

Supplementary material

## Synthesis, properties, and biodegradation of periodic copoly(ester amide)s containing $\gamma$ -aminobutyric acid

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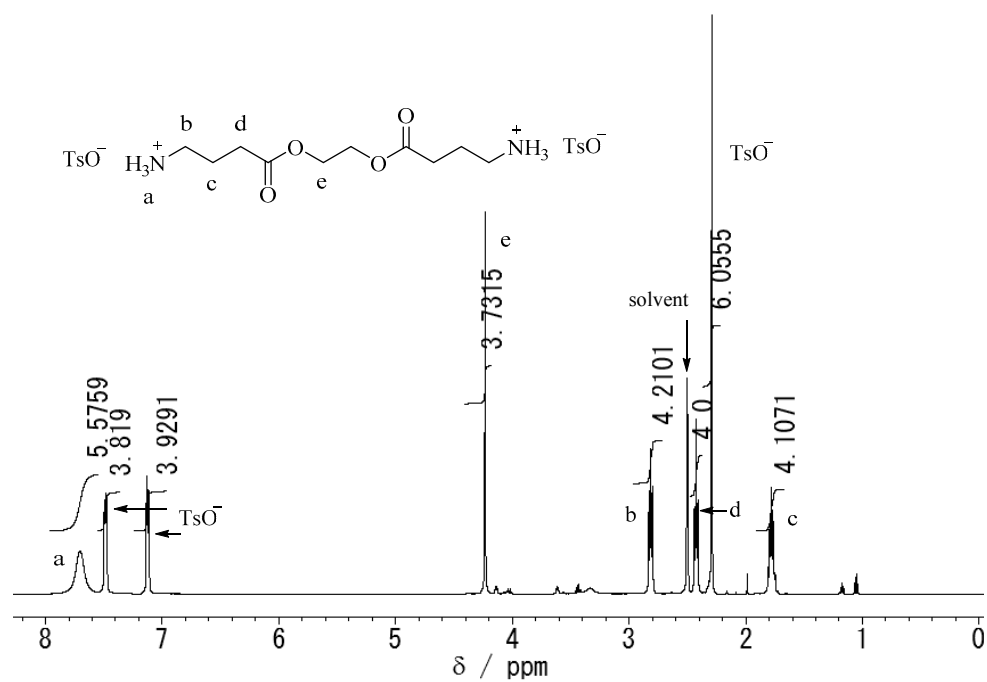
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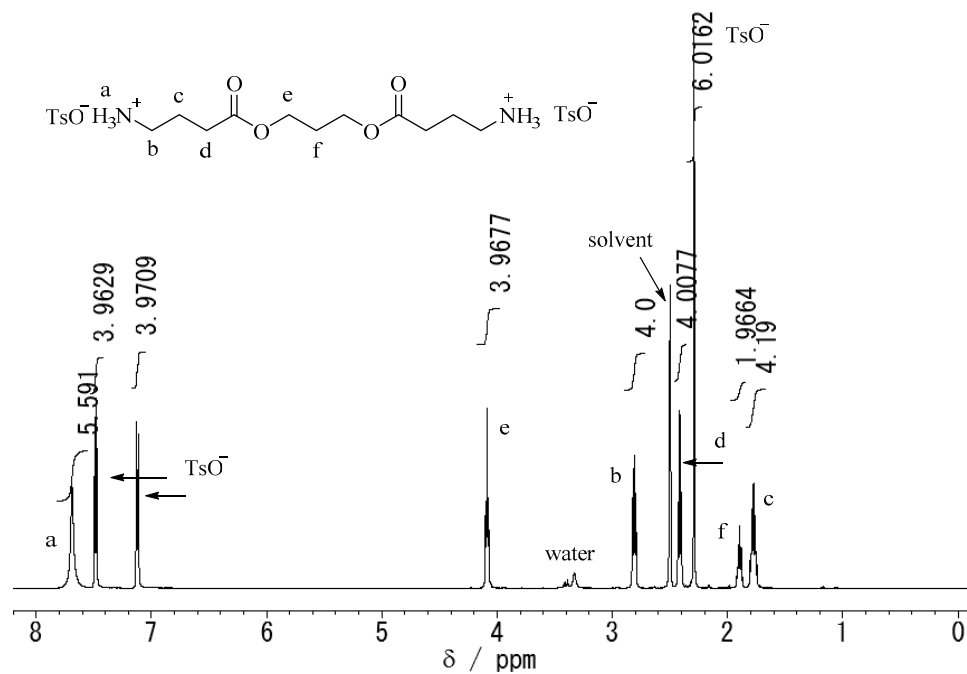
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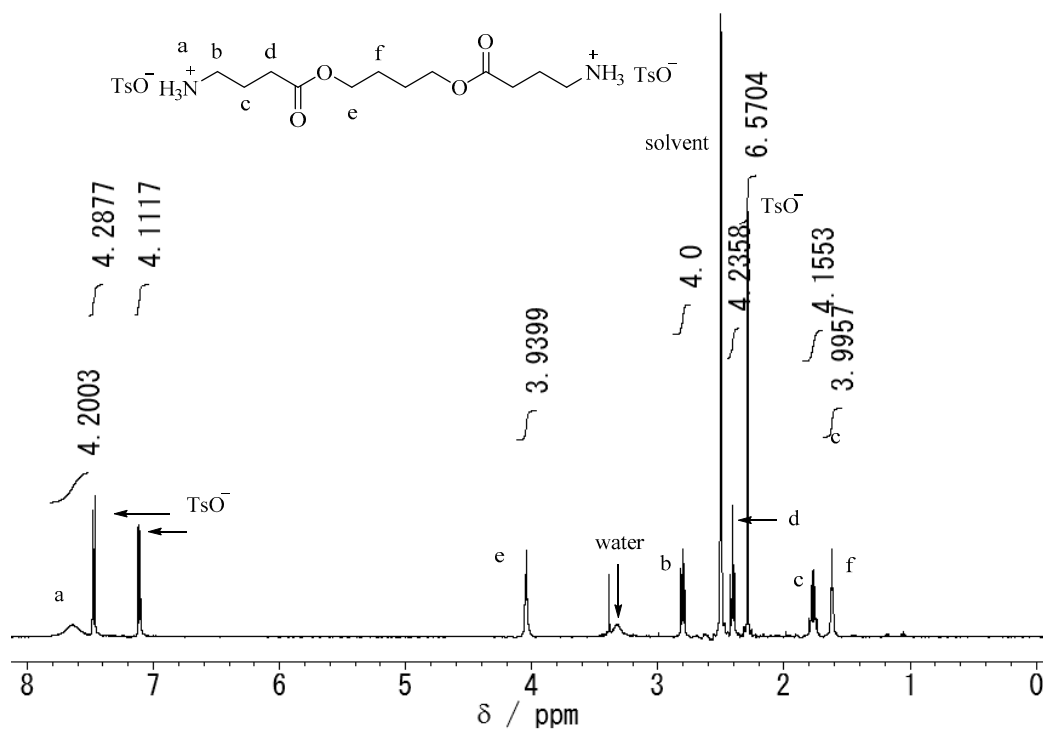
1.  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of the products.



