Supporting Information

A quantum dots-based fluorescent sensing platform for efficiently and sensitively monitoring collagen self-assembly

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1. Morphology of QDs



Figure S1. TEM image (A) and size-distribution (B) of QDs.

2. CD spectra of collagens



Figure S2. CD spectra of GCSC (A), PSC (B), BSC (C) and BTC (D).

3. CD spectrum of GCSC and QDs mixture



Figure S₃. CD spectrum of GCSC (a), GCSC and QDs mixture (b).





Figure S4. Turbidity-time curves of GCSC self-assembly (a) and GCSC self-assembly in the presence of QDs (b).

5. Fluorescence spectrum of low concentration GCSC before and after incubation



Figure S5. Fluorescence spectrum of low concentration GCSC (0.05 mg/mL) before (a)and after (b) incubation at 30 °C for 3 h.

6. Calculation of fluorescence quenching efficiency

quenching efficiency=
$$(F_o-F_c)/F_o$$
 (Equation S₁)

where F_o is the fluorescence intensity of QDs before collagen self-assembly, Fc is A is the fluorescence intensity of QDs after self-assembly of collagen at different concentrations. 7. Correlation between the amount of collagen in fibrils and collagen concentration



Figure S6. Correlation between the amount of collagen in fibrils and collagen concentration.