

Supporting Information

Molecular Assembly of Alkyl Chain-Grafted Poly(L-lysine) Tuned by Backbone Chain Length and Grafted Alkyl Chains

*Bo-Yu Chen, Yun-Chiao Huang and Jeng-Shiung Jan**

Department of Chemical Engineering National Cheng Kung University No 1, University Rd., Tainan,
Taiwan 70101 (Taiwan)

Table S1. Characterization of poly(Z-L-lysine) (PZLL).

Sample code	Mn	Mw	PDI
PZLL ₃₀₀	79400	97800	1.23
PZLL ₁₃₀	35600	40600	1.14
PZLL ₆₀	17400	19100	1.10

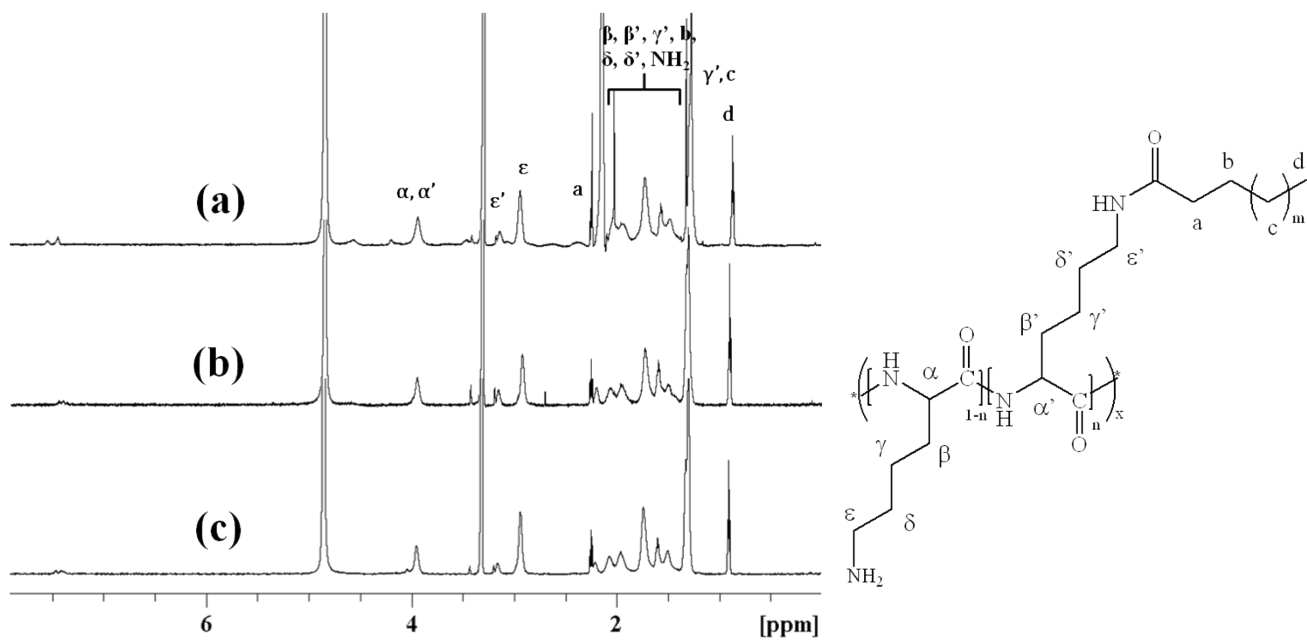


Figure S1. ^1H NMR spectra of (a) $\text{K}_{60}\text{-g-Dec}_{0.2}$, (b) $\text{K}_{60}\text{-g-Dec}_{0.4}$, and (c) $\text{K}_{60}\text{-g-Tetra}_{0.2}$ graft copolymers.

