Supporting Information of

The Robust Hydrogel Hierarchically Assembled from a pH Sensitive Peptide Amphiphile Based on Silk Fibroin

*Hui Guo, Jinming Zhang, Tao Xu, Zhidong Zhang, Jinrong Yao, and Zhengzhong Shao**

State Key Laboratory of Molecule Engineering of Polymers, Laboratory of Advanced Materials and Department of Macromolecular Science, Fudan University, 220 Handan Road, Shanghai, 200433, People's Republic of China

*Address correspondence to:

E-mail: zzshao@fudan.edu.cn

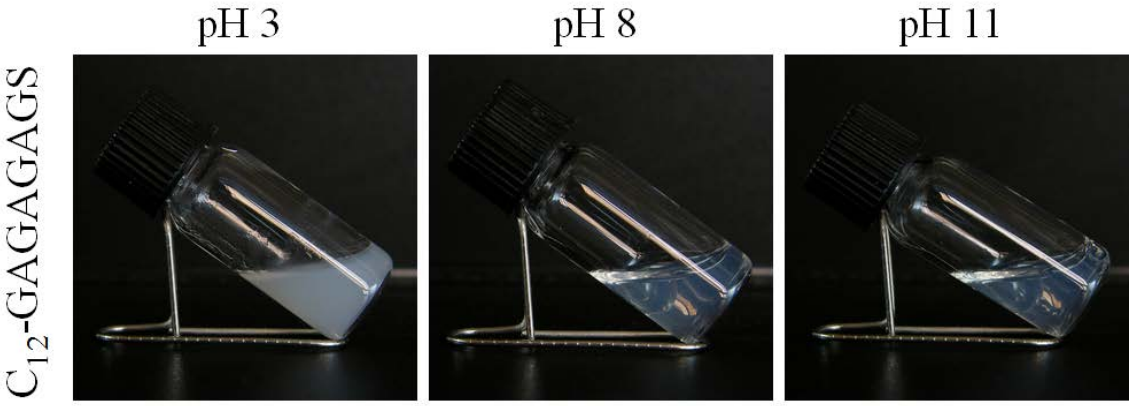

Figure S1. C_{12}-GAGAGAGS/H_2O system (1 wt %) at pH 3, pH 8 and pH 11.

Figure S2. TEM images of C_{12}-GAGAGAGS assembly and aggregates (negatively stained by uranyl acetate) at pH 11

