**Supporting Information for** 

## Complete Dissociation and Reassembly Behavior as Studied by Poly(ethylene glycol)block- Poly(glutamate sodium) and Kanamycin A

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**Figure S1.** The angular dependence of the excess scattered intensity of the assemblies formed by  $PEG_{114}$ -PGlu<sub>64</sub> and kanamycin A at different [+]/[-] ratios in deionized water.



Figure S2. SEM morphology of  $PEG_{114}$ -PGlu<sub>64</sub>/kanamycin A assemblies with [+]/[-] = 1

(A), 2 (B), 3.5 (C), 5 (D), 8 (E), 10 (F), and 20 (G).



**Figure S3**: Morphology of PEG<sub>114</sub>-b-PGlu<sub>64</sub>/Kanamycine A assembly at [+]/[-]=3.5 as determined by cryo-TEM.



**Figure S4.** The angular dependence of the excess scattered intensity of the  $PEG_{114}$ -PGlu<sub>64</sub>/kanamycin A assemblies solution ([+]/[-] = 3.5) after addition of 30 mM NaCl.



**Figure S5.** Time dependence of size (A) and excess scattering intensity (B) of the complex formed by  $PEG_{114}$ -PGlu<sub>64</sub> and kanamycin at [+]/[-] = 3.5 with or without 20 mM TFE (scattering angle: 30°).



**Figure S6.** Angular dependence of the excess scattered intensity of the  $PEG_{114}$ -PGlu<sub>64</sub>/kanamycin A assemblies ([+]/[-] = 3.5) after changing the pH of the complex solution from 7.8 to 8.3.



**Figure S7.** Scattered intensity of the  $PEG_{114}$ -PGlu<sub>64</sub>/kanamycin assemblies ([+]/[-] = 1) after changing the pH value of the solution from 7.8 to 8.3.