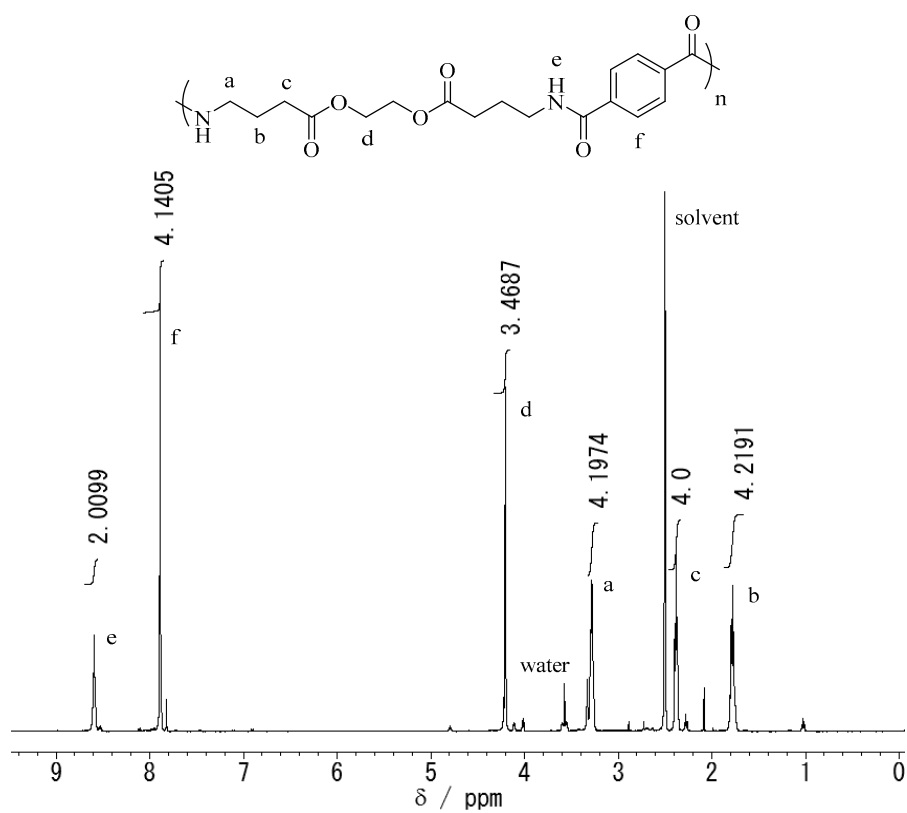
**Figure S1.**  $^1\text{H}$  NMR spectrum of gEg-OTs (DMSO- $d_6$ , 500 MHz, r.t.)



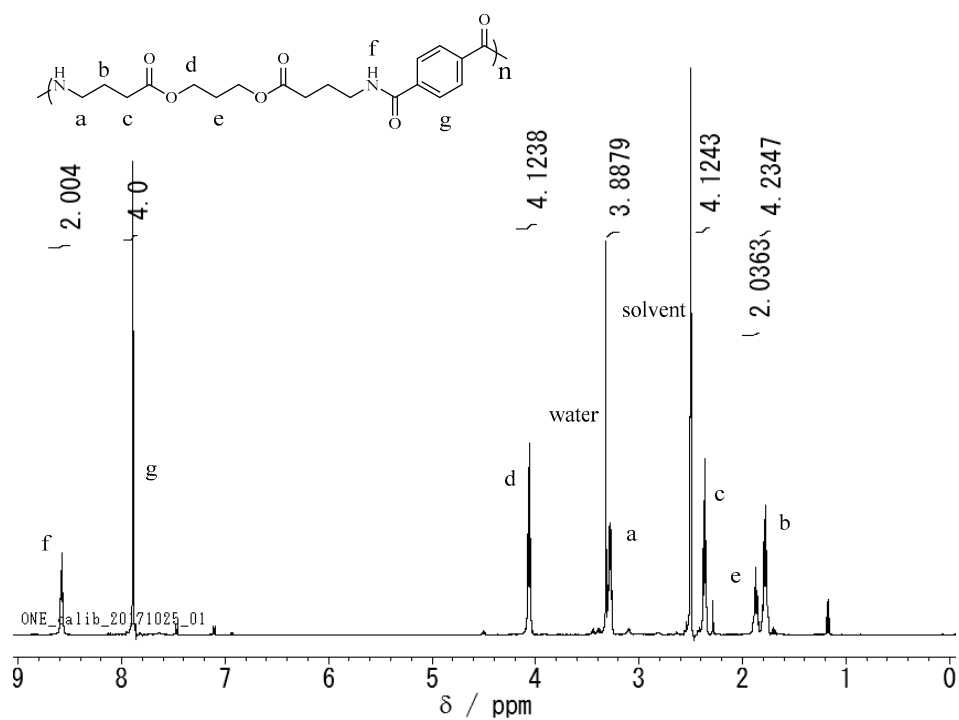
**Figure S2.**  $^1\text{H}$  NMR spectrum of gPg-OTs (DMSO- $d_6$ , 500 MHz, r.t.)



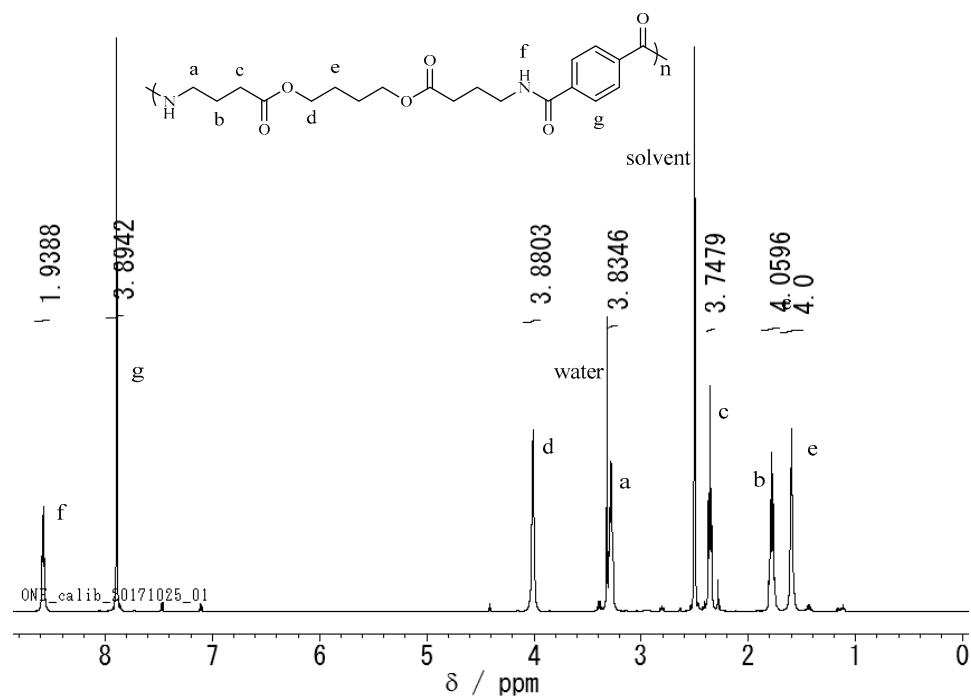
**Figure S3.** <sup>1</sup>H NMR spectrum of gBg-OTs (DMSO-d<sub>6</sub>, 500 MHz, r.t.)



