

Supporting Information

Telopeptide-dependent xenogeneic collagen co-assembly

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1. SDS-PAGE analysis of collagens

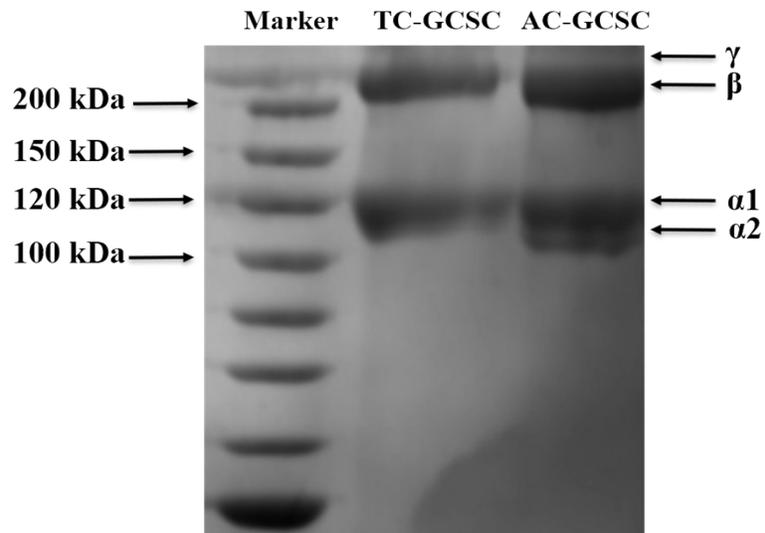


Figure S1. SDS-PAGE analysis of marker, TC-GCSC and AC-GCSC.

2. Fluorescence quenching of FITC-PSC by GO

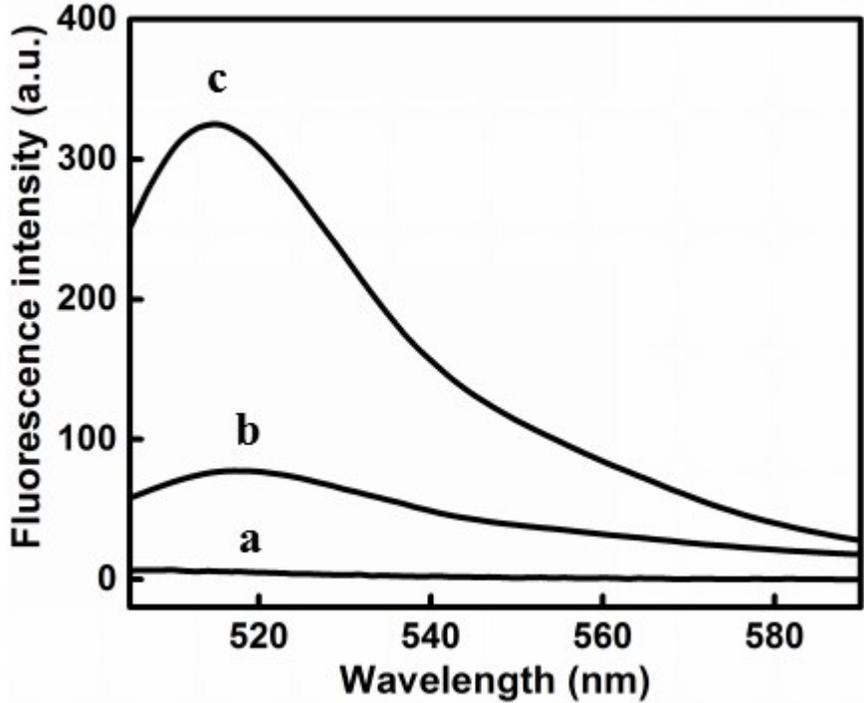


Figure S2. Fluorescence intensities of PSC (a), FITC-PSC (c), and the mixture of FITC-PSC and GO (b).

