Well-Defined Acetylene-Functionalized Oxanorbornene Polymers and Block Copolymers

Zoha M. AL-Badri and Gregory N. Tew*

Department of Polymer Science and Engineering, University of Massachusetts Amherst
120 Governors Drive, Amherst, MA 01003

Supporting Information

Table of Contents

Figure S1: $^1$H NMR spectrum of compound 1b..........................................................2S
Figure S2: $^{13}$C NMR spectrum of compound 1b.........................................................2S
Figure S3: $^1$H NMR spectrum of compound 1c.............................................................3S
Figure S4: $^{13}$C NMR spectrum of compound 1c.............................................................3S
Figure S5: $^1$H NMR spectrum of block copolymer 4....................................................4S
Figure S6: $^{13}$C NMR spectrum of block copolymer 4....................................................4S
Figure S7: $^1$H NMR spectrum of block copolymer 9.......................................................5S
Figure S8: $^{13}$C NMR spectrum of block copolymer 9.......................................................5S
Figure S9: $^1$H NMR spectrum of block copolymer 10.....................................................6S
Figure S10: $^1$H NMR spectrum of block copolymer 5....................................................6S
Figure S11: $^{13}$C NMR spectrum of block copolymer 5....................................................7S
Figure S12: GPC analysis of macroinitiator 3 and block copolymer 5.............................7S
Figure S13: $^1$H NMR spectrum of deprotected block copolymer 11............................8S
Figure S14: $^{13}$C NMR spectrum of block copolymer 11................................................8S
Figure S1. $^1$H NMR spectrum in CDCl$_3$ of compound 1b.

Figure S2. $^{13}$C NMR spectrum in CDCl$_3$ of compound 1b
Figure S3. $^1$H NMR spectrum in CDCl$_3$ of compound 1c.

Figure S4. $^{13}$C NMR spectrum in CDCl$_3$ of compound 1c.
Figure S5. $^1$H NMR spectrum in CD$_2$Cl$_2$ of compound 4.

Figure S6. $^{13}$C NMR spectrum in CD$_2$Cl$_2$ of compound 4.
Figure S7. $^1$H NMR spectrum in CDCl$_3$ of block copolymer 9.

Figure S8. $^{13}$C NMR spectrum in DMSO-d$_6$ of block copolymer 9.
Figure S9. $^1$H NMR spectrum in DMSO-$d_6$ of block copolymer 10.

Figure S10. $^1$H NMR spectrum in CDCl$_3$ of block copolymer 5.
Figure S11. $^1$H NMR spectrum in CDCl$_3$ of block copolymer 5.

Figure S12. GPC analysis of macroinitiator 3 and GPC analysis of block copolymer 5.
Figure S13. $^1$H NMR spectrum in CDCl$_3$ of block copolymer 11.

Figure S14. $^{13}$C NMR spectrum in DMSO-d$_6$CD of block copolymer 11.