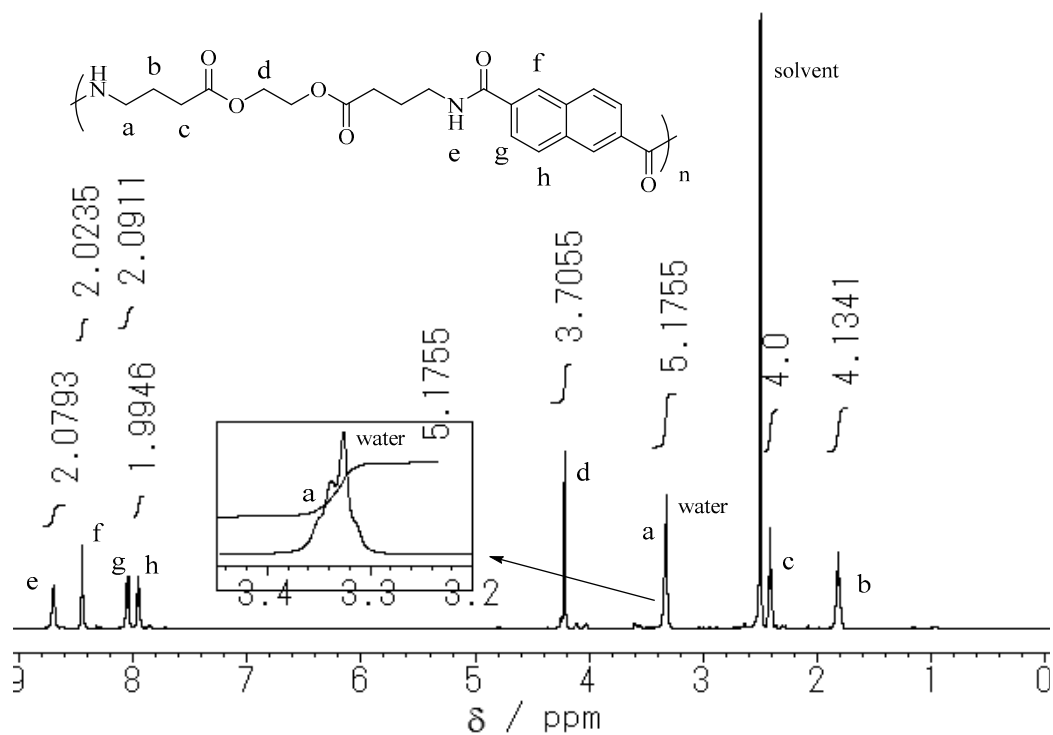
**Figure S4.** <sup>1</sup>H NMR spectrum of poly(gEgT) (DMSO-d<sub>6</sub>, 500 MHz, r.t.).



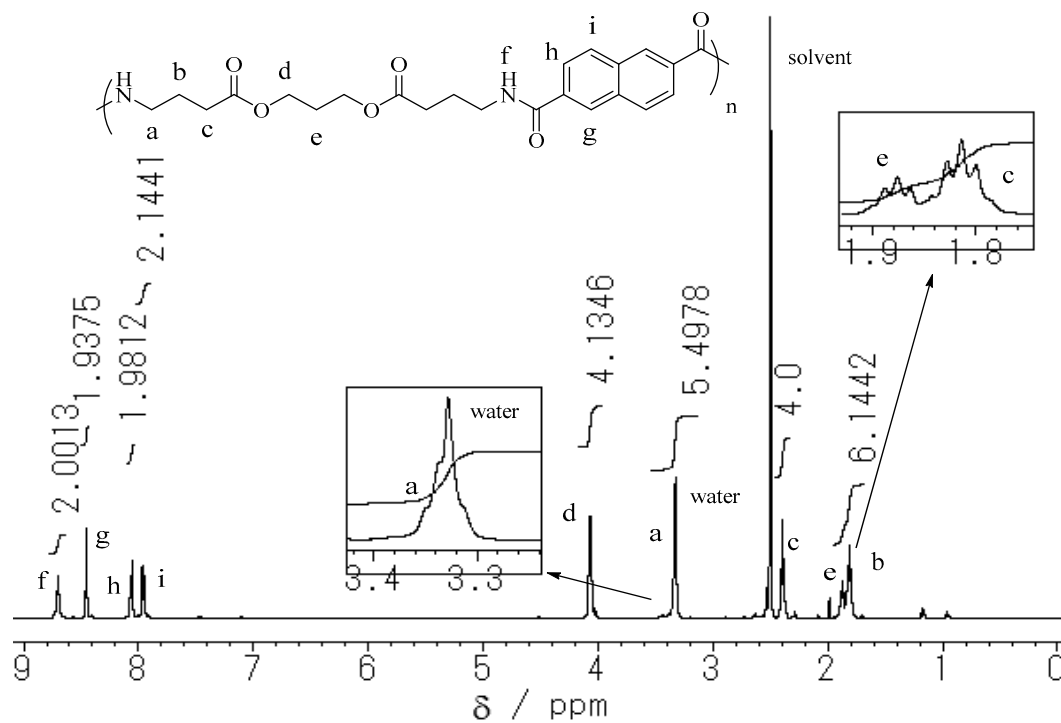
**Figure S5.** <sup>1</sup>H NMR spectrum of poly(gPgT) (DMSO-d<sub>6</sub>, 500 MHz, r.t.).