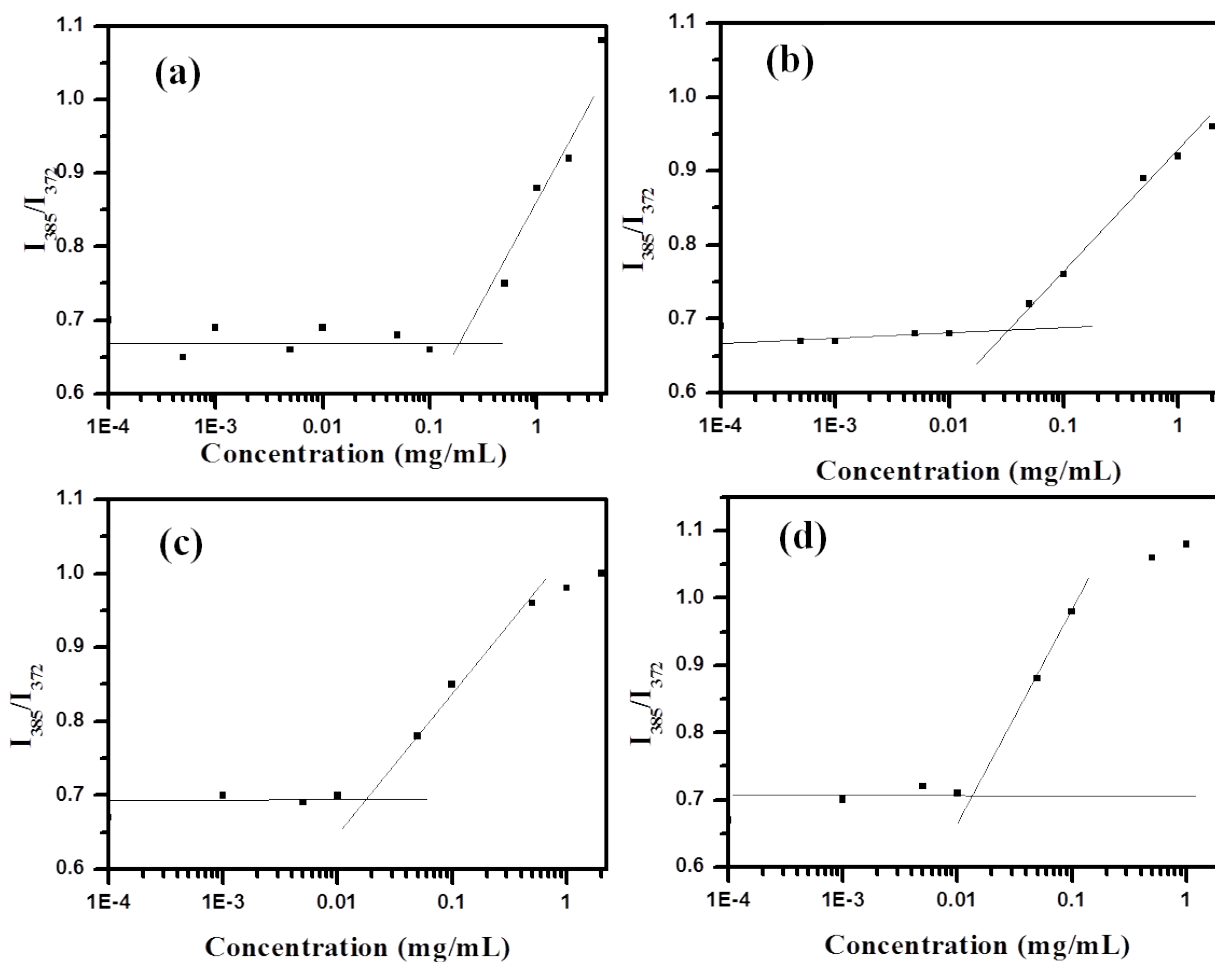


Figure S2. The I_{385}/I_{372} value of pyrene emission of (a) K_{130} -g-Hexa_{0.2}, (b) K_{130} -g-Dec_{0.2}, (c) K_{130} -g-Dec_{0.4}, and (d) K_{130} -g-Tetra_{0.2} as a function of polymer concentration.

