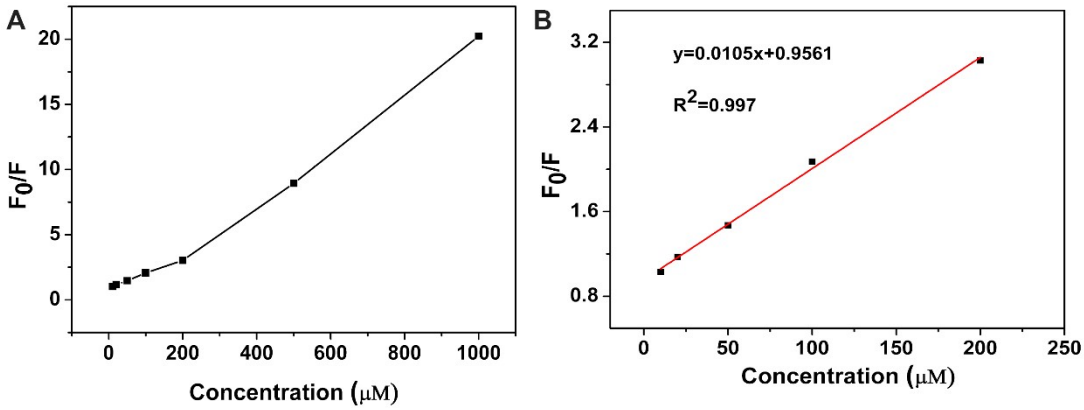

Fig. S5 A Fluorescence data of SiQDs (500 μg/mL) in the presence of H_2O_2 with different concentrations (10–1000 μM). B Stern–Volmer plot of the data presented in A

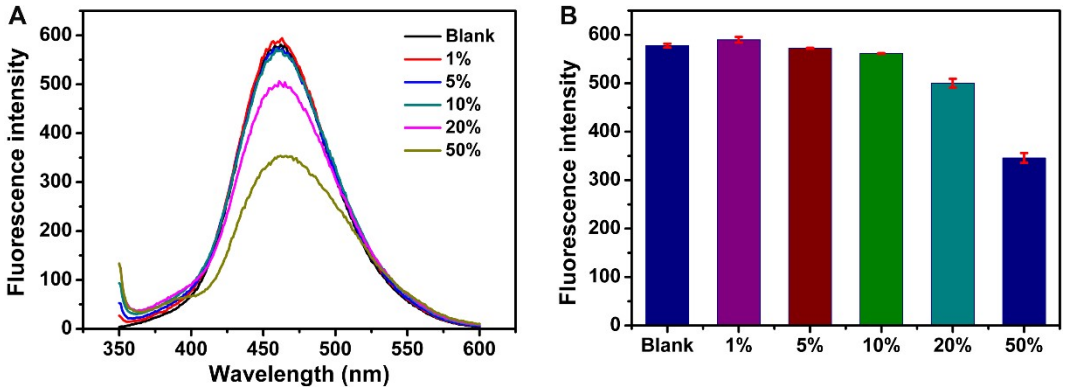

Fig. S6 (A) Effect of human serum matrix on the fluorescence of SiQDs. (B) Fluorescence intensities of SiQDs in the PBS buffer (blank) and 1–10% human serum samples. The concentration of SiNDs: 500 μg/mL.