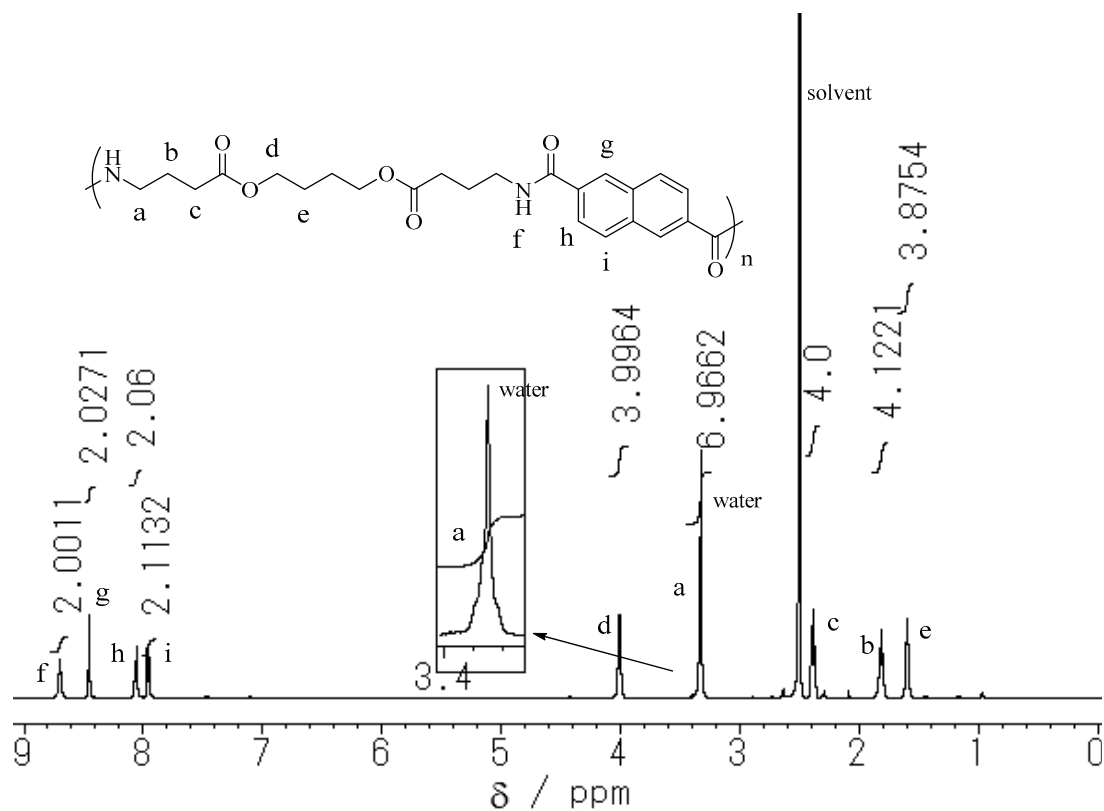
**Figure S6.** <sup>1</sup>H NMR spectrum of poly(gBgT) (DMSO-d<sub>6</sub>, 500 MHz, r.t.).



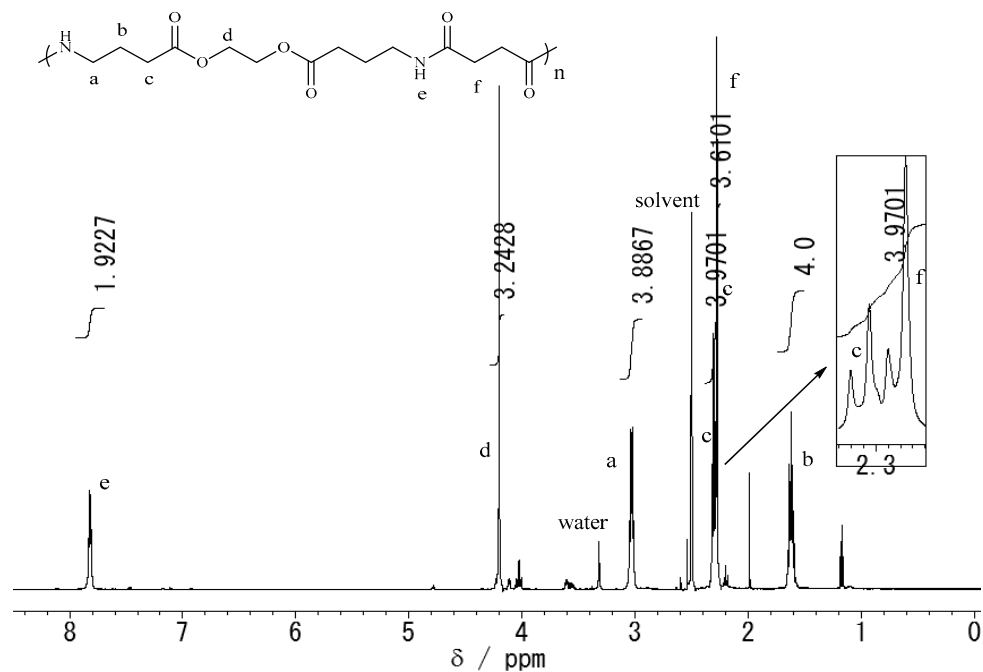
**Figure S7.**  $^1\text{H}$  NMR spectrum of poly(gEgN) (DMSO- $d_6$ , 500 MHz, r.t.).



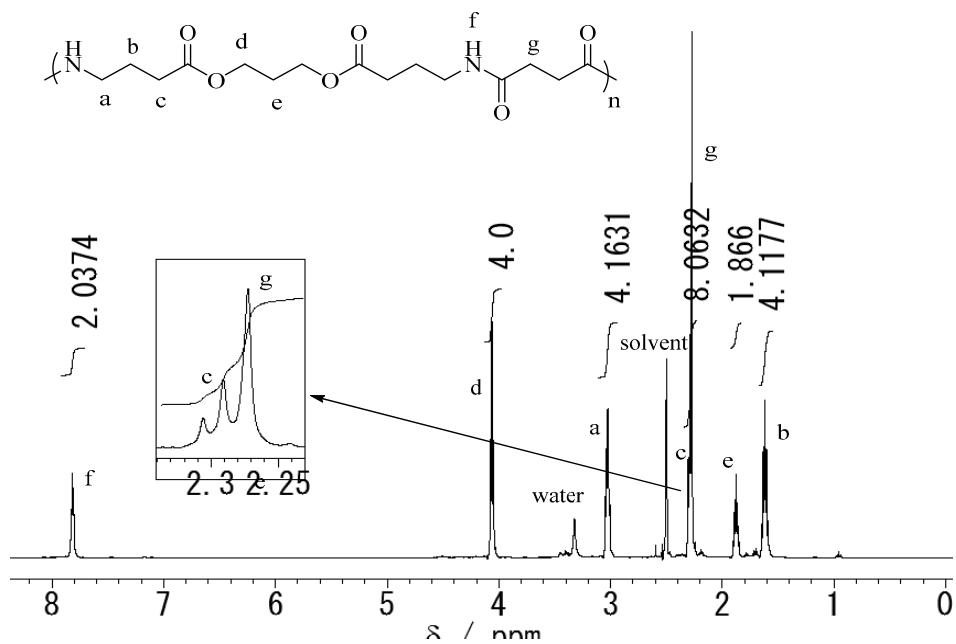
**Figure S8.**  $^1\text{H}$  NMR spectrum of poly(gPgN) (DMSO- $d_6$ , 500 MHz, r.t.).