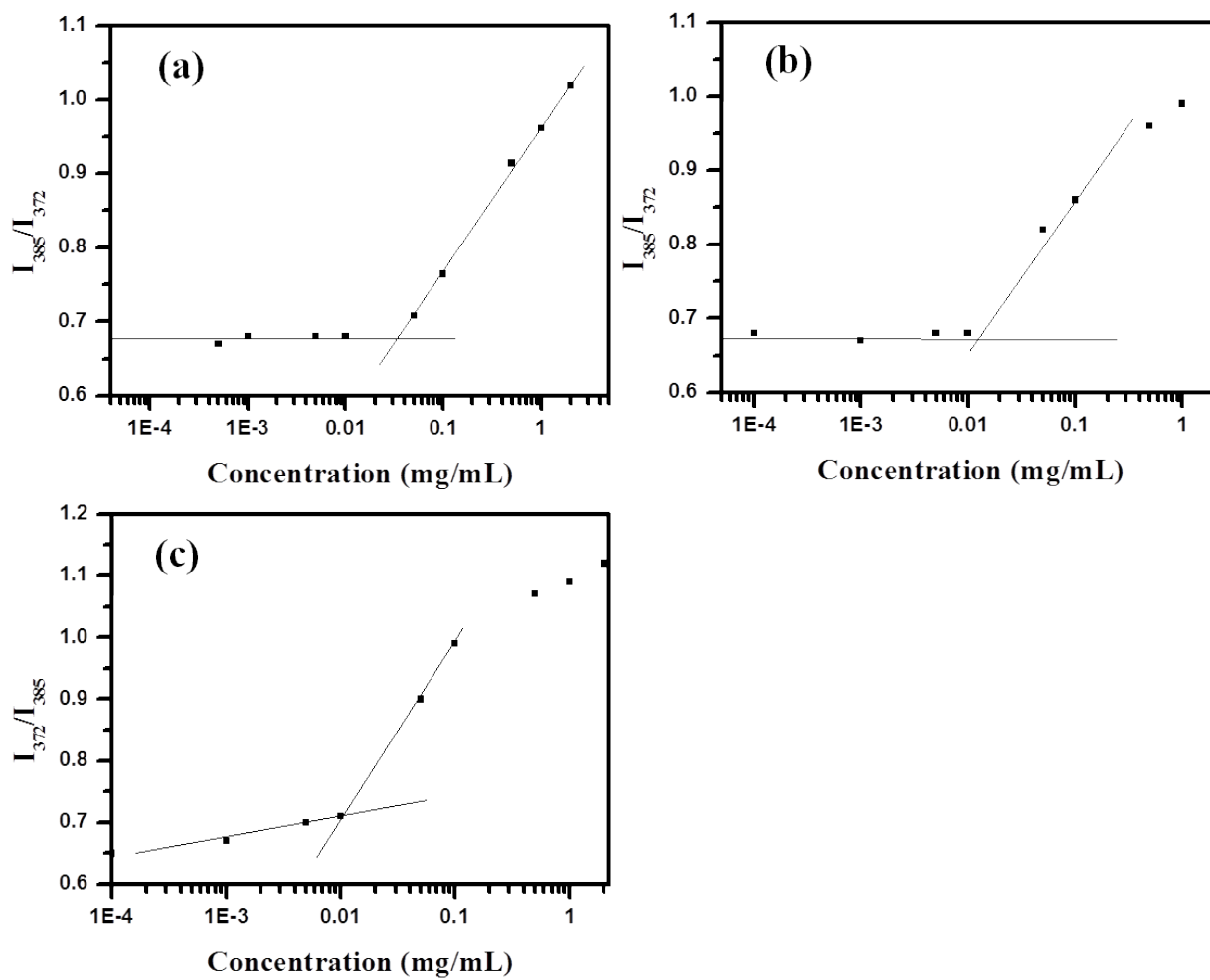


Figure S3. The I_{385}/I_{372} value of pyrene emission of (a) $K_{60}\text{-g-Dec}_{0.2}$, (b) $K_{60}\text{-g-Dec}_{0.4}$, and (c) $K_{60}\text{-g-Tetra}_{0.2}$ as a function of polymer concentration.

