Degradable and Salt-Responsive Random Copolymers

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Supplementary Information

Thermal properties of cationic copolymers PCL-co-P(CL-g-QA) were characterized by Differential scanning calorimetry (DSC) and Thermogravimetric analysis (TGA). TGA was operated on a SDT Q600 TGA system (TA instruments), ramping from 25 °C to 1000 °C at a rate of 20 °C/min, and maintaining for 5 min at 1000 °C. DSC experiment was conducted on a DSC Q200 instrument (TA instruments). The samples were heated from –80 °C to 200 °C at a rate of 10 °C/min, maintained for 2 min at 200 °C and then cooled to –80 °C at a rate of 10 °C/min. The data were collected at the second scan.

As sown in Figure S1, the cationic copolymer has a $T_g$ at around –60 °C. Also the copolymer has melting temperatures ($T_m$) at between ~40 °C and ~50 °C as well as a crystallization temperature $T_c$ at ~20°C due to the crystallinity of PCL. As shown in Figure S2, the copolymer showed a typical two-stage weight loss behavior.
Figure S1. DSC curve of degradable cationic copolymer PCL-co-P(CL-g-QA) (Table 1 Entry 3)

Figure S2. TGA curve of degradable cationic copolymer PCL-co-P(CL-g-QA) (Table 1 Entry 3)