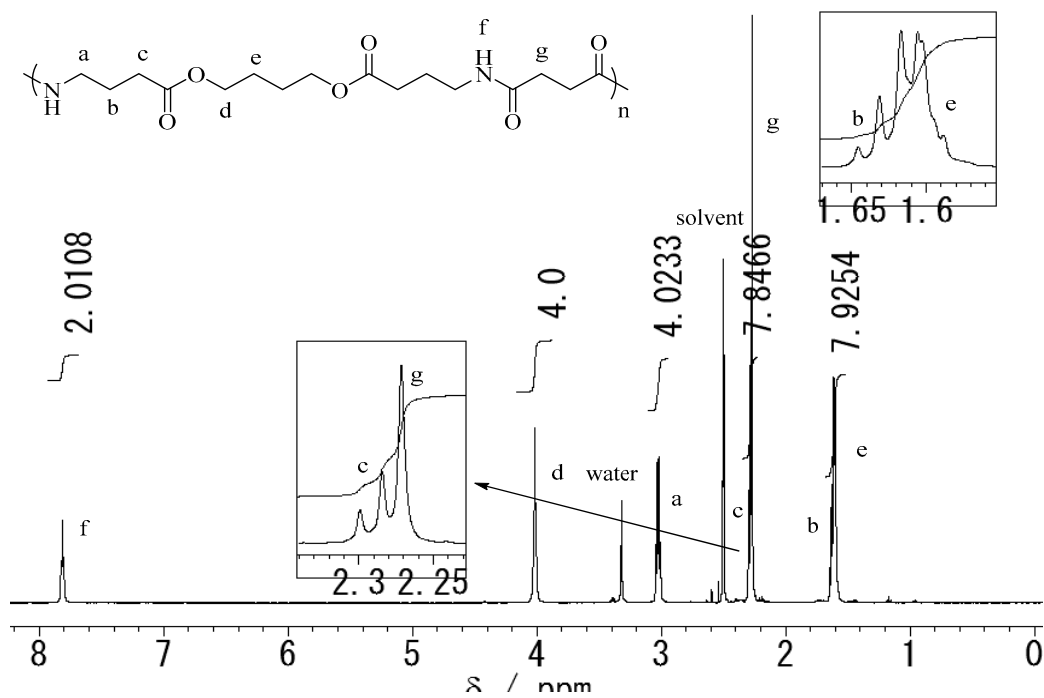
**Figure S9.**  $^1\text{H}$  NMR spectrum of poly(gBgN) (DMSO- $d_6$ , 500 MHz, r.t.).



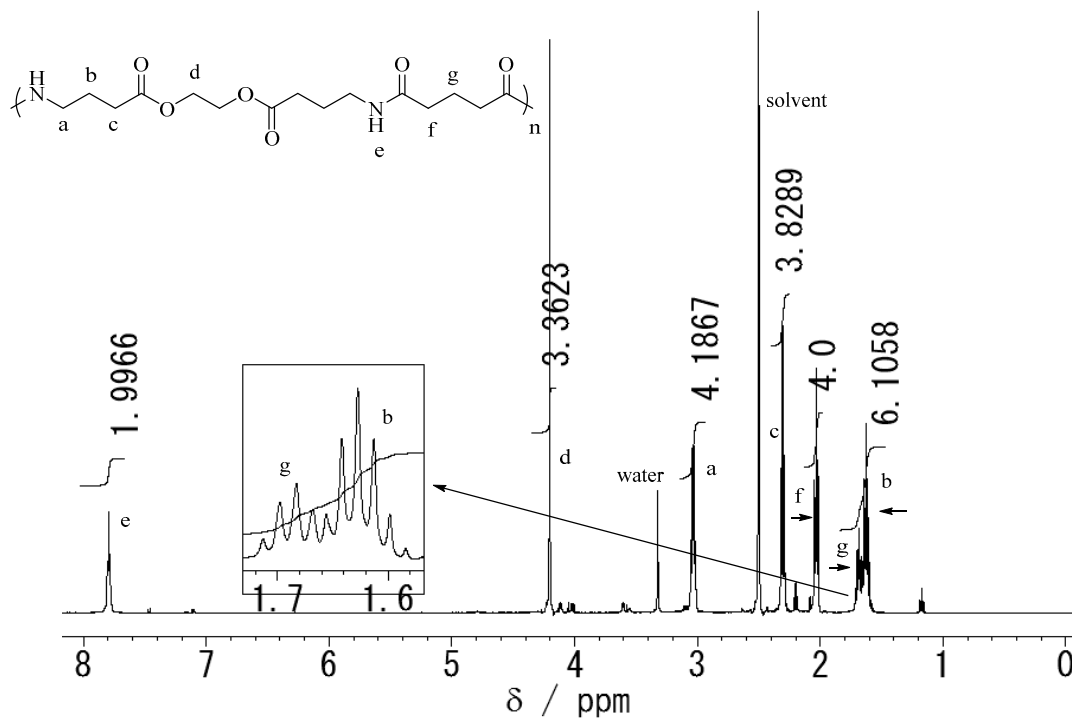
**Figure S10.**  $^1\text{H}$  NMR spectrum of poly(gEgS) (DMSO- $d_6$ , 500 MHz, r.t.).



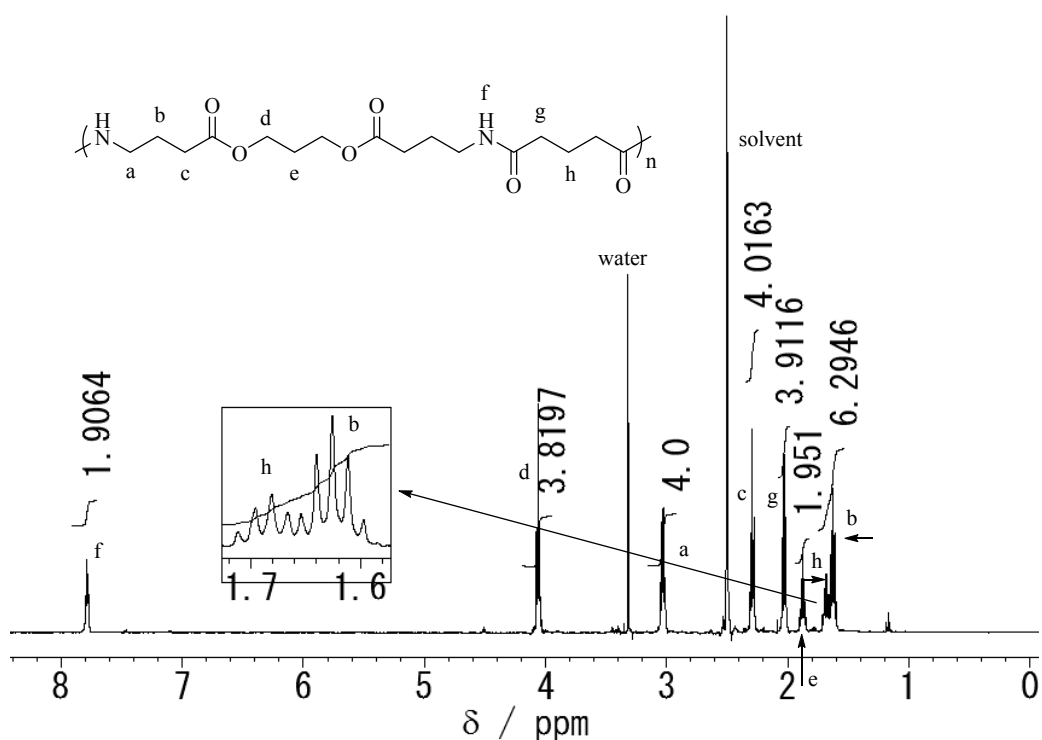
**Figure S11.** <sup>1</sup>H NMR spectrum of poly(gPgS) (DMSO-d<sub>6</sub>, 500 MHz, r.t.).