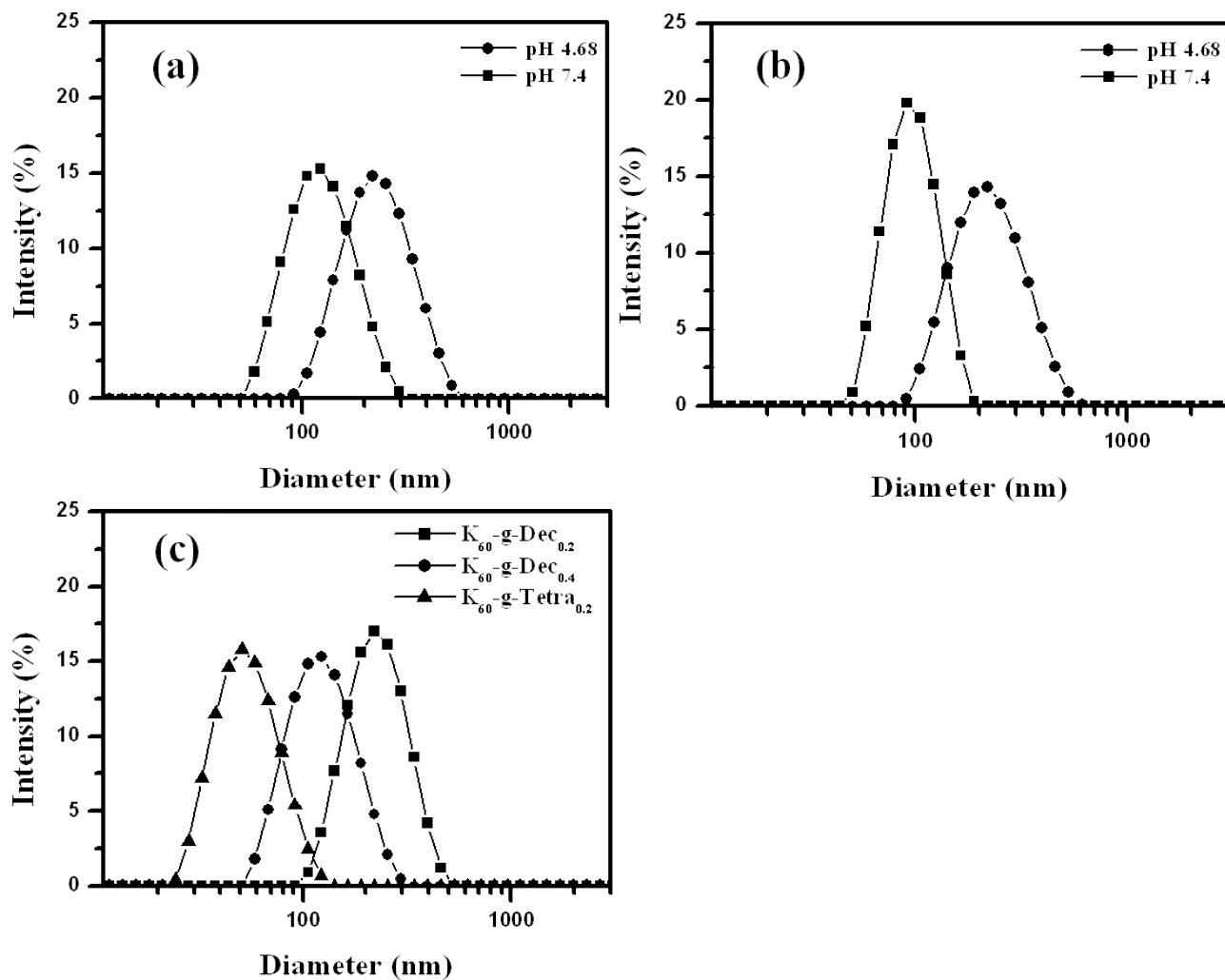


Figure S4. Size distributions of (a) K_{130} -g- $Dec_{0.4}$ and (b) K_{60} -g- $Dec_{0.4}$ assemblies at pH 4.68 and 7.4, and (c) alkyl chain-grafted K_{60} assemblies at pH 7.4 ($I = 0.01$ N).

