Supporting Information

Short peptide-regulated aggregation of porphyrin for photoelectric conversion

Shengjie Wang,*a Dongxiu Zhang,†a Xiao Zhang,†a Daoyong Yu,a Xiaofeng Jiang,b Zhenyang Wang,b Meiwen Cao,a Yongqing Xia,a Heyuan Liu,c

a State Key Laboratory of Heavy Oil Processing and Centre for Bioengineering and Biotechnology, China University of Petroleum, Qingdao 266580, P. R. China, Tel.: (+86) (0) 532 86983455, Email: sjwang@upc.edu.cn
b College of Chemistry, China University of Petroleum, Qingdao 266580, P. R. China
c Department of Chemistry, College of Science, China University of Petroleum, Qingdao 266580, P. R. China
Figure S1. Photography of I₄K₂/TPPS co-aggregates under various peptide concentrations. TPPS concentration is constant at 50 µM and the mixtures are kept at pH 2.5.
Figure S2. UV-vis spectra of the deposits and the supernatant obtained from the I₄K₂/TPPS co-aggregates (C_{I₄K₂}=2 mM, C_{TPPS}=50 µM, pH2.5) via centrifugation. The deposit collected by centrifugation and dispersed into ultrapure water for before UV-vis characterization.
**Figure S3.** Negatively stained TEM images of I₄K₂ assembly at various concentration diluted from 16 mM and stored at room temperature for one week.
Figure S4. CD spectra of $\text{I}_4\text{K}_2$ assemblies with different concentration. All the samples were diluted from a preassembled $\text{I}_4\text{K}_2$ solution (16 mM) and kept static for two days before characterization.
Figure S5. Photography of $\text{I}_4\text{K}_2$/TPPS at various porphyrin concentrations. Noting that $\text{I}_4\text{K}_2$ concentration is constant at 2 mM and solution pH values are 2.5.
Figure S6. UV-vis spectra of the I₄K₂/TPPS co-aggregates formed with different TPPS concentration. Noting that I₄K₂ concentration is 2 mM, and the solution pH value is 2.5 for all the samples.
Figure S7. Unstained TEM images of $I_4K_2$/TPPS at various porphyrin concentrations. $I_4K_2$ concentration is constant at 2 mM and solution pH value is 2.5.
Figure S8. UV-vis spectra of TPPS solutions (50 µM) at various pH values.