**Figure S12.** <sup>1</sup>H NMR spectrum of poly(gBgS) (DMSO-d<sub>6</sub>, 500 MHz, r.t.).

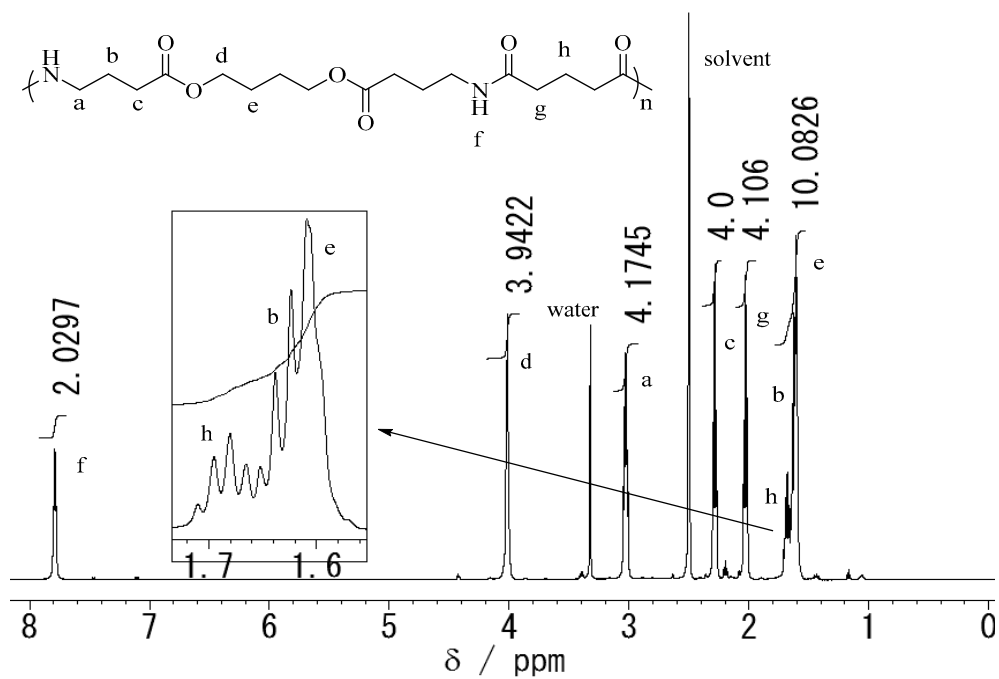


**Figure S13.**  $^1\text{H}$  NMR spectrum of poly(gEgGl) (DMSO- $d_6$ , 500 MHz, r.t.).

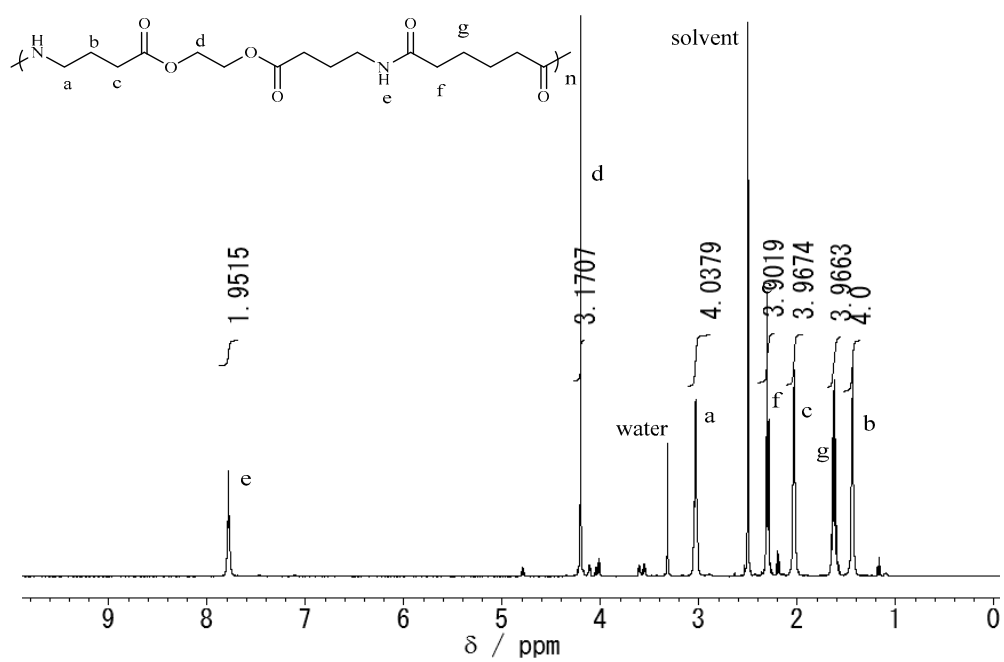


**Figure S14.**  $^1\text{H}$  NMR spectrum of poly(gPgGl) (DMSO- $d_6$ , 500 MHz, r.t.).

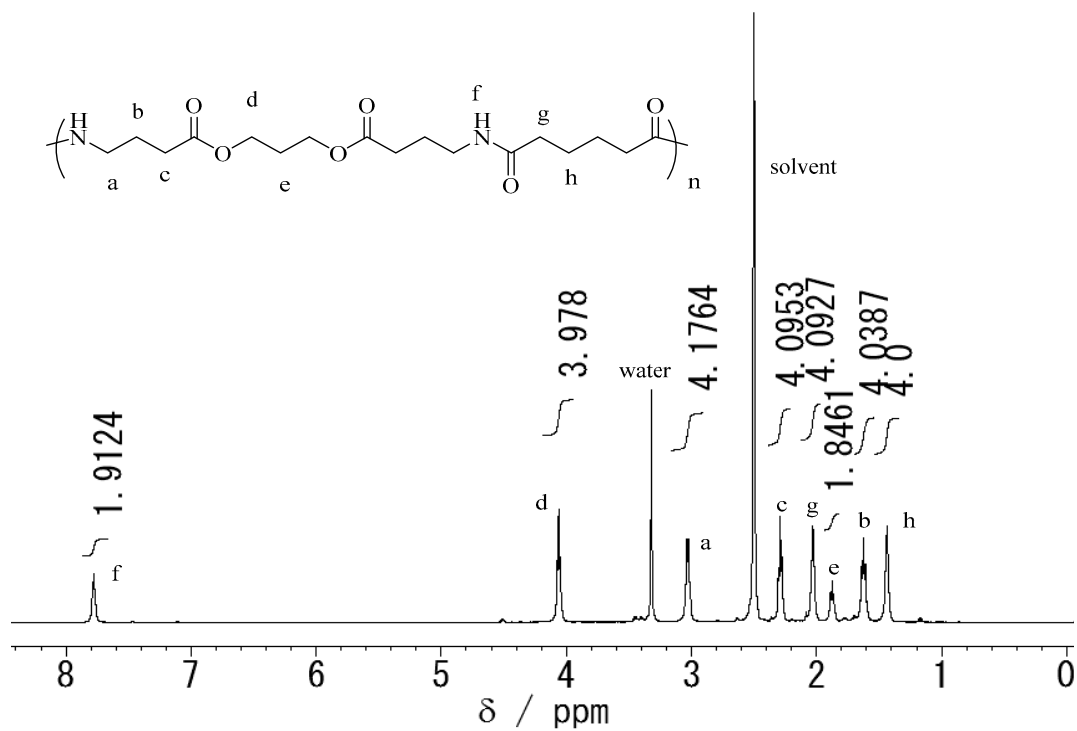




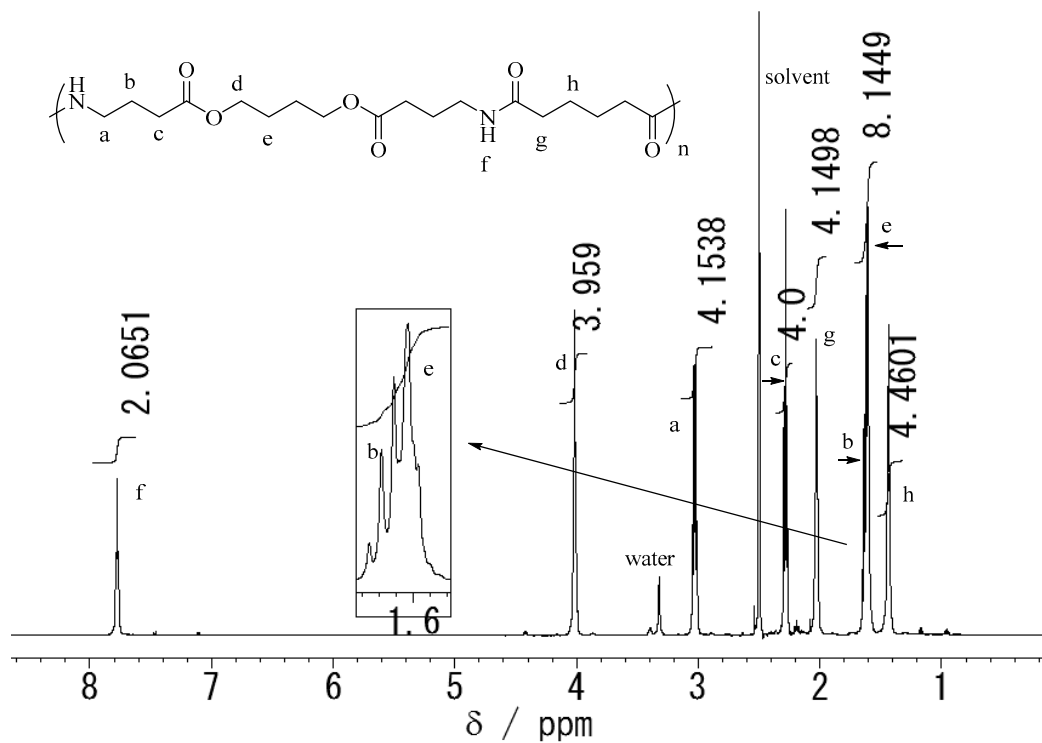
**Figure S15.**  $^1\text{H}$  NMR spectrum of poly(gBgGl) (DMSO- $d_6$ , 500 MHz, r.t.).