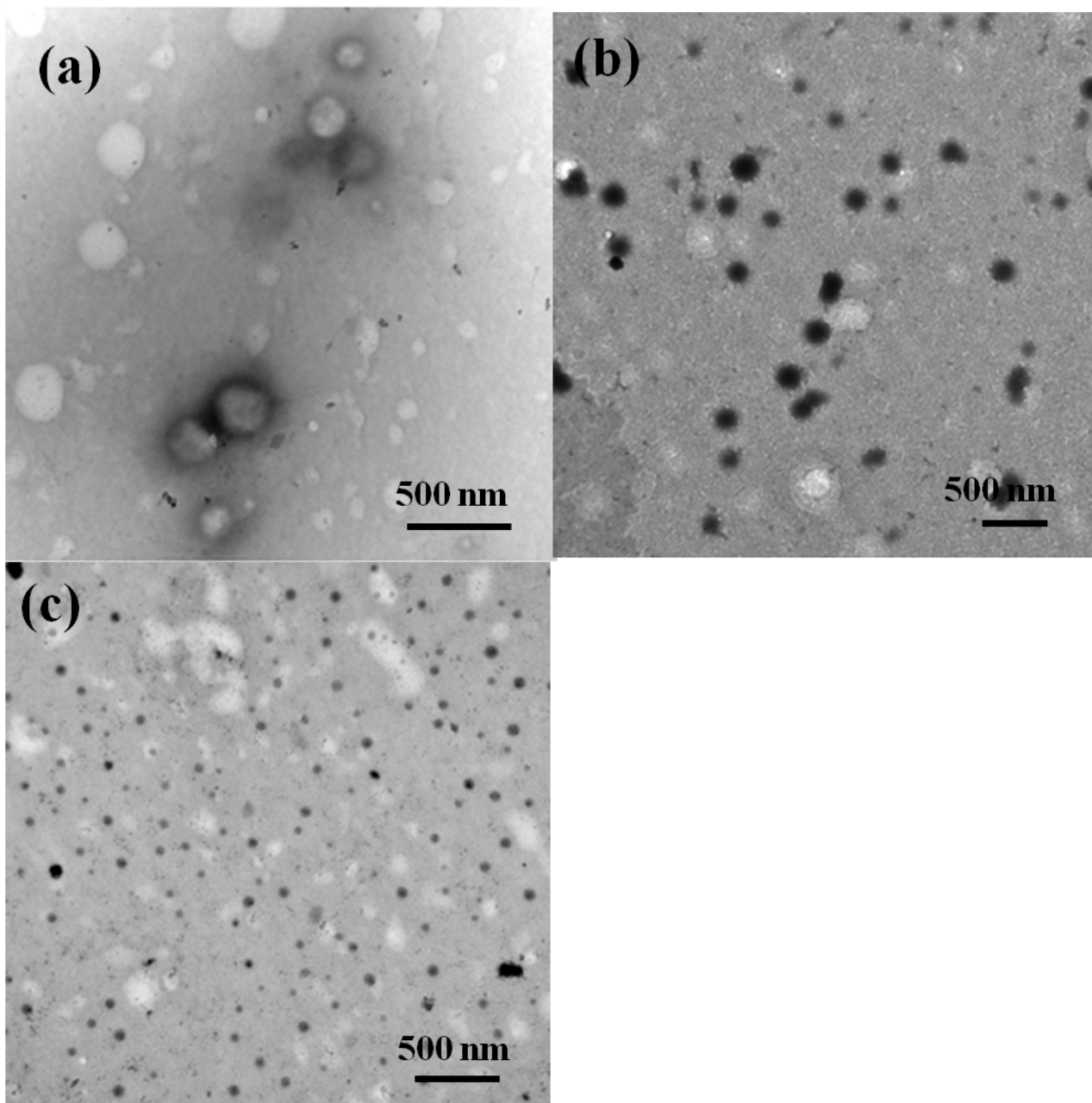


Figure S5. TEM images of (a) K₆₀-g-Dec_{0.2}, (b) K₆₀-g-Dec_{0.4}, and (c) K₆₀-g-Tetra_{0.2} assemblies at pH 7.4 (I= 0.01 N).