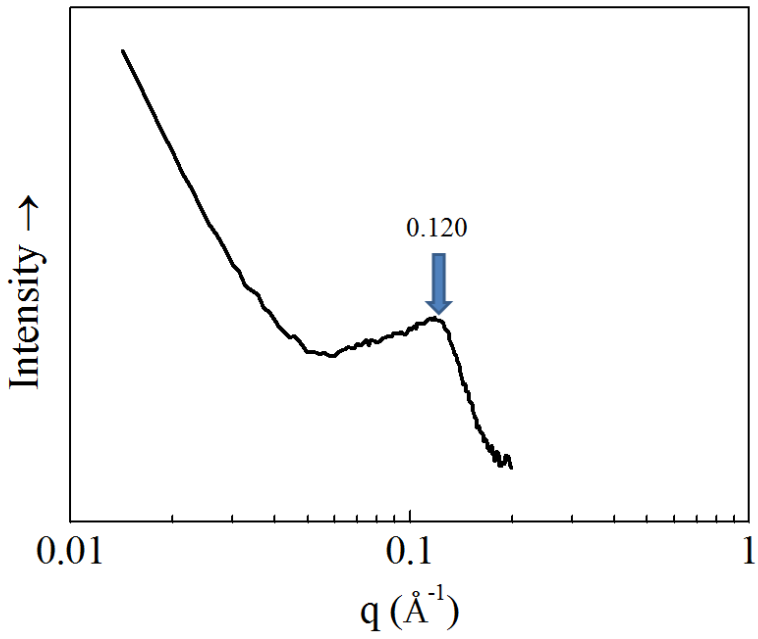

Figure S3. SAXS results of C_{12}-GAGAGAGY hydrogel after freeze drying

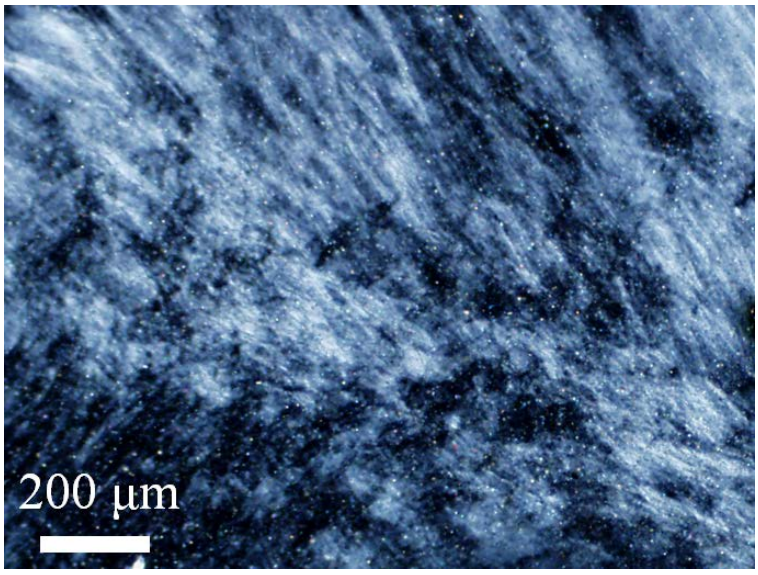

Figure S4. POM image of the C_{12}-GAGAGAGY hydrogel formed at lower pH (pH<4, the light spots were attributed to salts) .

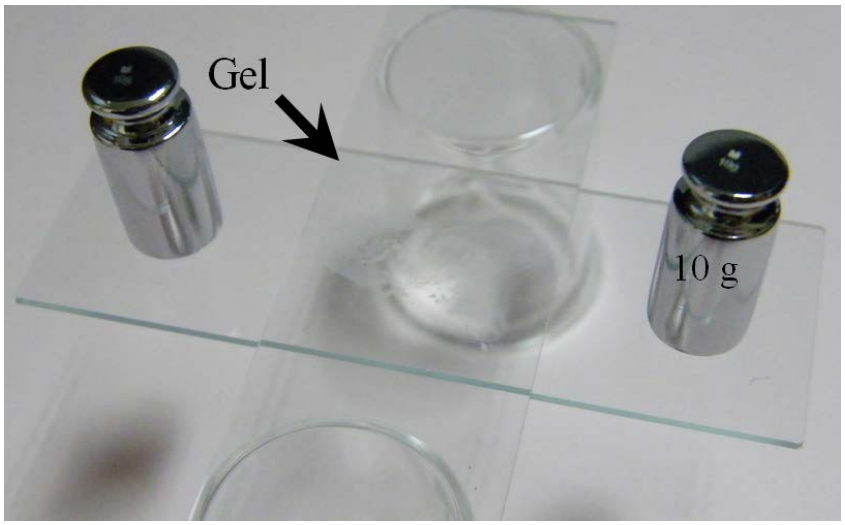

Figure S5. The PAs hydrogel can be used as adhesive, with adhesive force over 400 N/m^2.

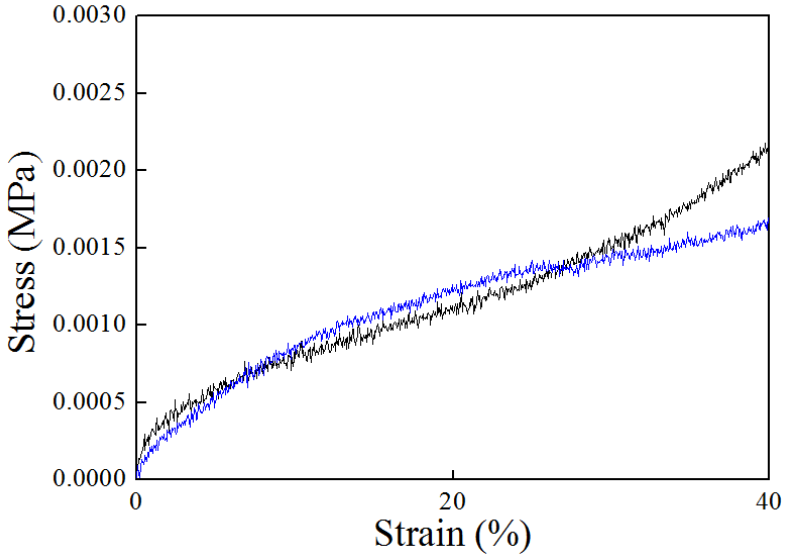

Figure S6. Compression test result of the C_{12}-GAGAGAGY hydrogels (1 wt %). The calculated compression modulus is around 10^4 Pa.