**Figure S16.**  $^1\text{H}$  NMR spectrum of poly(gEgA) (DMSO- $d_6$ , 500 MHz, r.t.).

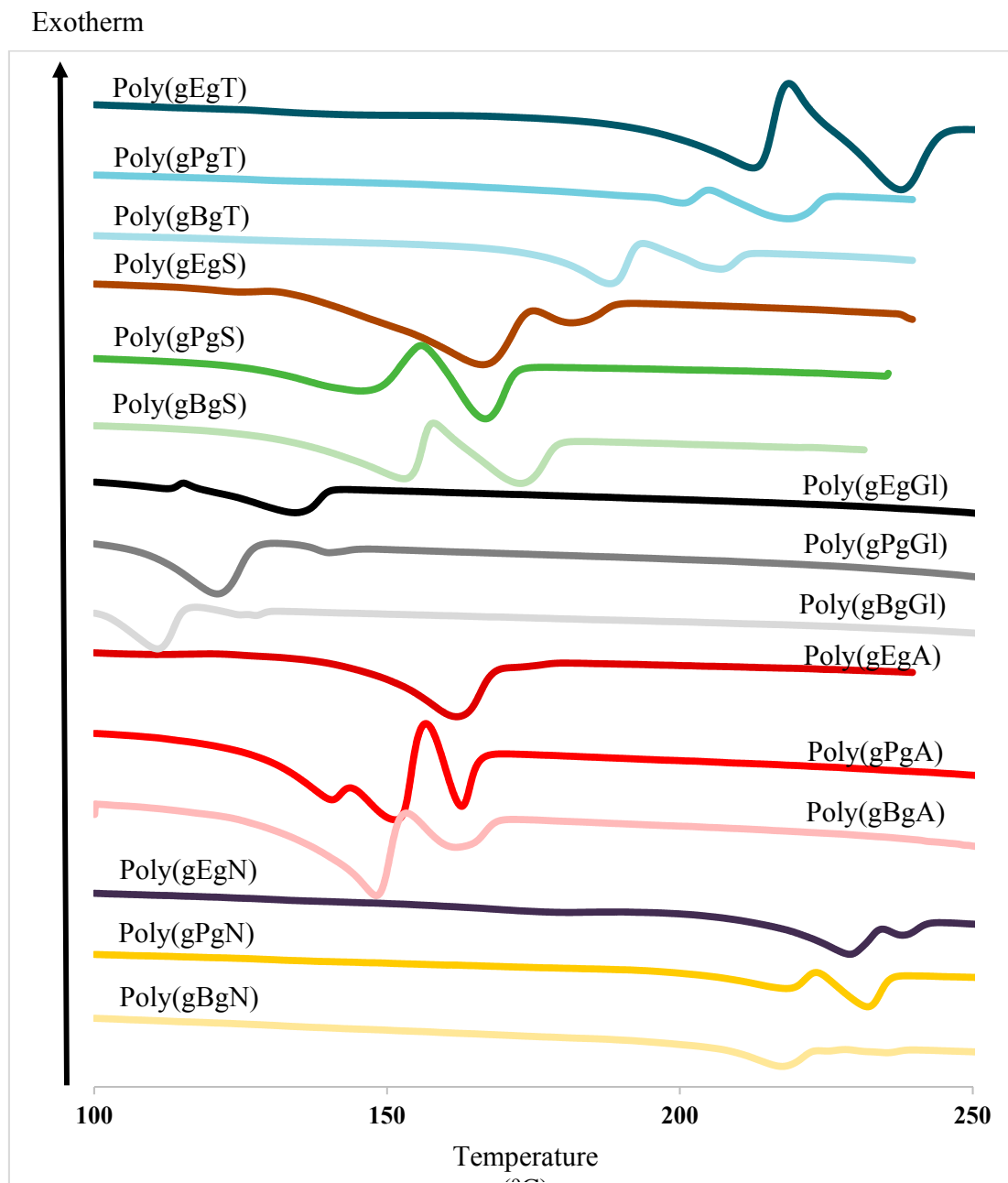


**Figure S17.**  $^1\text{H}$  NMR spectrum of poly(gPgA) (DMSO- $d_6$ , 500 MHz, r.t.).



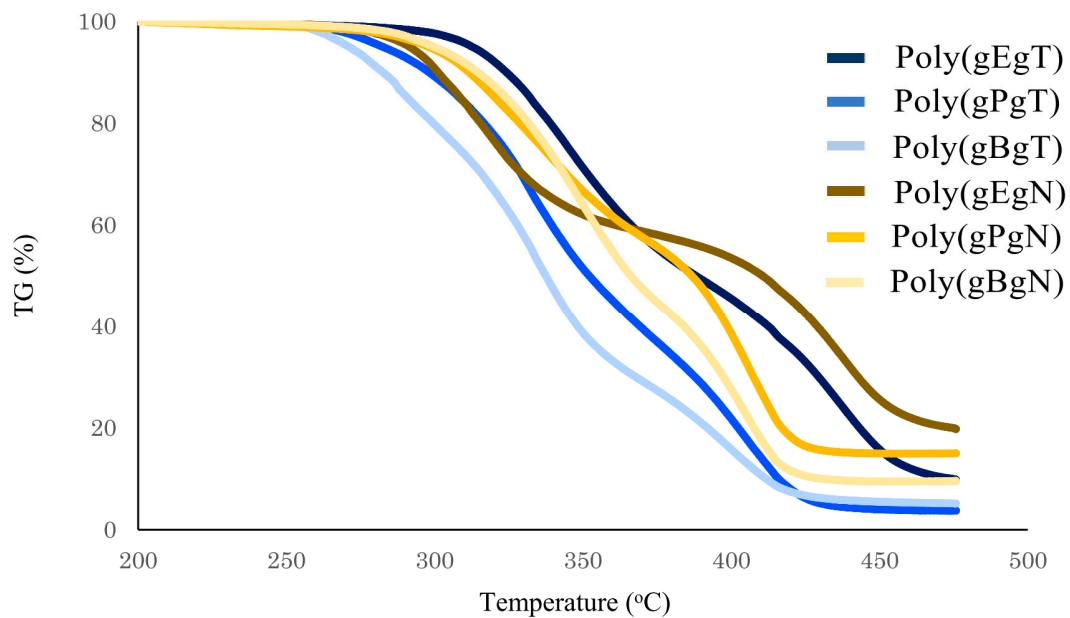
**Figure S18.**  $^1\text{H}$  NMR spectrum of poly(gBgA) (DMSO- $d_6$ , 500 MHz, r.t.).

## 2. DSC Curves of the periodic copoly(ester-amide)s.

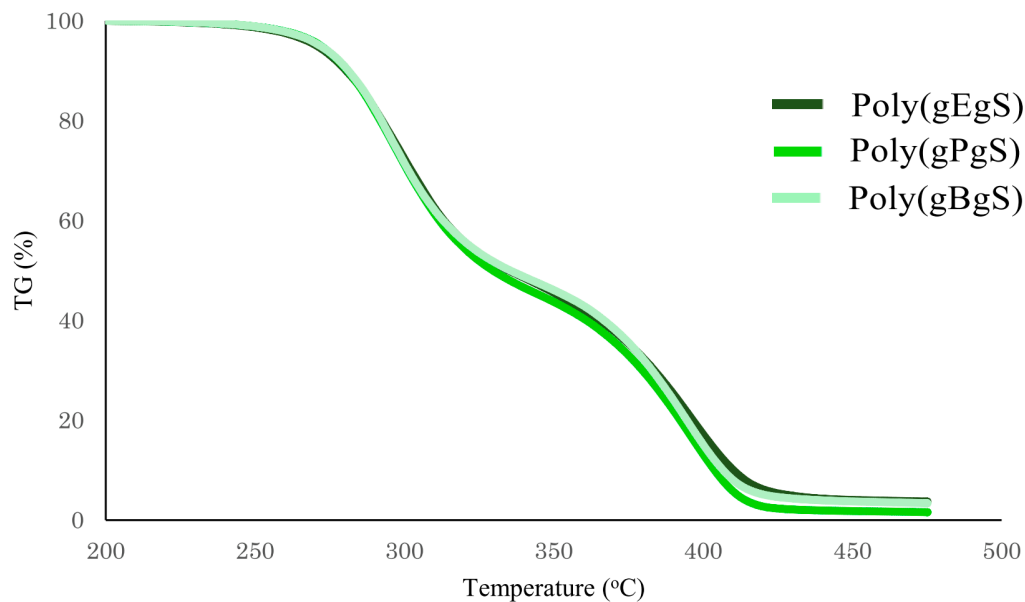