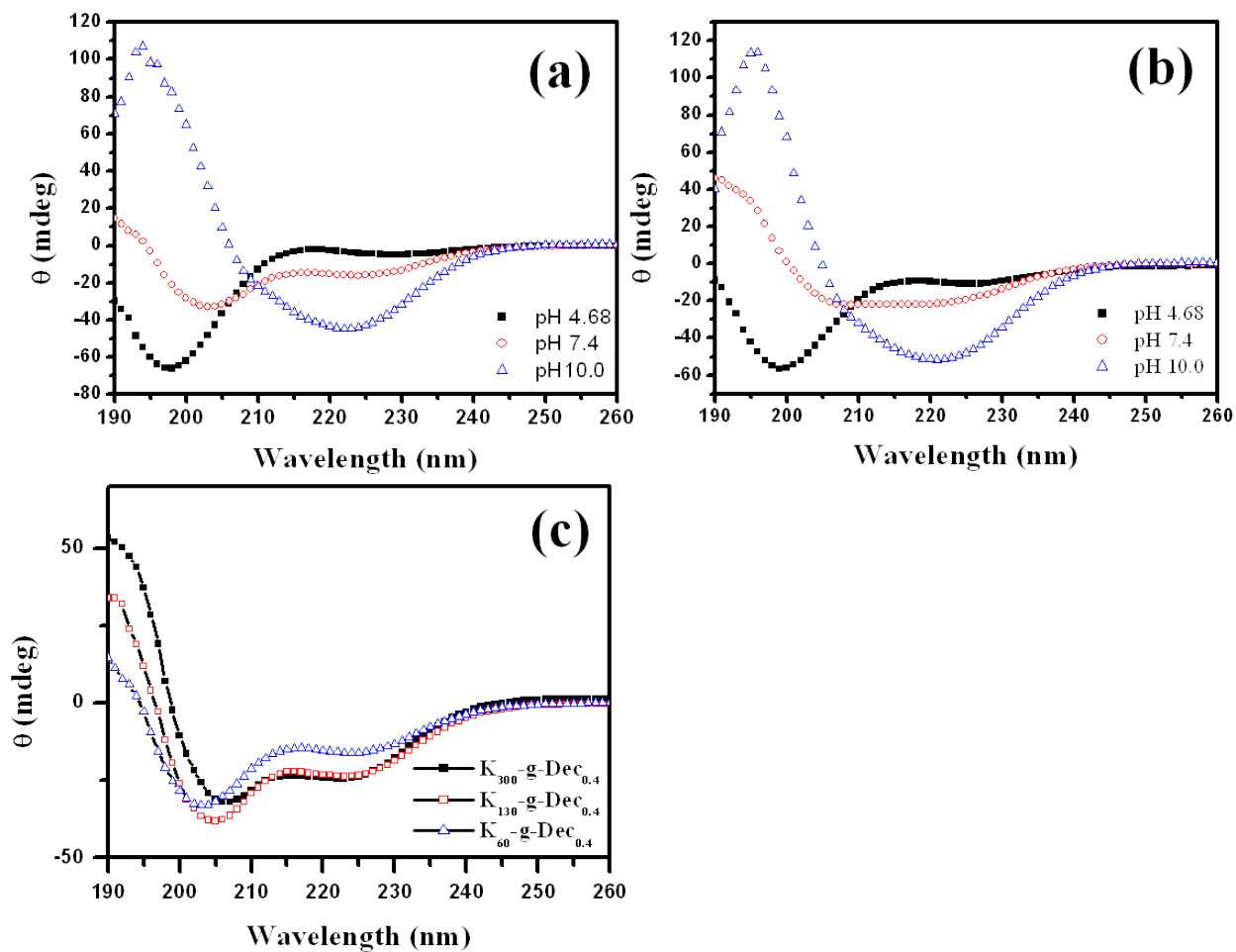


Figure S6. CD spectra of (a) K_{60} -g- $Dec_{0.4}$ and (b) K_{60} -g- $Tetra_{0.2}$ at different pH values and (c) CD spectra of PLL-g- $Dec_{0.4}$ at pH 7.4 ($I=0.01$ N)