Supporting information

Synthesis, aqueous solution behavior and selfassembly of a dual pH/thermo-responsive fluorinated diblock terpolymer

Panagiotis G. Falireas,* Vincent Ladmiral, and Bruno Ameduri*

Ingénierie et Architectures Macromoléculaires, Institut Charles Gerhardt, Ecole Nationale Supérieure de Chimie de Montpellier (UMR5253-CNRS), UM, 240 rue Emile Jeanbrau, 34296 Montpellier Cedex 5, France.

*Corresponding Authors: E-mail: bruno.ameduri@enscm.fr (B. Améduri)

E-mail: pfalireas@uliege.be (P.Falireas)



Figure S1. ¹H NMR spectra of P(VAc-*alt*-MAF-TBE) (a) and P(VOH-*alt*-MAF) (b) copolymers recorded in CDCl₃ and D₂O, respectively. The crossed-out signals are those of acetone (2.16 ppm).



Figure S2. ¹⁹F NMR spectrum (CDCl₃) of P(VAc-*alt*-MAF-TBE) copolymer.



Figure S3. ¹³C NMR spectrum (CDCl₃) of P(VAc-*alt*-MAF-TBE)-*b*-PDMA-1 diblock terpolymer. The crossed-out signals are those of acetone (30.92 ppm)



Figure S4. ¹⁹F NMR spectrum (CDCl₃) of P(VAc-*alt*-MAF-TBE)-*b*-PDMA-1 diblock terpolymer.



Figure S5. ¹⁹F NMR spectrum (CDCl₃) of P(VAc-*alt*-MAF-TBE)-*b*-PNIPAM-1 diblock terpolymer.



Figure S6. ¹⁹F NMR spectrum (D₂O) of P(VOH-*alt*-MAF) copolymer.



Figure S7. ¹H NMR spectrum (D₂O) of P(VOH-*alt*-MAF)-*b*-PNIPAM-1 block terpolymer.



Figure S8. ¹⁹F NMR spectrum (D₂O) of P(VOH-*alt*-MAF)-*b*-PNIPAM-1 block terpolymer.



Figure S9. Particle size distribution of self-assembled P(VAc-*alt*-MAF-TBE)-*b*-PDMA-1 and P(VAc-*alt*-MAF-TBE)-*b*-PDMA-2 diblock terpolymers (a and b, respectively), and P(VAc-*alt*-MAF-TBE)-*b*-PNIPAM-1 and P(VAc-*alt*-MAF-TBE)-*b*-PNIPAM-2 diblock terpolymers (c and d, respectively) at pH=7.0 and 25 °C.



Figure S10. TEM micrographs of self-assembled P(VOH-*alt*-MAF)-*b*-PNIPAM-2 at pH=9.5 (a) pH=3.5 (b).