3. Comparison of the kinetics of XCCA in fluorescence assay

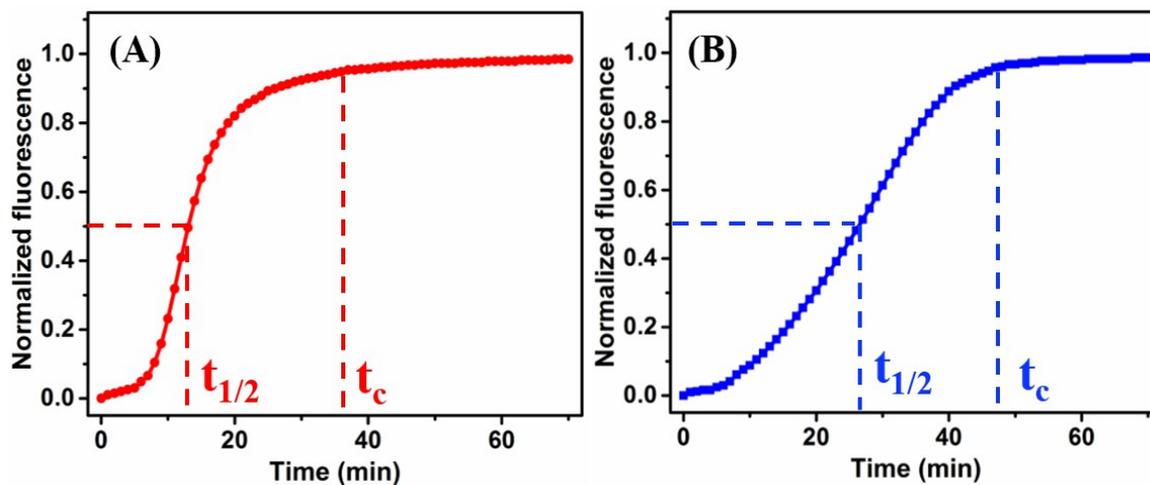


Figure S3. The kinetics of FITC-PSC/AC-GCSC co-assembly (A) and FITC-PS/TC-GCSC co-assembly (B) in fluorescence assay. Each experiment was performed at least three times and showed a representative example.

4. Comparison of the kinetics of XCCA in turbidity assay

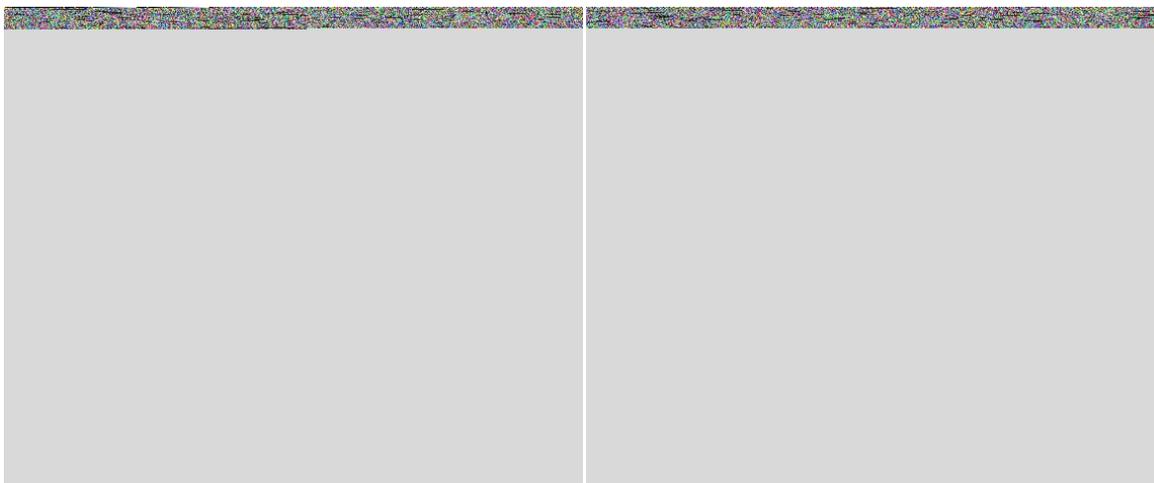


Figure S4. The kinetics of FITC-PSC/AC-GCSC co-assembly (A) and FITC-PSC/TC-GCSC co-assembly (B) in turbidity assay. Each experiment was performed at least three times and showed a representative example.

