Controllable Self-Patterning Behaviours of Flexible Self-Assembling Peptide Nanofibers

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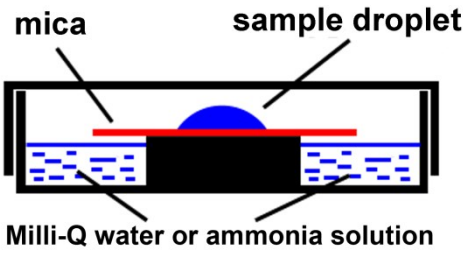

Figure S1. Schematic illustration of the incubation device.

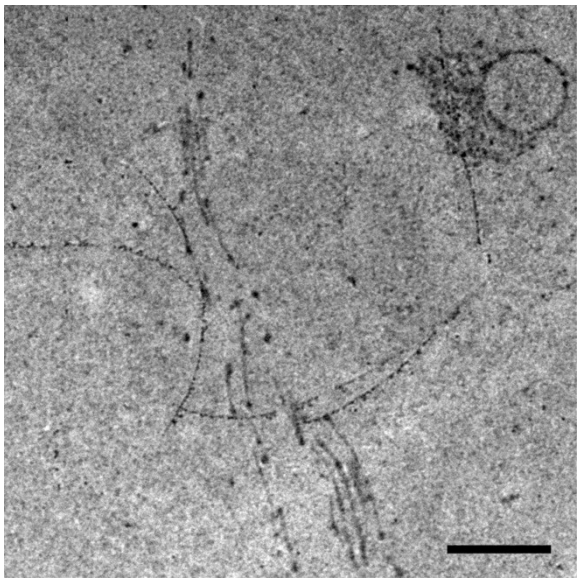

Figure S2. TEM image of DGAV nanofibers combined with copper ions. Scale bar=500 nm.

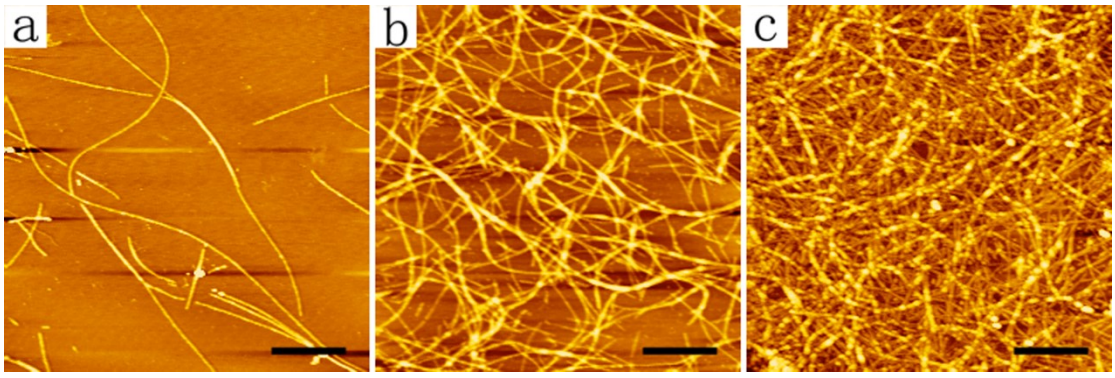

Figure S3. AFM images showed random stacking of nanofibers formed by 2 mM KGAV. (a) long nanofibers attached on mica surface without incubation. (b) after 5 h of incubation, nanofibers randomly stacked with each other and formed interweaving scaffold. (c) after 10 h of incubation, three-dimensional scaffold was formed by very thick multiple-layer nanofibers. Scale bars=1 μm.

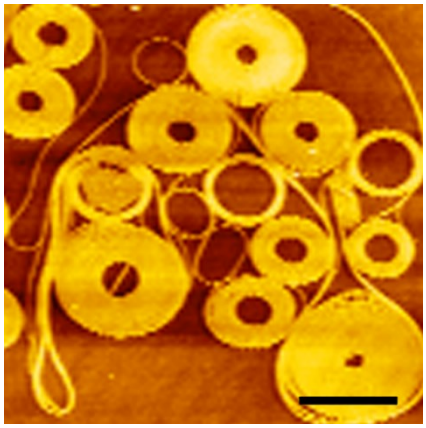

Figure S4. AFM image of nanofiber coils formed by DGAV combined with copper ions after 1 h of incubation on mica surface. Peptide/$CuCul_2$ solution used to prepare the AFM sample was the same one used for TEM study. Scale bar=1 μm.

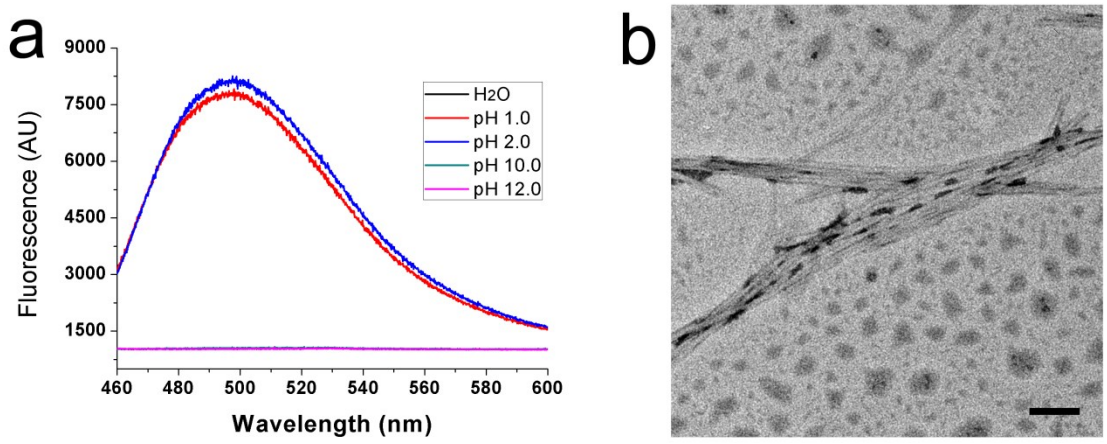

Figure S5. Self-assembly of DGAV at different pH. (a) ThT-binding fluorescence suggested that DGAV exhibited similar self-assembling behaviour at pH 1.0 and 2.0, while it failed to undergo self-assembly at pH 10.0 and 12.0. (c) TEM image showed that at pH 1.0 DGAV formed nanofibers with morphology similar to those formed at pH 2.0. Scale bar=100 nm.

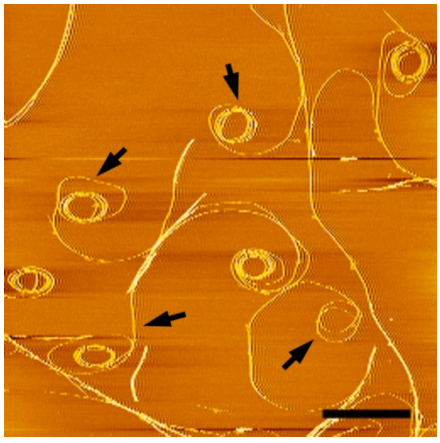

Figure S6. AFM image of nanofiber coils formed by 0.5 mM DGAV after 1 h of incubation. Black arrows indicated coils formed by single nanofibers. Scale bar=2 μm.