**Figure S19.** The observed melting transitions in DSC Curves of the periodic copoly(ester-amide)s.

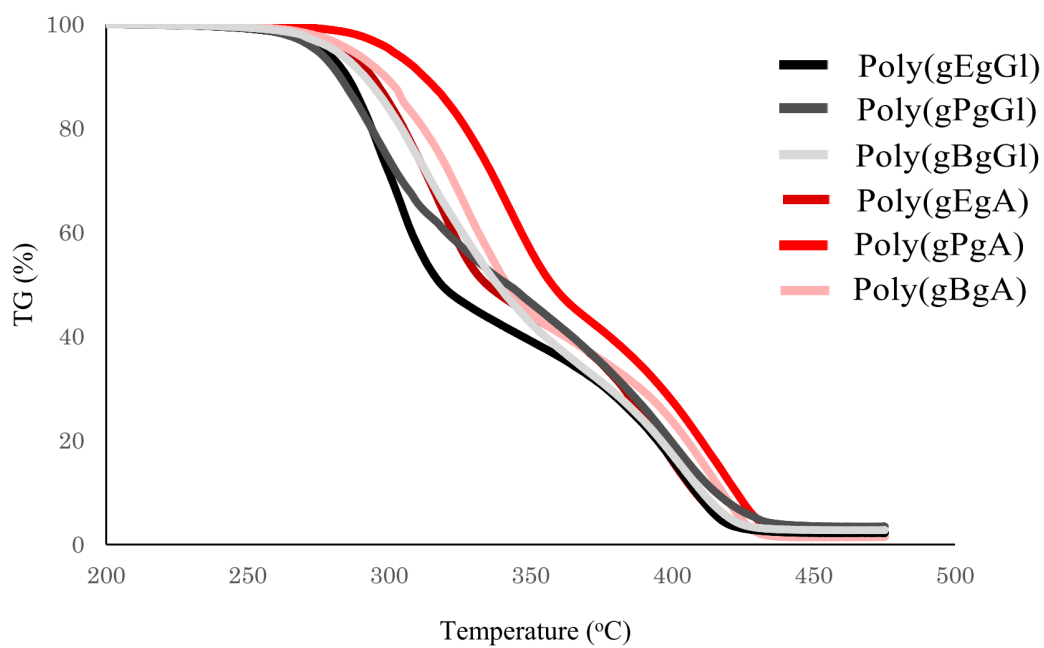
3. TG/DTA curves of the copoly(ester-amide)s.



**Figure S20.** TG/DTA curves of the aromatic copoly(ester amide)s with terephthalate or naphthalenedicarboxylate units.



**Figure S21.** TG/DTA curves of the copoly(ester amide)s with succinate units.



**Figure S22.** TG/DTA curves of the copoly(ester amide)s with glutarate or adipate units.