5. Rate constant (k) calculation of XCCA

The rate constants of XCCA were calculated according to the following equation, where A_t is the absorbance at 310 nm at time t , A_0 and A_e are the absorbance at the beginning period ($t=0$) and plateau phase respectively, k is rate constant.

$$-\ln \frac{A_e - A_t}{A_e - A_0} = kt$$

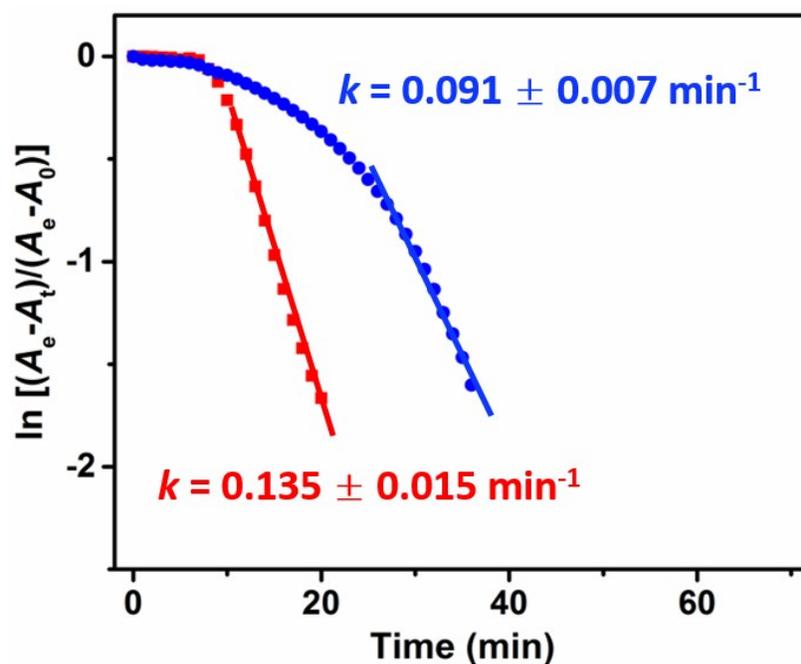


Figure S5. Rate constants (k) of FITC-PSC and AC-GCSC co-assembly (red), and FITC-PSC and TC-GCSC co-assembly (blue).

6. SEM images of collagen fibrils

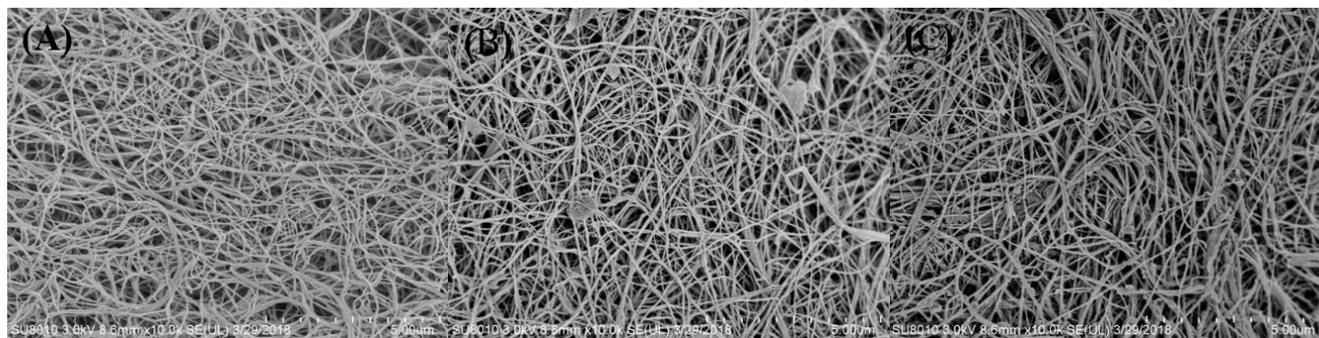


Figure S6. SEM images of PSC (A), AC-GCSC (B) and TC-GCSC (C) assembled fibrils.

