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 calorimetery (DSC) and Thermogravimetric analysis (TGA). TGA was operated on a SDT Q600 TGA system (TA instruments), ramping from 25 ^{o}C to 1000 ^{o}C at a rate of 20 ^{o}C/min, and maintaining for 5 min at 1000 ^{o}C. DSC experiment was conducted on a DSC Q200 instrument (TA instruments). The samples were heated from –80 ^{o}C to 200 ^{o}C at a rate of 10 ^{o}C/min, maintained for 2 min at 200 ^{o}C and then cooled to –80 ^{o}C at a rate of 10 ^{o}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 ^{o}C. Also the copolymer has melting temperatures (T_m) at between ~40 ^{o}C and ~50 ^{o}C as well as a crystallization temperature T_c at ~20^{o}C due to the crystallinity of PCL. As shown in Figure S2, the copolymer showed a typical two-stage weight loss behavior.

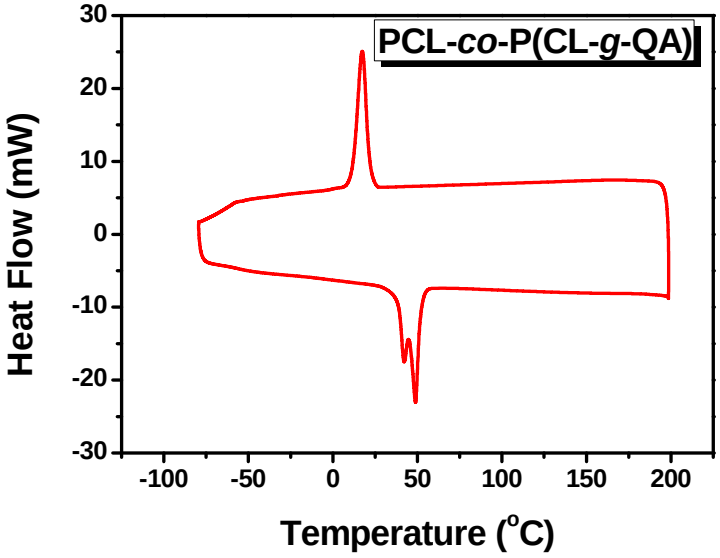

Figure S1. DSC curve of degradable cationic copolymer PCL-*co*-P(CL-*g*-QA) (Table 1 Entry 3)

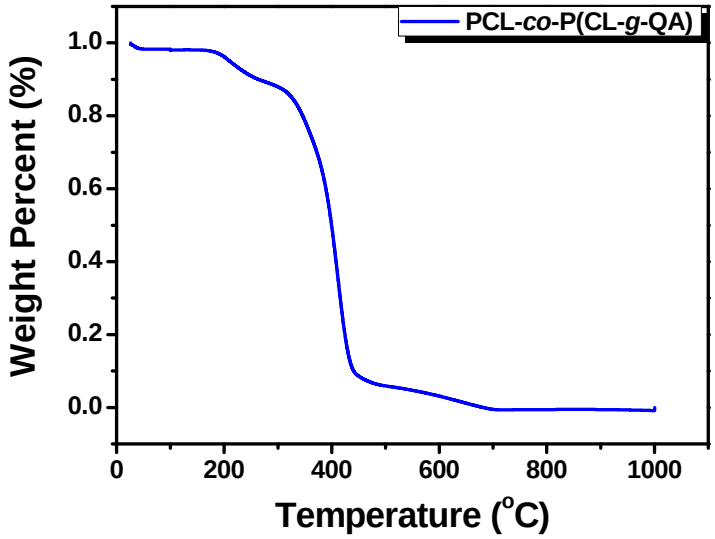

Figure S2. TGA curve of degradable cationic copolymer PCL-*co*-P(CL-*g*-QA) (Table 1 Entry 3)