7. Gelation dynamic of collagen self-assembly

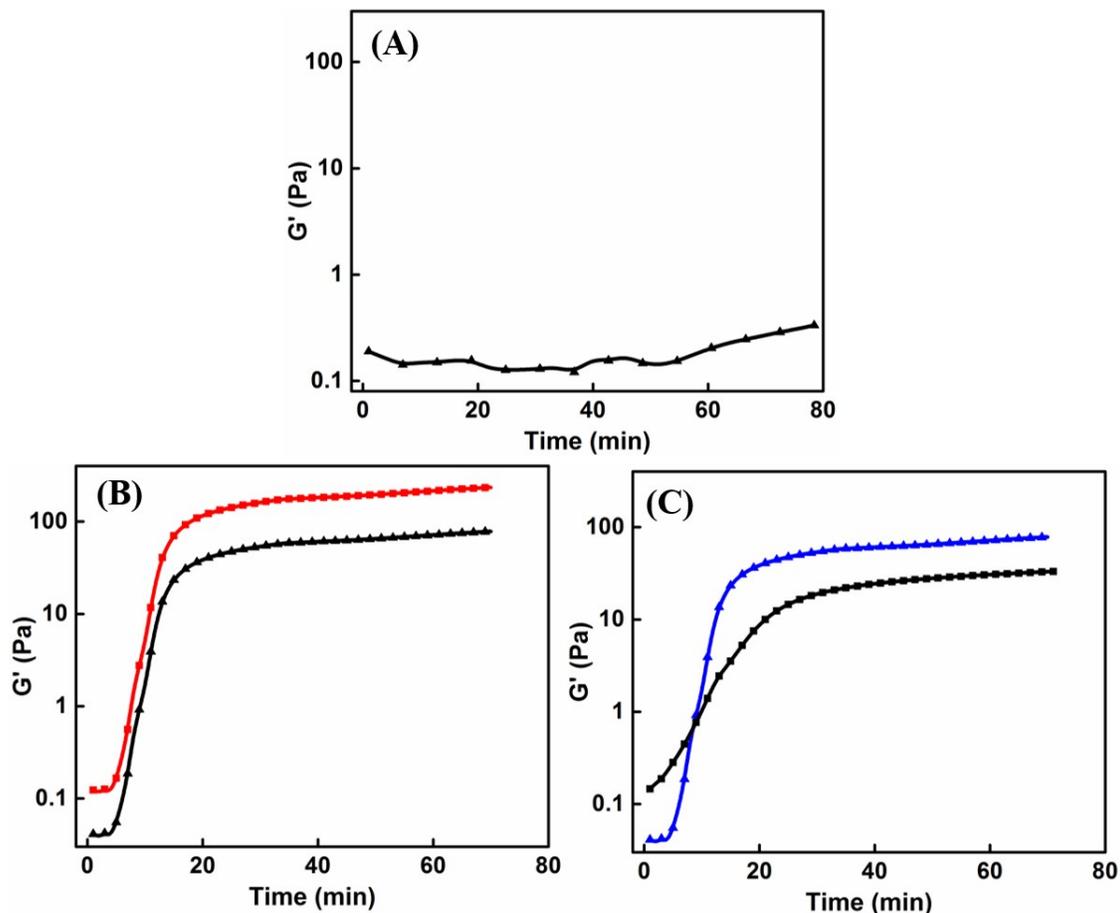


Figure S7. (A) Gelation dynamics of PSC sample at 30 °C; (B) Comparison of G' modulus between AC-GCSC (black line) and PSC/AC-GCSC (red line) samples; (C) Comparison of G' modulus between TC-GCSC (black line) and PSC/TC-GCSC (blue line) samples.